

# Transcript of Proceedings

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THE HONOURABLE JUSTICE C HOLMES, Commissioner

MR JAMES O'SULLIVAN AC, Deputy Commissioner

MR PHILLIP CUMMINS, Deputy Commissioner

MR P CALLAGHAN SC, Counsel Assisting

MS E WILSON SC, Counsel Assisting

IN THE MATTER OF THE COMMISSIONS OF INQUIRY ACT 1950

COMMISSIONS OF INQUIRY ORDER (No. 1) 2011

QUEENSLAND FLOODS COMMISSION OF INQUIRY

BRISBANE

..DATE 02/02/2012

..DAY 59

THE COMMISSION RESUMED AT 8.59 A.M.

COMMISSIONER: Mr Callaghan, we might just take appearances first, so if you would announce yours?

MR CALLAGHAN: Yes. If it please the Court, my name is Callaghan, initials C J, of Senior Counsel. I appear with my learned friends, Ms Wilson of Senior Counsel, and Ms Kefford.

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COMMISSIONER: Thank you. Mr O'Donnell?

MR O'DONNELL: I am appearing for Seqwater. O'Donnell QC, with my learned friend Mr Pomeranke, instructed by Allens Arthur Robinson.

COMMISSIONER: Thank you. Mr Ambrose?

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MR AMBROSE: My name is Ambrose, initial P. I appear with Mr Liam Dollar of counsel. We're instructed by Holding Redlich for SunWater and Mr Robert Ayre.

COMMISSIONER: Thank you. Yes?

MR PORTER: Porter, initials B T, with Mr Dunning SC, instructed by Clayton Utz for Brisbane City Council.

COMMISSIONER: Thank you.

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MR RANGIAH: Your Honour, Rangiah, initials D C, instructed by Maurice Blackburn Lawyers, and I appear for the Ferndale residents.

COMMISSIONER: Thank you. Mr Murdoch?

MR MURDOCH: Murdoch, initials J E, Senior Counsel. I appear for the Mid-Brisbane River Irrigators Incorporated, instructed by Gallagher Legal.

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COMMISSIONER: Thank you, Mr MacSporran?

MR MacSPORRAN: If it pleases the Commission, my name is MacSporran, initials A, Senior Counsel. I appear for the State of Queensland, together with Mr J Rolls and Ms J Brasch, instructed by Crown Law.

COMMISSIONER: Thank you. Yes?

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MR SULLIVAN: If it please the Court, my name is Sullivan, initials T P, Senior Counsel. I appear for Mr John Tibaldi, and I'm instructed by Dibbs Barker.

COMMISSIONER: Thanks, Mr Sullivan.

MR BURNS: My name is Burns, initials M J, Senior Counsel. I seek leave to appear on behalf of Mr Malone with Mr Sewell.

COMMISSIONER: Thanks, Mr Burns. That leave is granted. Yes, Mr Callaghan?

MR CALLAGHAN: The Inquiry reconvenes public hearings in order to consider issues relating to the operation of Wivenhoe Dam during the January 2011 flood event. In flood events, the dam is to be operated in accordance with procedures contained in a manual.

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The manual contemplates four possible strategies for the operation of the dam during a flood. These are known as strategies W1, 2, 3 and 4. The manual requires a transition from strategy W1 to strategy W2 or 3 when the Wivenhoe Lake level exceeds 68.5 metres, as it did at 8 a.m. on the 8th of January 2011.

On the 2nd of March last year Seqwater published its official report on the operation of the dam during the January flood event. In that report, it is clearly stated that strategy W3 was adopted for use at that time, 8 a.m. on Saturday 8 January 2011.

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Flood Operations Engineer, Robert Ayre, who was on duty at that time, has given sworn evidence to the Inquiry and he has in that evidence confirmed that this was the case.

During his evidence Mr Ayre was referred by Mr Rangiah to an entry in a situation report written on the evening of 8 January. This entry indicated that strategy W1 or W2 may have been engaged at that time. Mr Ayre explained that he had inadvertently recorded the wrong strategy, stated that the entry was not correct, and confirmed that the transition into W3 had been made earlier in the day.

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No contemporaneous record existed as to when flood engineers moved to W3. The Inquiry's interim report commented on the inadequacies in the records of decision-making at the dam, in particular with respect to the keeping of the event log by the flood engineers during the flood event. It was observed that the log did not make any note of decisions to change strategy, nor of the reasons for such decisions. These inadequacies were the basis of a recommendation that an accurate record should be kept of key decision-making processes, including changes in strategies.

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In the absence of such records, the Commission accepted the accuracy of the March report, the sworn testimony of Mr Ayre, and the evidence of the other three engineers; Mr John Tibaldi, Terrence Malone, and John Ruffini. There were no discrepancies of any note between their evidence.

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The Commission also had before it reports from four independent experts who had been asked to review the report and express an opinion as to whether there were any aspects of the operation of the dam that were not in accordance with the manual. Relevantly, their unanimous conclusion was that there had been compliance with the manual.

On the 23rd of January this year, Mr Hedley Thomas, writing in The Australian, pointed to a number of features in the evidence which suggested, amongst other things, that the dam was not operated in the manner described to the Commission. If true, the suggestion is a serious one and involves questions not only as to how the dam was managed, but as to how the public and the Commission have been informed about the January event.

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A review of the evidence was conducted and a requirement was issued to Seqwater. I will tender that requirement and the response received to it.

COMMISSIONER: Exhibit 1,033.

ADMITTED AND MARKED "EXHIBIT 1,033"

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MR CALLAGHAN: After receiving this response, the Commission sought an extension of time from its end date of 24 February to 16 March 2012 to permit the matters to be investigated.

The Premier has granted that extension and I will tender a copy of the relevant part of the Queensland Government Gazette.

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COMMISSIONER: Exhibit 1,034.

ADMITTED AND MARKED "EXHIBIT 1,034"

MR CALLAGHAN: The investigation to be completed in the days ahead will involve evidence from the four flood engineers, together with senior officers of the relevant entities, including Seqwater and DERM. The independent experts who reviewed the report will also be called.

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Madam Commissioner, I propose that the first witness should be flood engineer John Tibaldi.

COMMISSIONER: We will have a short break before that occurs. Thank you, we'll adjourn briefly.

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THE COMMISSION ADJOURNED AT 9.06 A.M.

THE COMMISSION RESUMED AT 9.11 A.M.

COMMISSIONER: Yes, Mr Callaghan?

MR CALLAGHAN: I call John Tibaldi.

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JOHN VICTOR TIBALDI, RECALLED:

FURTHER EVIDENCE-IN-CHIEF:

MR CALLAGHAN: Could you tell the Commission your full name and occupation?-- John Victor Tibaldi, civil engineer.

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And you're currently employed by Seqwater, is that correct?-- Yes, it is.

Mr Tibaldi, you've made a statement to this Commission, first of all back on the 25th of March of last year. That is Exhibit 51 in evidence. You were taken to that statement on the 15th of April and you affirmed that you stood by the contents of that statement, is that correct?-- I am not sure about the 15th of April but I certainly stand by the contents of the statement.

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All right. At that time back in April this Commission was in hearings where you and Mr Ayre, Mr Ruffini and Mr Malone all gave evidence. Were you present here when the other three flood engineers gave evidence?-- I wasn't present when Mr Ayre gave evidence. I don't think I was present at any of those times because I was the last one to give evidence, and the advice of my lawyers at that time was not to come.

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All right. So you weren't even in the building when they were testifying?-- No.

All right.

COMMISSIONER: Can I ask did you watch it on live stream?-- I watched some of it on live stream but generally I tried to stay away from it.

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MR CALLAGHAN: I just want to recap on a few things that we learned about earlier - well, during the course of hearings last year. If we start just by considering some aspects of the Flood Operations Centre. You, along with the three men whose names I have just mentioned, operated the Wivenhoe Dam during the floods from the Flood Operations Centre, is that correct?-- Yes, it is.

At that time it was situated in Turbot Street?-- That's correct.

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It was staffed by you and the other engineers at different times and also some technical officers?-- That's correct.

Can you just give us a brief explanation as to the different roles played by the engineers and the technical officers in the Flood Operations Centre?-- Yes, I can. As far as the engineers go, there was two senior flood operations engineers, who were Mr Ayre and Mr Ruffini, and then what's termed as two flood operations engineers, which was myself and Mr Malone. The definitions as to what's a senior flood operations engineer and what's a flood operations engineer are contained in the manual, but generally the senior engineers have - I guess, oversee the event and have powers associated with applying discretion if needed, and, again, that's described in the manual. As far as the four of us go we worked as a team and we worked together. As far as the technical officers go, at that time the term for them was data collectors, and that may be the term I used in the report. They're now known as flood officers. The term "data collectors" is a throwback to, you know, the original set-up of the flood manual. The purpose of those people is to assist the flood engineers with any duties through the flood event. They may be administrative duties, record taking, record keeping, that sort of - those sort of duties.

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How many of them were on duty at any given time?-- Well, it varied. At the early stages of the flood event while the flood event was developing, there was generally one flood engineer and one - I will call a flood officer. As the event got bigger, the - you know, we doubled that. We had two duty engineers at any time and two flood officers. The details of that are contained in the flood event report. It goes through who was on when in terms of shift. With shifts, there was some overlap. So, for example, on the 11th of - on the Tuesday, even though myself and Mr Malone's shift finished at 7, because of what had occurred that day we stayed in the room for some time.

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All right. Can I ask you about the duty engineer email account? I will show you a sample document. It is annexure TM5 to Exhibit 45, the statement of Mr Malone. And it is an email from the duty engineer to a group of people. I just choose this as an example of an email of the kind with which we're concerned. This duty engineer email account, who had access to that account?-- All of the - anyone that entered the room I believe would have had access to that account.

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Including a flood officer?-- That's my understanding, potentially including a flood officer, yes.

So anyone could use it, anyone could read emails on it?-- Yes, I believe so.

All right. Who could send emails from that account?-- Well, again, if you had access - I guess, just to explain my

understanding of the computer system that existed in the room at the time, because it was a separate system not connected to either SunWater's or Seqwater's system, there was generally one user log on and that user log on covered everybody. So, essentially, if you could log on, that meant you could access that account and, as I understand it, also send emails from that account. You could confirm that with an IT person but, as I said here, that's my understanding.

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Was there any protocol in place about the identification of the person who was sending an email? For example, in this one I think Mr Malone has put his name at the bottom of the email. Was that the protocol?-- I don't think there was a formal protocol but I would have to refresh myself by going through the flood report in terms of those situation reports but I-----

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Well, there is no protocol of which you are aware. That's all I was asking?-- No formal protocol.

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We might scroll back up that email that's on the screen. It contains a situation report issued at noon on the 10th of January, is that correct?-- It looks like 2.58 p.m. to me - but the subject - it looks like it has been sent out at 2.58 p.m.

Yes?-- But certainly the subject does say situation report at 12, Monday the 10th of January.

What are situation reports?-- They are briefing reports sent out to a broad range of people to give them an understanding of what's occurring in the flood centre. They're a way of, I guess, keeping people like the council - the relevant council officers, from Somerset Council, and Ipswich Council, and Brisbane Council up to date with what's occurring. You can see that the distribution on this particular situation report is narrow, because at that time the protocol was such that we were instructed not to send those situation reports broadly to organisations such as, say, the SES. That has now changed. The flood event - our protocol now is that the situation reports go very broadly to really anyone - each stakeholder agency, emergency services, that-----

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All right. You say it is narrow but we can see the people to whom it was sent there and it includes, for example, a CC to Ken Morris, who we know is Brisbane City Council, is that correct?-- That's correct.

Includes Mr Borrows, the CEO of Seqwater?-- Correct.

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Includes Mr Trace. I think he is Ipswich City Council, is that right?-- Correct.

Who creates a situation report?-- The situation reports are generally - I think always would be developed by the engineer on duty. If there's two engineers on duty, there is no necessary - necessarily a protocol as to who is developing it.

But it is always an engineer rather than a flood officer?-- I can - certainly when I've been on duty, I can never recall a flood officer developing a situation report when I've been there.

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No. All right. Can we distinguish a situation report from a technical situation report? I can probably show you one of those. It is appendix F to Exhibit 24, which is the March flood report of Seqwater. I think you have your own copy there but we'll get a copy on the screen?-- I don't need to see one but if you can't get it up on the screen.

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No, you can answer my question and people can catch up on the screen?-- Okay. You wanted to know the details of a technical situation report?

Yes, who creates them, how often, why, what purpose?-- That's fine. To give a bit of background, certainly myself and Mr Malone opposed technical situation reports, because in our view it was really just a rehash of the situation report, and we felt that - you know, we couldn't see the point of it, I guess, and, as I said, technical situation reports no longer happen. At that time, though, what used to happen was that we would send the situation report - I think if you go back on the distribution list - this is my recollection of it - on the distribution list would generally always be Mr Robert Drury, who is also an employee of Seqwater. He would then get the situation report and transform it into a technical situation report by, I guess, copying and pasting and clipping. The idea of it, really, was to remove the technical detail so it could be more easily read. That was the idea.

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All right. Can I just-----?-- Excuse me, so it would go broadly - I just - I forgot to say - so it would go broadly to these agencies, as I understood it, such as the Water Grid Manager, and Emergency Services, and that sort of thing.

Okay. Can I talk now about the shifts that you worked and, in particular, the procedures during handovers between shifts? You were working 12-hour shifts - you and the other engineers were working 12-hour shifts at the time, is that correct?-- Yes, it is.

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And, as you have already explained to us, some of those were alone but later on you worked in pairs - later on in the event?-- That's correct. I think from about the Sunday we worked - Sunday night at 7 p.m. there was pairs.

Would it be the case that at a change of shift, the engineer who had been on duty would give some sort of briefing to the one who was coming on to the shift?-- That's correct. That was the practice.

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Can I take you to the Exhibit 24, which is the flood event report, pages 33 to 35? We have there a list of - scroll down to pages 33 to 35? There we have the list which sets out who was involved in each handover during the flood event, is that correct?-- Yes, that's it.



Can I interpret that by suggesting that engineer 1 was Mr Ayre, engineer 2 was Mr Malone, 3 was Mr Ruffini, and 4 was yourself?-- That's correct.

Now, the flood report - and this is - I might refer to this document from now on as the March report?-- Okay.

This is the report that you-----?-- Yes.

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-----or Seqwater issued on 2nd of March, is that correct?-- That you're referring to it as the March report, that's fine.

March, yes?-- I know what you're talking about.

It says in some entries that the handover occurred in accordance with the Flood Procedure Manual. That, I take it, would be a reference to the internal Flood Procedure Manual of Seqwater, is that right?-- That's correct. That isn't referring to the Manual of Operations.

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And I don't believe that's in evidence as yet, so I will tender a copy of that document.

COMMISSIONER: Exhibit 1,035.

ADMITTED AND MARKED "EXHIBIT 1,035"

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MR CALLAGHAN: And I'll ask if we can have displayed page 7 of that document. I might just go back up. I would suggest to you this is a list of information that should be provided in the course of a handover of shift, is that correct?-- I don't think that page is handovers, but I expect it is in that-----

Right down the bottom you see "Conducting end of shift handovers that provide the following information"?-- I see, that wasn't quite on my screen.

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All right. And there is a series of bullet points there?-- Yes. I-----

The third-----?-- Could I take a minute to read that?

Certainly?-- I did actually draft that initially but I just-----

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All right?-- -----haven't read it for a long time.

By all means familiarise yourself with it?-- Yes, okay.

Third bullet point refers to the flood release procedures being applied and the reason for their selection?-- Yes.

What is that referring to?-- I can't recall what was in my

head when I drafted that because it is - I think if you see the date on it, it is several years ago. In my mind, if I was reading that now, I would have an expectation that at handover, the engineer going off would explain simply the procedures that he was intending applying at the time, in terms of how he was calculating the release from Wivenhoe - from both dams, Wivenhoe Dam and Somerset Dam, and just explaining why - you know, what his reasoning was behind that approach.

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It is just the actual gate releases?-- That would be the gate releases from both dams.

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Yeah?-- Yeah, how he's calculating them at that current time, what he expects to occur over the shift-----

All right?-- -----and the reason why he's doing what he's doing.

All right. Anything else done, whether in accordance with that directive or otherwise, in terms of explanation as to gate releases?-- Look, I think, you know, that's a - that's a - I would have to say - you know, it is not something I - we read at handover and go through line item by line item, but I guess, you know, there is possibly a case for doing that. But, no, I think that's a - probably a fair description of what occurs.

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All right. There is no reference in those procedures to a review of situation reports?-- Yes.

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But would that happen as a matter of course?-- It just depends - look, I think certainly the oncoming person knows the situation, but I'll just explain. I think it depends, really, how the guy does the handover. Sometimes a good way to do it might be to go through the situation report. I think more often than not that you'd just give an explanation without necessarily going through the situation report. But, normally speaking, you would expect that the oncoming engineer, if the situation report's been done, he would read that - not necessarily at the time of handover, but I think it is a reasonable expectation, and certainly, from my experience in the room, just talking to myself, I would generally read that at some point in the shift. You would certainly have to read it at some point because normally the next situation report you do will be based on the previous one so you use that as a starting point.

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Would you do a situation report on every shift?-- Generally speaking, you'd do it either end - at the end of the shift. So unless something significant happens in between that warrants additional situation reports. For example, you know, the flood event we've just had and that's occurring at the moment, you know, we got a significant amount of rain, I think on the Tuesday and Wednesday night, so we went out a quick situation report to alert people: Hey, you know, the situation is developing differently to what we expect, and that would have happened to a large extent, I believe, in the January event, but I would have to go back. My recollection is not great. I would have to go back and match the situation reports against-----

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Likewise, as a general proposition would emails be reviewed at the commencements of a shift, emails which had been received during the previous shift?-- I've never done that.

Never done that?-- I've never done that.

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Can I take you to paragraph 24 of your first statement, the statement dated 25 March 2011 - that is Exhibit 51 - because I want to ask some questions about the flood event log?-- Yes.

In paragraph 26 of that statement you say that the log is a contemporaneous record of significant events that occur during a flood event?-- Yes, that's what it says.

Is there any definition that you would ascribe to the term "significant events"?-- I would almost say that it - I mean, in a large flood a lot happens, and there's a lot to write down. In a smaller flood, or if things are very quiet, you know, there's no phone calls, nothing might occur, so - and that might be the same in certain periods of a flood event. But essentially the idea is that it's the flood officer's responsibility to maintain the log. I don't think I've ever written - I stand corrected. I may have written a log entry at some point if the flood officer was out of the room. But otherwise, it's not something I would go to unless I wanted to particularly check some aspect of it.

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Well, it's the only real contemporaneous record of everything that occurs in the Flood Operations Centre, is it not?-- No. It records some aspects, but remember you've still got your gate directives, you've got your situation reports, you've got all the lake levels, you know, coming back from the dams, all their releases, plus you've got all the data coming in from the ALERT network in terms of all the rain gauges and stream flow stations, and you've got the systems being used to manage and review that data, and really they're in realtime.

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Well, you have the data - you have data in several forms?-- Yes.

You have the sitreps, which I think you've told us tend to be prepared towards the end of a shift?-- Correct.

Which might have gone for some hours?-- Correct.

But aside from that, to record anything else that may have occurred during a shift, it's really the flood event log or nothing, isn't it?-- No. If significant rainfall occurs in the event, or stream flow, or gate operations, that's all recorded separately. The flood log is just one aspect. You know, I suppose in my mind the main purpose of it was to record phone calls or communications with the flood centre, not necessarily, you know, if someone arrived at the flood centre or something that couldn't be captured by the data, say, for example, a power outage, you might write that in the flood - in the flood log.

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Which something which couldn't be captured by the data might be recorded in the flood event log; is that right?-- Yes, but primarily phone calls, is how I would have viewed it.

And I think we've been through this in the hearings last year. An issue's been identified that might only be one side of the phone call, so there might be some inaccuracies for that reason; is that right?-- That's correct.

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At times, though, in the flood event log we see a pasted copy of the situation report; is that so?-- Yes, I have seen that in the - can I just refresh myself by looking at the appendices before I answer that question?

I'm not going to ask you about a specific one. You're familiar with the process of sitreps going into the flood event log?-- It's not something I've ever done. It's not something I've ever pasted in. I notice that they are in the flood log for this event - for the - in the March report, but that's not necessarily something I had seen before.

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Let's talk about the March report. That became Exhibit 24 before the Commission. You've already told us in your previous statement that you were heavily involved in the preparation of that report; is that correct?-- Yes, that's correct.

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You've provided another statement on this issue, a statement dated just yesterday, 1 February 2012, and attached to that statement are a number of exhibits, specifically, some drafts of parts of that report; is that correct?-- Yes, that's correct.

I'll tender that statement.

HER HONOUR: Exhibit 1036.

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ADMITTED AND MARKED "EXHIBIT 1036"

MR CALLAGHAN: Mr Tibaldi, your counsel alerted me to the fact that you have a copy of your statement with you. I'm assuming

that's the most recent one, is it? Or you've not got a copy of it?-- I've only got the most recent statement. 1

Yes, that's the one I'm about to ask you about, so you might like to extract that or identify where you have it for the purposes of the next few questions?-- Okay.

Have you got that now?-- Yes.

Thank you. Can I take you to paragraph 7, where you explain that you undertook the initial drafting of this report over a period of some days; is that correct?-- Looking at it now, I would say a period of some weeks. But yes, certainly days. 10

I think we can gather - were there 21 drafts or something like that that you've referred to?-- There is 21 drafts I've referred to, but they don't represent the full extent of the drafting period. The drafting period extended from when I did the first draft - I can't recall the date without looking at it - up until, you know, the end of February would have been when the report was finalised. 20

A lengthy exercise?-- Yes.

Can I take you back to the start of the period during which you prepared that. You're actually still in the Flood Operations Centre; is that right?-- Well, all the drafting occurred from the Flood Operations Centre because - which period do you mean in terms of days? 30

I'm hoping you can tell me when you actually started drafting it?-- Okay. I would say it would have been the - if 24 January is a Monday, because that's when I've sent the first draft or saved the first draft, I would say it was 24 January.

Okay. As you've already told us, you were doing this from the Flood Operations Centre. In paragraph 8 you refer to the fact that Mr Malone was generally in the Flood Operations Centre with you whilst the report was being drafted; is that correct?-- Yes, pretty much. Mr Malone and myself were there on a - continuously from when we started the drafting process, which is around that time to when the report was completed. 40

It was, I think - had it been agreed that the drafting of these parts of the report anyway was to be your responsibility?-- I don't think it was ever agreed.

By default perhaps?-- Yeah. I think - my recollection of what occurred - the others may have different recollections. This is my recollection - because Mr Malone and myself are Seqwater employees, it was - I suppose it was appropriate for us to be full-time working on this report. The other two, they have responsibilities with other agencies, and my recollection, particularly when the drafting process started - but this continued through - they were just not available to assist in the drafting because of their other responsibilities. So possibly by default the drafting fell to myself. 50

Was Mr Malone assisting you with this part of the process though?-- Not the - not the drafting of words. Mr Malone was going through and I guess just checking all the data, crosschecking that gate operations directives matched with actual operations, that, you know, someone there wasn't errors, checking there wasn't data corruption within the rainfall files or the electronic files that are generated from the field - sometimes you can get corruptions in the radio signals that send the data through - and generally going through a detailed validation process which, to be honest, it would be better for him to explain it to you.

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Sure?-- But in terms drafting words, he did draft two sections, I believe. Do you want me to tell you what they are?

Two sections of-----?-- The total report.

The total report? No, we're talking just about the parts that you've identified?-- Oh, sorry. Certainly those four parts were me.

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Yes, and you identify those - I'm sorry?-- In terms of the, you know, complete first draft, that was certainly myself.

These are the parts you refer to in paragraph 4 of your most recent statement?-- Yes, that's right. Yes, correct.

But did you discuss your preparation of those parts with Mr Malone as you were doing it?-- I can't - look, I can't recall specific discussions, but I think it's just natural, the fact that both of us were sitting there for that whole time, we must have had some conversations. I guess he was very busy doing his bit, and I was very busy doing my bit. But certainly there would have been conversations, without question.

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Did you share some of these early drafts with him?-- Not that I recall, but he may have seen them. But not that I recall.

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What about with Mr Ayre; did you have any discussions with him during this early stage about the nature of the report?-- I certainly would have seen him from time to time, and I would have explained to him what I was doing and the process I was following, just given his role as a senior flood operations engineer.

And likewise with Mr Ruffini, would you have explained what you were doing and process you were following at some stage during this early preparation?-- Look, I can't - again I may have, but I can't - I can recall that Mr Ayre was there more - slightly more often than Mr Ruffini. The reason for that is Mr Ayre, his place of work was in that building; whereas Mr Ruffini's place of work is in another building. So Mr Ruffini, I rarely saw him, but I guess when he - he must have dropped in at some stage during that period, and I imagine that I would have discussed it with him, but I cannot recall specifically.

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You can't recall specific conversations?-- Yes.

But it follows as matter of logic that you would have discussed what you were doing?-- Correct.

And how you were doing it?-- Oh, yeah, I guess how - yeah, that's fine.

Because as you point out, you were only in the Flood Operations Centre yourself for 24 of the really relevant 120-hour period; is that correct? I think you make that point early in your statement?-- I think it's in 16.

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Paragraph 16, yes?-- Yes, that would be correct. I believe that will match with the duty roster.

And yet you were required to write a report addressing all of that period?-- Well, the whole 324 hours of the flood. That's what the report was addressing.

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It must have been understood as between you and the other three that the balance of the period when you weren't there was going to be written about by you and presumably that you were going to write about it by reference to data, records and so on; is that correct?-- Yes.

Personal recollections of the event weren't part of this process?-- If - certainly any personal recollection that I might have - you know, as you develop through an understanding of what occurred, obviously you're going to have personal recollections about the shifts I was doing.

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Yes. Can I just stop you on that point. You don't record those in the flood event report, do you?-- In the flood event report?

In the March report. You don't record personal-----?-- What do you mean by "personal recollection"?

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Well, anything that's not contained in either data or a situation report or a gate directive. You don't explain reasons why you did particular things at particular times unless that explanation appears in some other document?-- That's right. I mean, if I - yes, that seems fine.

And was there any discussion with the other three - any of the other three about which data, which records, which writings of any kind were going to be used by you for the purposes of preparing the report?-- No.

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Would you suggest that - I would suggest to you there was probably a shared understanding between the four of you as to the records that you would be using?-- I can't presume that, but I can't recall a specific discussion about it. I guess naturally you'd think they would be the official flood event records. That was my understanding. You would have to ask the other three.

Let's look at the actual process that you were adopting. If I can take you to paragraph 19 of your statement, where you say that your aim was to make the final summary as factual as possible. Can you just tell us what you mean by that?-- Is this the flood summary, or just the document generally we're talking about here?

You-----?-- In terms - I guess in terms of both, we just wanted to paint the full picture of the flood event, the good and the bad. I think there's plenty of avenues available for criticism in the flood report in terms of things that occurred, particularly in the flood log. But regardless of what our thoughts were, whether we would like to see it in there or wouldn't like to see it in there, we put it in there. So it was a warts-and-all account for better or for worse of the January flood, and our thoughts were: Well, it's out there. People can judge us on what's in the report.

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And that was your purpose in - that was what you wanted the March report to achieve; to be a warts-and-all account to put everything out there so people could judge you on the facts; is that right?-- That's right. I mean, exactly. I mean, we weren't about saying we did good or bad.

20

No?-- Yeah.

And were you concerned to ensure, for example, that the report recorded things like the transition of strategies under the manual at the right time?-- Yes, I tried to match the strategy transitions against the data that was available to me.

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Right?-- Just made conclusions based on that data as to when strategy transitions had occurred.

You make it clear that this was no simple process. As we've said, I think there are 21 drafts; is that right?-- That isn't all the drafts.

Sorry?-- There's 21 drafts that were retained, and I've explained why they were retained.

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I'm sorry. You have done that, that's correct?-- Yes.

And I think you've identified for us that the process began on 24 January - or thereabouts, at least?-- If the 24th is a Monday. As I said, I'm not sure what day of the week it was. It would make logical sense to me that it was the Monday after that weekend we came in. That was the first day.

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I think we can trace through in the drafts that you've provided to the point where you've got a fairly final version; is that correct?-- I don't believe that those drafts are a fairly final version. As I said, they were the drafts. The drafting process changed slightly after that point.

You elaborate in your statement in paragraphs 25 to 38 on a particular difficulty you had in recording the transfer from



W1 to the next phase; is that correct?-- Yes.

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And we might just demonstrate the difficulties that you were encountering by reference to some of the drafts that you've provided. Now, it's annexure JT-1 to this statement, and it's item B for bravo, and we'll get that up. Or if you've got the actual exhibit, that would be-----?-- I've got that.

Do you have that?-- Yes.

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First of all, there's the email where you've sent it to yourself; is that right?-- Yes, that's correct. It was just a way of saving the emails, because they go into an archive system on their circuitous server.

Now, this was the version as at 24 January last year of what eventually became the flood event summary, which is part 2 of the March report; am I correct?-- That's right. This document evolved over many, many drafts into the flood event summary, that's correct.

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I understand. I just want to demonstrate some of the difficulties that you had by going through some of those drafts?-- Okay.

If we can go to page 5. Sorry to do this to you. Can we go back to the start and the columns at the top as we go across the columns on the top of page 1: "Date/time, directive, dam levels, model results, strategy"?-- That's right.

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Four of those probably speak for themselves, but can we just clear up what's recorded in the column "date/time"?-- My approach to, I suppose, breaking down what had occurred was that, you know, one approach could just be to write a story from start to finish, so just write a story over the whole 14 days. Another approach, and that's the approach I took, was to break it down into periods as to when - I think I've written a description of how I selected a period in the flood event report. If I might just refer to that?

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Please?-- Okay. It says, "Each table below covers a period of" - sorry. This is on page 9 of the flood event report. Apologies.

Thank you. "Each table below covers a period of the event during which one of the following occurred", and there's bullet points?-- That's right.

So there's just a block of time in which one of the things described in the other columns occurred; is that correct?-- That's right. I guess - obviously if you chose a period where there was no rain, and no gate operations, and a steady flow and no change of strategy, you know, the reader would - I judged that the reader would be confused as to why that period was broken down. So I tried to choose periods where something significant occurred or something of interest that the - you know, something the reader would be interested in in terms of understanding what occurred during the flood.

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And perhaps more than one thing in a block of time?--  
 Certainly more than one thing. Because again the idea with the flood event summary was that, you know, it was a summary, so we didn't want to make it - I didn't want to make it, you know, 100 pages. I wanted to have something that was readable, and I know it's 22 pages or something, but that's about as fine as I could get it.

Sure. So I was taking you to page 5 and just pointing out that as at this draft - we understand this was a draft - you had the transition from strategy W1E to strategy W2 occurring at sometime between 3 p.m. on 7 January and 2 p.m. on 8 January; is that correct?-- That's correct. That's what's in this draft.

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If we looked at page 10 of this draft, it would demonstrate that the transfer to W3 occurred at sometime between 7 p.m. on 9 January and 1 a.m. on 10 January?-- Yes, that's in this draft, yes.

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And page 15 records the transition W4 occurring at sometime between 4 a.m. on the 11th and 10 a.m. on the 11th; is that right?-- That's correct. Well, yes, that's correct.

And this is why I asked you about the date and time. Do you at any point in that document attempt to pinpoint the time of the transition in any greater detail than that other than to capture that it occurred at some time between those times specified?-- Well, in the final we do.

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I understand?-- In this one - I would have to read it to tell you. I'm not familiar with this particular draft. But if you tell me I didn't, I'll take your word for that.

No. Well, the document, I'm supposing, will speak for itself. Can we approach it this way: if you did mean to pinpoint a particular time, which you do - and we'll come to that in a moment?-- Okay.

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It would appear in the text; is that right?-- Well, I mean, this - I think - can I just - I mean, the background of that draft, you've got to understand, as you've taken me through to this point, that, you know, I understand that draft's got errors. I'm trying to-----

No, no, I'm not suggesting that - that's not my purpose?-- Okay.

I'm just tracing through the thought processes and the difficulties which I think - I think we can demonstrate some of the difficulties which you've already described in your statement, okay?-- Thank you.

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I'm not going to take you through each one, but I just want to demonstrate some of the changes along the way?-- Okay.

Can I then you then to item E to annexure JT-1, page 9 of that

document, which - please take your time to look at it, but I would suggest to you that at this stage in the development of the report, at this draft, the change to the strategy from W2 to W3 is recorded as occurring sometime between 2 p.m. on the 9th and 7 p.m. on the 9th; Is that correct?-- Yes, that's what that draft says, correct.

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And this might be really pushing it, but - I appreciate this was a work in progress - do you remember now how or what caused that move in the time during which the transition from W2 to W3 occurred? To remind you, in the earlier draft you had it between 7 p.m. on the 9th and 1 a.m. on the 10th. In this one it's 2 p.m. on the 9th and 7 p.m. on the 9th, so it's coming back a bit earlier.

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MR AMBROSE: Excuse me, Commissioner. We can't identify item E by reference to the document that's referred to.

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COMMISSIONER: Mr Callaghan, can you help?

MR CALLAGHAN: We're just using the schedule at the back of the witness's own statement.

MR AMBROSE: Even on the screen it doesn't identify it as item E and nor does the document that we have.

MR CALLAGHAN: It's an e-mail of 25 January 2011, 4.37 p.m., identified in the witness's own statement in the Index to Annexures of JT 1 as E.

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MR SULLIVAN: Commissioner, can I just potentially assist here?

COMMISSIONER: Yes.

MR SULLIVAN: I act obviously for Mr Tibaldi. When we were producing the statement we sent a copy of this Exhibit before we sent the statements, so we wanted to give the Commission the exhibits as early as possible, and I think on the exhibits that we gave the Commission early it might have had A, B, C, D, E written at the top of the documents so the Commission could tell from the index what they are.

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COMMISSIONER: Okay. Mr Ambrose doesn't have that; is that what you're telling us?

MR SULLIVAN: Well, it may be that when it was electronically sent through, the A, B, Cs and Ds didn't appear in the electronic copy and that may be where the confusion is.

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COMMISSIONER: Yes.

MR SULLIVAN: And I think what my learned friend may be referring to is the early version, the one we sent through to the Commission earlier for their use.

MR CALLAGHAN: We just passed on the version we received when-----

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MR SULLIVAN: That may be just simply the confusion.

COMMISSIONER: Thanks, Mr Sullivan.

MR CALLAGHAN: The e-mail attachments are chronological. Do you have them?

MR AMBROSE: No, not yet. I have got it now.

MR CALLAGHAN: 25 January 4.37 p.m.

MR AMBROSE: Yes.

MR SULLIVAN: Commissioner, the key to the sequence is the e-mail attachment, so E will be only identified specifically by the fact it was sent 25 January 2011 at 4.37 p.m.. So, to the extent that somebody has the document without the A, B, Cs and Ds, they can tell the document by that date.

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COMMISSIONER: Thanks, Mr Sullivan.

MR CALLAGHAN: And, Mr Tibaldi, you have had a bit of time to think about my question?-- Mmm.

And it was whether you can now recall what it was in the evolution oh of your thought processes which caused the shift in time attributed to the move to W3?-- Well, this is draft 5 of 50.

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Yes?-- One day into the process. All I can note on that page is there's still a lot of data missing. I - you know, I have no recollection of that draft.

All right. If we can't-----?-- Obviously it's my draft, but-----

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Yes, sure, but if we can't say specifically what it was, can we say at least this, that it would have been something to do with the data that you didn't have or something to do with information which you were still gathering?-- Well, it developed as data, I think you can see, you know, work through those 21 drafts as those question marks start turning into numbers you start developing a picture of - as to what's occurring.

Right?-- But while there's question marks there you don't know information that's required to understand what's occurred during that period.

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And we can see the sort of information that you're looking at there, for example, on the document that you have got in front of you you don't have the Somerset Lake level forecast; is that correct?-- That's right, yes. That's one of the things.

That's the sort of thing that you were accumulating as the drafts developed; is that right?-- That's right.

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Okay. Well, I will take you through to the item M, which is an e-mail of 28 January 2011 at 3.41 p.m.. I will give everyone a chance to turn that up. This is another e-mail attaching another version of the same document. I suppose the only difference is that this one is called on the e-mail a Flood Event Summary as opposed to a Decision Review, which is the title of the other e-mails, I think. Is there any

significance in that?-- Well, you will notice that - yeah, the significance is that - I think if you look at G - sorry to take you back to an exhibit. 1

Yes?-- I will just quickly explain it without going back there. G's called - I think that was our first attempt at a table of contents and then I think after - I think perhaps in that table of contents you will find we might have a section - I have to look - called a Flood Event Summary. 10

Right?-- So, you can see then that after G the drafts start being called Flood Event Summary, because our - you know, our thinking as to how the structure of the report would come together was developing.

I follow. Well, in this document, and we're on M, I can take you to page 5, again you have got a record here transition to W2 - from W1 to W2 and that's occurring at some time between 9 a.m. on the 7th and 3 p.m. on the 7th; is that right?-- That's what that document says, but that's an incorrect statement. 20

Yes?-- But that's what the document says, yes.

Well, you have got a later version which makes it clear that's not the way you saw it; is that right?-- That's correct.

And we can see the words there "Transition from Strategy W1 to W2 once it becomes apparent that the Wivenhoe Dam level is likely to exceed 68.5 metres." Was this when you first factored in the significance of the lake levels, specifically Wivenhoe's lake level?-- I have to go back and look through the earlier drafts. 30

All right?-- I doubt it. I think I would have been aware of lake levels by the time I got to draft whatever number that one is.

All right?-- Eleven or 12. 40

Well, there's certainly provision for lake levels to be taken into account. As you say, sometimes there's question marks, sometimes there's figures other than that?-- Yes.

Okay. Can I take you to item P, which is an e-mail 1 February 2011 - sorry, just excuse me. Sorry, I take that back. That's the date of your statement. It's an e-mail of 31 January 2011 at 4.22 p.m.. I take you to page 5 and it's here that you record that the transition was made direct from Strategy W1D to W1E to W3?-- Yes, but there's still a - in the second column, third paragraph down, there's still - oh - oh, no, that's correct, yep, yep. 50

Yes. So, it shows that W2 was skipped and the W3 transition occurred at some time between 3 p.m. on the 7th and 2 p.m. on the 8th; is that correct?-- Yes, that's right.

But clearly, as we've pointed out, this is still a draft and

it retains some features of the earlier drafts. If we were to look at page 7 in the "Background" column it's still referring to strategy W2 as at 1 a.m. on the 9th?-- That's right. 1

You just haven't got around to amending that?-- Yes, well, you can go backwards in strategy. Whether or not I was - had that thought or whether - I just hadn't amended it and realised it was W3 at that time, I'm not sure.

Yes. Perhaps just to take it one step further, if we go to page 9 at a later period in time, some time between 2 p.m. and 7 p.m. on the 9th, you have got another transition from W2 to W3. So, it could be one of two things, you might have worked out that you were going back and forth between strategies, or that you just hadn't got around to amending that part of the document; is that right?-- That's correct. 10

Okay. And do you recall that was something that occurred, maybe something else that caused you difficulty, was that you did actually find that you were moving back and forth between strategies as you were working this out?-- No. I guess fairly early on it was clear to me - it might not be reflected in the drafts there, but it was clear to me we had gone from Strategy W1 to W3. I was concerned about that because even though it ultimately reduced the final peak level of the flood, I was concerned because I thought it could have been a breach of the manual. If - there's a flow chart on page 23 of the manual that I developed and under the conditions that were operating in the flood at that time it appeared that going from W1 to W3 was not in accordance with our flowchart and that - as I said, even though it did reduce - ultimately provide a better result, I was concerned about a breach at that time. 20 30

All right. So that is the process that you have described in your statement and I think-----?-- That's correct.

And we will come back to that in a second, I just want to show you one final annexure to - or one final item in that annexure and that's item O, which is an e-mail 31 January 2011 at 4.21 p.m., sent just one minute before the one we were just looking at, and this is a different document, I think, it's the document perhaps which was headed towards chapter 10 of the March report; is that right?-- I haven't got it in front of me, but I know the document you're referring to. If you go down a bit on the screen, I could confirm that. Yes, that - even though that's headed number 7, that eventually became section 10, I believe. 40

That's right. And in this document it's not just - excuse me. Page 12 of that document, you have got, in the middle box at the top towards the third block of text in that box, you have got, "Accordingly, Strategy W3 was adopted for use at 8 a.m. on Saturday, 8 January 2011."; is that right?-- That's what it says there. 50

That's the form of words that is actually used in chapter 10 of the report, I think; is that right?-- I just have to look

again to confirm that, but if you're telling me it's there I am sure it is.

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Well, we can check, but is it true to say that this is the first time in your development of the report, it would appear that that was the first time upon which you fastened on 8 a.m. Saturday the 8th as being the time that W3 was adopted; is that correct?-- I have to check the drafts.

Well, I just-----?-- I don't know.

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Sorry?-- Well, you showed me-----

I showed you the draft?-- It appears the one directly before said that. Now - I mean, I don't - I'm - I can't confirm it without looking, but I - I'm happy if that point's made.

The drafts will speak for themselves?-- Yes.

But the adjacent one, if you like, the one that you sent to yourself one minute after this-----?-- Yes.

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-----document still had that W3 in that range?-- Yes.

But this document sent a minute either side of it actually fastens on the time?-- Okay.

And that's what suggests to me that it might be the first time that you actually fastened on the specific time?-- Yeah, no, that - that seems reasonable, but I can't recall.

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Sound okay?-- Yes.

Now, coming back to the difficulties you were having with W2, you explain in paragraph 26 of your statement your reasons for the conclusion that W2 had not been implemented and, in essence, it was because of your analysis of the flow rates at the time; is that right?-- Yeah, that's right.

Your analysis of the flow rates at the time and what was required by the manual for W2 meant that W2 could not have happened by your reckoning?-- We certainly weren't in W2 at that point in time, the release rates were just too high.

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Okay. Now, you explain in your statement how you discussed this problem with Mr Peter Allen. You presumably told him what you were doing, that is writing the March report; is that right?-- Yes. He would have been aware I was drafting a report at that point.

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Yes. And you told him what you were doing?-- Yes.

You would have told him how you were doing it?-- Look, I can't recall the conversation. The impression of it I had was that - you know, I did have concern that we had gone from W1 to W3 directly.

Yes?-- And that wasn't in accord with the flowchart.



I suppose what I'm getting at is you would have told him or to make sense of this conversation you'd have had to tell him that you were trying to work out which strategy had been applicable, try to work out when it had changed, what it had changed to, those sorts of things?-- Oh, well, I didn't go to any detail, because - you know, ultimately Peter would - Mr Allen would be one of the people that would be judging the report, so I would have talked in general terms, not specifically. That would be my recollection of how I would have approached that call. Now, I can't remember exactly, yes.

10

That's all I was-----?-- Yes, okay, right.

That's all I was suggesting to you, that you were talking in general terms about what you were doing and how you were doing it?-- About the delimma I was having with-----

Yeah?-- Yeah, the transition, yes, that's correct.

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You were trying to work out which strategy had been applicable?-- Yes.

And specifically that there was this problem with the flow-----?-- Yeah.

-----you were trying to make fit, if you like; is that right?-- I guess what I'd say is if you look at the manual and where the strategies are described, we - we were wholly and without question within W3, you know, the level was too low, the lake level was too low - too high to be in W1 and the flow was too low to be in W3, so we could only be in W3. That wasn't my delimma, I could see we were in W3, that wasn't a question. My delimma was there's a flowchart on page 23 of the manual earlier before the schedule - the strategies are described in detail that doesn't allow for that transition from 1 to 3.

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Suggests you should have been in 2 and that's what you were worried about?-- It suggested we should have been in 2 but I can see from the facts that we were certainly in 3 at the time.

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Okay. Now, you must also have discussed this problem with Mr Ayre at some stage; that's right?-- I would be fairly certain that at some point - you know, when there was a fairly advanced draft and I can recall when I used to give him the draft I would run it through - you know, I just can't recall the process of giving him a draft but I would have mentioned this issue because it was a big issue in my mind at that time, given that I'd drafted the erroneous flowchart in the first place.

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Do you recall the issue arose upon providing Mr Ayre with a draft?-- No, no, I knew fairly early on in the drafting process that it was looking like there was going to be a problem.

That's what I'd suggest to you, that an early stage when you were still in the flood operations centre working on this report you raised with Mr Ayre the issue that the criteria of W2 could not technically have been achieved?-- I can't recall doing that. I wouldn't say my belief but my thought is I wouldn't have done that because I - I was concerned that the error was my error and I guess - you know, because of the flowchart issue, so I wanted to think it through until I'd made a - you know, until my thoughts had developed to a point where I was confident that what I was presenting, you know, was right and highlighted a potential discrepancy with the manual.

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You were concerned that the error in recording the transfer to W3 at 8 a.m. on the Saturday was your error?-- No. What I was concerned about was that because it didn't accord with the flowchart, because we'd made this large jump in outflow from the dam, it didn't really accord with that flowchart, even though it's well within the intent of the manual and, as I said, ultimately it made the flood peak low, still technically it was a breach of the table in the manual and - flowchart in the manual and that was a flowchart that I had initially drafted.

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I perhaps worded that poorly. When you say you were concerned that the error was your error, what do you mean?-- Oh, that if at that time it had been judged that breaching or at some later point it had been judged that breaching - you know, not using that flowchart was a breach, then essentially I drafted it so - I drafted the flowchart, so - yeah, I had a bit of - a little bit of concern about that-----

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I see?-- -----given the seriousness of the flood.

Well, if we can just recap on your methodology in writing the report at this stage, you were assessing the data and I suppose all the information you had available to you?-- That's correct, you know, the official written records I was using plus - which were the Situation Reports and the different things we talked about, but the data was coming - the numbers were coming to me from Mr Malone. As he was going through the verification process he would provide them to me.

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And you were, as we can tell from the drafts, calculating the strategy which must have been in place by reference to that information?-- That's right. As I progressively developed an understanding, I would - as you can see through the drafting process, I would provide an explanation, I would put things forward, I would test them, and then either accept or reject them depending on what I found through the data.

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Yes. And I'm specifically talking about the Wivenhoe manual strategies W1, 2, 3 and 4?-- Yes.

Yes. Because as we've - well, I will put this to you: Mr Ayre's given a statement, a further statement, which we received only yesterday, but in it he suggests - and I will

suggest this to you - that strategy labels are generally only attributed after the event as part of the reporting process; do you agree with that?-- I guess to - given the first flood I have been involved in as an engineer was October 2010 and we are talking about January 2011, I guess I'd have to go back and look through the earlier flood reports that exist, which I haven't looked at anything prior to the October 2010 to make a judgment on that. Mr Ayre's got a lot of experience in that, he's been involved since 1996, so-----

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So you can't say?-- I couldn't say.

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When says-----?-- I would have to go and check.

When he says "generally" you can't comment on that, but there's no doubt that's what you were doing in-----?-- Oh, certainly.

-----January, you were attributing strategy labels as part of the reporting process, you were-----?-- Correct.

20

-----preparing the report. You agree with that?-- I agree with that.

Okay. So, the description of transfers in Strategy W1, 2, 3 and 4 and so on is, you'd agree, the reconstruction of events with the benefit of that data that you performed in January of 2011, perhaps finishing on the 1st of February?-- Finishing on the 1st of Feb?

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Or thereabouts?-- I think it would have been quite a bit later too - oh, it could have been around, it's hard to say.

You have made that point, I'm sorry. We don't have all the drafts?-- Yes.

Okay. All right. Well, that was what was happening in late January at least and in early February.

COMMISSIONER: Can I just go back though? Did you agree with the substance of the question, never mind the dates, that it was a reconstruction-----?-- Certainly-----

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-----of what had occurred?-- Certainly a reconstruction. I wasn't there for extended periods, as I have explained in my statement, and all I - the only way to - you know, it was a reconstruction certainly.

MR CALLAGHAN: Okay. Now, the report was reviewed by some eminent experts; that's correct?-- You mean the final report or-----

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Yes - well, the March report was reviewed by-----?-- Yes, that's correct, sorry.

-----Associate Professor Apelt, -I am not sure of their titles, but Brian Shannon, Leonard McDonald and Greg Roads; is that correct?-- Yes, that's correct.

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And were you aware that the report was being reviewed - was being reviewed by these people?-- Yes. During that time I was in the liaison in terms of just giving - because I was, I suppose, controlling the document, I would have physically given them their copy of the report, I - in some cases it might have got delivered. We give it to them in hard copy, so it was, you know, similar to the thickness that it is now would be my recollection, but, yeah, I - I was certainly aware of it and I had some role in just engaging them, I guess - Seqwater engaged them but in terms of just contact - yeah.

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Any other involvement with these people in terms of the content of their reports?-- If they had clarifications while they were going through the report, they would have contacted me.

Do you have recollection of that occurring?-- I certainly can't recall any from Mr - Mr Roads. But the others, there may - there may have - who was the three? Len McDonald. The others there may have been. It is possible. But I think Mr Roads, though - I remember when I dropped off the document, I remember that was - I recall that was the first time I'd ever met him and I can't recall seeing him since, so I would think it unlikely with him. The other three possible - all possible.

10

Do you not have any recollection of any interaction between the other three?-- Between the other three or between-----

Well, yourself and any of them?-- What I'm saying is there could have been some interaction. I can't remember any specific interaction between myself and the other three, but there well could have been, because, you know, I can recall there was a couple of questions, I just can't recall who they were from or what they were about, as I sit here now, but I think there was some questions. That's all I can say.

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Well, specifically, can I ask you do you recall any interactions with Professor Apelt?-- I can certainly remember having some conversations with him. The content of those conversations, I couldn't tell you.

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Well, in what circumstances would those conversations have occurred?-- Look, I can't remember. It was about this time. Again, I'd never met Professor Apelt before that time and I can recall meeting him for the first time around then. I recall there was - you know, as you said, he is an Emeritus Professor at the University of Queensland. To engage him, it was through the university's research or consulting branch, which I think is called Unisearch, and I can recall there was a lot of issues. I think there is problems - you know, administrative problems in terms of how that arrangement worked. We certainly would have discussed that. Look, I just - I can't recall any other discussions. I just can't.

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You can't recall any content or any discussion you might have had with him about the content of the report?-- Nothing specific in - as I said, nothing specific. I cannot recall anything specific I had with him in relation to the content report but for him, for Len McDonald, or Brian Shannon, I may have had discussions. I can't recall them.

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I take it if there were any such discussions, there is no record of them?-- I can't imagine that there would be. I can't-----

You didn't keep any-----?-- They wouldn't have been minuted. No, I don't keep records of that nature.

All right. You were aware that the reports of these people were going to be submitted to the Commission of Inquiry?-- I believe that would have been my expectation at that time.

Excuse me for a moment. I suggest to you that you had a meeting with Professor Apelt on the 7th of February at SunWater's premises. Does that jog your memory?-- No.

No?-- No, I can't recall that meeting.

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All right?-- I cannot recall that day or that period.

Can I show you an email of 6 February 2011? Does that jog your memory?-- Oh, well, I still don't recall that meeting but-----

I will show you-----?-- -----it is certainly an email saying I will come to SunWater on Monday the 7th, no later than 12.

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Okay?-- It's an email from him to myself.

I will tender that email.

COMMISSIONER: Exhibit 1,037.

ADMITTED AND MARKED "EXHIBIT 1,037"

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MR CALLAGHAN: Can I show you an email from slightly later - or some eight minutes later on Sunday the 6th, an email from you to him? "Sounds good. Sorry I missed your call. See you tomorrow"?-- Yes, that certainly confirms-----

Does that jog your memory about contact that you had with Professor Apelt?-- Well, as I've said a number - no, it doesn't. And as I have said a number of times, I have no doubt I would have talked to the three of those guys during that period, but specifics of it, I have no memory. If we keep going through these emails, though, we might find something that-----

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All right. Well, I will tender that one.

COMMISSIONER: Exhibit 1,038.

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ADMITTED AND MARKED "EXHIBIT 1,038"

MR CALLAGHAN: I will show you another one from 19 February, 8.55 p.m., an email sent by Professor Apelt to you?-- So this is two weeks later?

Sunday - ah, the 19th of February, that's right. It should be on the screen in front of you. Have a look at that. Does that jog your memory?-- I can't - as I said, I can't recall that email but I can certainly recall talking to Professor Apelt and the other two that I've mentioned.

I didn't hear you?-- No, that doesn't jog my memory.

Middle paragraph of that one, "As mentioned by telephone, there was an exercise of discretion on 11 January at 21:00 when Wivenhoe gate openings were below minimum recommended settings. In my considered opinion this was appropriate and fully in accordance with the intent of the manual."?-- Yes.

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Does that jog your memory?-- I am sorry, it just doesn't.

It just doesn't?-- What he's referring to there is we closed down the gates which - not strictly in accordance with the manual, but that ultimately, again, made the flood peak less, a lot less. So that's why he's saying, "It is fully in accordance with the intent of the manual." But there was an exercise in discretion. I think the next email you are about to show me was shown to me yesterday by my lawyers, which is, I think, my distribution of this to the other flood engineers. I can't recall seeing this yesterday. I don't think it was shown to me. So in terms of my memory of - you know, if you show me that email-----

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All right?-- -----I will remember it because I saw it yesterday.

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We will show you the response on 20 February, 3.57 p.m. I am sorry, I will tender that one if I haven't already.

COMMISSIONER: Exhibit 1,039.

ADMITTED AND MARKED "EXHIBIT 1,039"

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MR CALLAGHAN: 20 February, 3.57 p.m., where you distribute Professor Apelt's email to the others?-- Yes.

The other flood engineers, "See email below. I don't agree with 'the discretion' words and will sort that out next week." Does that jog your memory?-- Well, as I have said, no. I saw that yesterday, and I told you that before, and I told you also before it didn't jog my memory. I don't know how many times you want me to say it. I mean-----

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Well-----?-- You know, what do you want me to say?

Well, I want you to explain how you are going to sort something out with someone who is meant to be reviewing this independently?-- Well, it's probably a poor choice of words,

but, you know, that was an email written in haste. I don't think someone - the likes of myself would be able to sort out Professor Apelt. To suggest that, I think is-----

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Well-----?-- Obviously you don't know Professor Apelt. I guess, you know, what was I trying to say? I wasn't necessarily trying to say I will do something to Mr Apelt. What I'm trying to say there is that "there could be an issue here and we'll look into this next week". I agree I haven't used those words exactly as that in the email. In my mind, that wasn't a particular problem because taking those actions, what he's referring to in terms of discretion, made the flood peak a lot less. So in my mind that wasn't an issue. If it ended up in the manual being - if it ended up in the report being an exercise in discretion, well and good. It wouldn't have concerned me either way because it reduced the flood peak. But certainly to suggest that, you know, I was going to go and, you know, somehow sort - sway Professor Apelt from changing - I think, you know, that's just not true and there is no possible way that would occur.

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We'll just trace through a couple more. I tender that one.

COMMISSIONER: Exhibit 1,040.

ADMITTED AND MARKED "EXHIBIT 1,040"

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MR CALLAGHAN: We will just trace through a couple more emails on the same subject. There is one on 21 February, 5.45 p.m., sent to you by Jim Pruss. Can you just remind us who he is?-- Mr Pruss is the Executive General Manager of Water Delivery - sorry for smiling. I just saw the email. I can't recall seeing that. So - oh, that's my email, right. Sorry, I was just reading the email as it came up in front of me. Mr Pruss is the Executive General Manager of Water Delivery, and he - that's the section I work with him.

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Okay. Now the email that's come up in front of you is actually from you to him?-- Yeah.

But the one from him to you appears below it, is that correct?-- Yes.

His at 5.45 p.m.; your response at 6.21?-- Yes.

And, again - well, the terms of the email speak for itself, but you're recorded as telling Mr Pruss that "Col is wrong on the discretion stuff, in my view. I will sort it out tomorrow."?-- That's what the email says, yes.

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All right. If we go to - I will tender that.

COMMISSIONER: Exhibit 1,041.



ADMITTED AND MARKED "EXHIBIT 1,041"

MR CALLAGHAN: If we go to the next day, 22nd of February, you sent Professor Apelt an email, which I will show to you now. I will give you a moment to read that?-- Yes.

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Starting point is "as discussed", "Colin, as discussed". That would suggest that there had been a discussion between you and Professor Apelt on this point?-- Certainly, yes. That's what it says.

You have no recollection of it?-- Not specifically. As I have said, no.

No, all right?-- I can certainly recall discussing different things with three of the experts I have mentioned. Not Mr Roads, because I can't recall ever talking to him from that initial meeting. So, yes, certainly I would have had some discussions with Colin. Given I've written this email, it appears that the discussion must have been about this reasonable discretion issue that he had raised in his draft report-----

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All right?-- -----and we'd talked about it. Without question, that's what it says.

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"For the gathering tomorrow". Which gathering is being discussed there?-- I wouldn't know what gathering that was. I - could have been one of the meetings to review the manual that was held in the Seqwater offices. To see if it was, you would have to check the minutes of those meetings - which weren't kept by myself - and see if Mr Apelt attended.

To be fair to you, can we scroll down to the bottom - the very bottom of that email. Does that assist?-- Yes, that I did not attend that meeting.

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All right. Are you aware of what the meeting was about or whether anyone from-----?-- Yeah. I do remember that meeting now. You could check with Colin, Greg and Brian - Professor Apelt, Mr Roads, and Mr Shannon. I guess the - my understanding was that the experts were aware of that there were other experts reviewing the - reviewing the draft report, and they considered, appropriately - and it is for others to judge whether it was appropriate or not - they all had, you know, developing thoughts as to what, you know, they thought of the report, and they were going to get together - certainly appears that way there - and have a discussion about it. I certainly believe I was not at that meeting but you could confirm that by talking to the three meeting participants. As I said, I don't have a good recollection of that period. I believe you will see their three reports are entirely different, so obviously - well, that would suggest to me that they certainly weren't getting together to have some sort of

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unified report. But I can't recall that email chain but the email chain suggests to me that Professor Apelt was still developing in his mind the position that he would take in relation to that discretion, and I can't - again, I can't recall what was in his final report. I don't think he's mentioned it. I think some of the others may have mentioned it in their report, so they thought it was an exercise in discretion. Professor Apelt may - again, I would have to read the reports to confirm that. You know, as I say, I wasn't - it wasn't a big burning issue for me either way because I was - I knew that it was an action that reduced the flood, so it just wasn't something that I was concerned about then, and, to be honest, I'm not particularly concerned about it today because of the fact that the actions we took at that time certainly reduced the peak. That's unquestionable.

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All right. I tender that email.

COMMISSIONER: Exhibit 1,042.

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ADMITTED AND MARKED "EXHIBIT 1,042"

MR CALLAGHAN: Just for completeness I will show you an email 22 February, 3.39 p.m. That's Professor Apelt's response to you?-- Okay.

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No recollection of that?-- No.

All right, I tender that.

COMMISSIONER: Exhibit 1,043.

ADMITTED AND MARKED "EXHIBIT 1,043"

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MR CALLAGHAN: And moving forward then to the 7th of March, 9.17 a.m., Mr Pruss sent an email to the relevant gentlemen and you were CC'd on it?-- Yes.

In which the questions framed were framed for them?-- Yes.

And any - you were volunteered as the person to answer any technical questions, is that correct?-- That's what that email states and I - yes, I have a recollection of that email.

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Do you recall whether you were contacted with any technical questions by any of the people to whom this was sent?-- Yes, I do. I will give you the background to the email.

No, just answer my question, please?-- Sorry. My apologies.

Were you contacted in response to-----?-- Yes.

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-----the invitation? By whom?-- By - well, I can certainly remember that - Mr Nathan and Mr Hill coming to the flood room to undertake a review of their sections of the report. So they would have arranged that. I can't recall the conversation but they certainly would have arranged that through me, just in terms of what time they were going to arrive, and, you know, because they wanted to - I mean, their role was validation of the models and validation of all the technical information that's contained in the report which they wrote a report of. The only way they could do that, as I understood it, was come to the Flood Centre, see how the models work, review the models, et cetera, and I certainly arranged that.

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All right. I tender that one.

COMMISSIONER: Exhibit 1,044.

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ADMITTED AND MARKED "EXHIBIT 1,044"

MR CALLAGHAN: Finally in this trail, there is an email from 9 March, 11.58 a.m. which you sent to Professor Apelt?-- This is after the report's finalised, is it?

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Professor Apelt's final report is dated 9 March. It may well have been finalised before that, but you seem confident that it had been, is that correct?-- Well, this - the flood report is dated 2nd of March-----

Yes, Professor Apelt's-----?-- That previous email you showed me is dated 9th of March so-----

The previous one I showed you was the 7th. This is the 9th?-- 7th, my apologies. So certainly that's well after - I mean, the cut-off for printing of this report.

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Yes?-- Yeah.

But it is also the same date as Professor Apelt's final report. Do you follow? You are still in communication with him?-- No, that's the 9th of March. This went - this report - the report I'm talking about is the Flood Event Report.

Yes, which Professor Apelt was reviewing?-- Yes. Sorry, can you go back to the previous email? I have missed your point there.

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You don't have to worry about my points. Perhaps just look at that email?-- But I may have answered it - what I'm saying is I may have answered a previous question incorrectly because I didn't note the date on the previous email.

The previous email was the 7th of March. That was the one from Mr Pruss to others requesting - where you were-----?-- Okay. So, at that stage the report's been finalised and publicly issued.

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Your report has but this is all about the process of reviewing that report?-- Okay, I am with you.

With me?-- Yes, sorry.

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These are the gentlemen who were reviewing it?-- Yes.

As was Professor Apelt?-- Correct.

So I don't know - do you feel concerned about the accuracy of any of your answers now?-- No, I think I'm-----

I suggest to you you shouldn't because what you said made sense?-- My apologies. I just got slightly confused with one of the emails there.

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I understand. We're back on 9 March, 11.58 a.m., one you sent to Professor Apelt, and you refer to the prospect of a meeting with him on the 14th to discuss the timetable and scope of review work that Seqwater would like him to do. Presumably this is review work other than review of the March report?-- Well, yeah, I am not sure. It could have been the review of the - we also did a report for the North Pine flood and I would have been writing it at that time. Whether it was - I - to be honest I don't recall whether he reviewed that report. If he did, that could be - that could well be a meeting about the review of that report.

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It refers to a number of flood reports?-- Oh, okay. Well, we also did a - also we did a flood report for the floods that occurred for North Pine between, I think, January and - between - you know, for the 2010/2011 wet season that weren't covered by these main reports. So there was - I don't know if they have been tendered, but they have been submitted to the-----

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All right?-- To the Dam Safety Regulator. So it wasn't just the January events that we were writing reports for at that time; we were also writing reports for the flood events that impacted Brisbane between October 2010 and the end of December 2010.

All right?-- Yeah, so-----

I tender that one.

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WITNESS: There is a large number of reports, I think, there.

COMMISSIONER: Exhibit 1,045.

ADMITTED AND MARKED "EXHIBIT 1,045"

WITNESS: Again, I can't recall but taking what it says in the email, that would be my expectation. I am uncertain whether Professor Apelt reviewed those reports or not. I would have to go and check records.

MR CALLAGHAN: Well, I'm not suggesting that - I will start that again. You clearly did have some communication with Professor Apelt in the period during which he was reviewing your report. You would agree with that?-- Definitely, yes, correct.

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You may have had contact with some of the other gentlemen who were reviewing your report?-- Yes, that's what I've said a number of times, yes.

In any of your communication with any of these gentlemen, did you explain to them the method that you adopted to write the report?-- I can't recall doing that.

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Does it follow that you can't recall whether they asked you to explain the method you adopted to write the report?-- Yes, that's right. That would be a question for them to see if they can remember any of those conversations.

I am about to change topic. Madam Commissioner, will that be convenient-----

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COMMISSIONER: We will take the morning break. We'll come back at quarter past.

THE COMMISSION ADJOURNED AT 10.54 A.M.

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THE COMMISSION RESUMED AT 11.15 A.M.

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JOHN VICTOR TIBALDI, CONTINUING EXAMINATION:

MR CALLAGHAN: I want to turn now to some evidence that was - that relates to the way the dam was actually operated back during the period with which we're concerned. Can I take you to Exhibit 24, which is the flood event report, and to Part 9 of that report. So I want to ask you some questions about release rates. Perhaps if we go to page 155, and if you go three rows up from the bottom of that page, the data relevant to 8 a.m. on 8 January 2011, the lake level is 68.52 and the outflows are 927 CUMECS; would you agree with that?-- Yes, I would.

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One row down, 9 a.m. that day, outflows 980 CUMECS?-- Yes, correct.

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And if you just skim through the next 24 hours of data, I would suggest to you that the inflows are slowly increasing. By 8 a.m. on the 9th, which is four rows up from the bottom of page 156, the outflow is 1,334 CUMECS; is that right?-- Did you say 9 a.m.? 1,3 - 33, I think, isn't it, to 9 a.m.? But yeah, you're right.

Okay. Well, the releases start to increase a little as time goes by; is that right?-- Which time period are you talking about, sorry?

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Well, say 8 a.m. on the 10th?-- That's Monday. 8 a.m. on the 10th.

10th, yes, 1,944; is that right?-- Yes.

Twelve hours later, 8 p.m. on the 10, 2,695?-- Yes.

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And so on. You don't need to worry about those figures at the moment, just agree that the maximum release rate in W1 is 1900 CUMECS?-- That's correct.

That release rate was not exceeded until 8 p.m. on the 9th?-- That's correct.

But there is no minimum release rate within W3; you agree?-- That's correct, yes.

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Within W3 it may well be appropriate to release less than 1,900 CUMECS?-- Very much so. You've got to be aware of what's in the river, not what's just coming out of the dam. Obviously, there's other catchments.

There's a lot of other factors involved?-- Yes.

So those release rates in isolation, if we go back to 8 a.m.

on January 8, were through, indeed, to the period at 8 a.m. on the 10th, those figures in isolation could be consistent with being in W1, 2 or 3?-- Certainly, yes. If you only looked at the flows, I agree with you, you could be in any strategy there.

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Right. Can we turn now to the topic of situation reports, technical situation reports, and the flood event log, which are the principal source of contemporaneous evidence of things other than data. Between 8 a.m. on the 8th and 9 p.m. on the 9th, I would suggest to you that there were four situation reports, two technical situation reports, and 23 flood event log entries relevant to what was happening at the dams. You obviously haven't added those figures up?-- Okay.

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But does it sound broadly consistent?-- Yeah, it sounds fine without checking it, yes.

All right. Now, during this period there could have been a reference in any of those documents to W3 or a reference to prioritising urban inundation. It would have been open for someone to record such a thing if the dam was being operated in W3 at that time?-- Well, there's no restriction on what information you put in the situation reports.

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Quite?-- It's not - so you could write that for certain, yes.

I might show you a schedule of the entries that's been prepared with the relevant parts excerpted, and I accept that you're seeing that for the first time, but you're probably familiar with the documents from which it's been prepared. The proposition is that in all of those documents there is no mention of urban inundation?-- Yes.

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And on the other hand, there is in all of the situation reports a mention of keeping certain bridges open?-- I haven't read those, but I will take that - I could see that could occur, yes.

I tender that.

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COMMISSIONER: Exhibit 1046.

ADMITTED AND MARKED "EXHIBIT 1046"

MR CALLAGHAN: Of course, keeping bridges open is the primary consideration prescribed by the manual for the purposes of strategy W1?-- Yes, that's correct. I don't think it puts it in terms of keeping bridges open. It talks about rural protection.

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I stand corrected?-- Yes.

I would suggest the only mention in any of this material of

any of the strategies referred to in the manual is in the situation report of 5.53 p.m. on 8 January and in the flood event log entry of 3.30 p.m. on 9 January; would you accept that?-- Without checking it thoroughly, I accept it.

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You were scheduled to start your shift at 7 p.m. on Saturday, the 8th?-- That's correct.

Do you recall whether you had any conversations with anyone prior to coming in to the Flood Operations Centre? Did you ring in or-----?-- My - well, I was on leave at the time away from Brisbane. It's noted in the report there, but I can't recall it specifically now, that I must have got a phone call on the Friday at some point to come back to Brisbane to assist in the flood centre as a - work as an engineer. My recollection is I drove back - checked out from where I - I was with my family. We checked out of where we were late that morning, because obviously we were booked until next day, and drove back to Brisbane. And I expect that I would have just come straight into the flood centre from there, but I can't recall the exact circumstances of what happened.

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That's right, isn't it? You were coming back from holidays. You would have known little about the situation at the time?-- Yeah, that's correct. I was aware it was raining and someone had told me the previous day to come back. But in terms of what was going on, how the flood had developed to that point, it's not something I would look at while I was on holidays.

No. So it would have been important at that time to appraise yourself of every aspect of the situation as fully as you could; would you agree with that?-- Well, certainly I would have to be very aware as to what my responsibilities were for my shift and what the approach was at that point in time.

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We've already canvassed what usually happens at a handover of shift?-- Yes.

Did this one proceed along those lines?-- I have no recollection of the handover. The handover would certainly have occurred. I can't imagine that it wouldn't have. But I've got no recollection of that day apart from the fact I came back from holidays.

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Do you recall any discussion with Mr Ayre about the strategy which had been adopted pursuant to the manual?-- I have no recollection whatever of any - of anything that took place on that day in the flood room. I just have no recollection. Obviously I was there in the flood room; obviously I was operating the flood room; there must have been a handover. But in terms of any part or, you know, smallest amount of - like, I just - I have to recollection of it.

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I understand your answer, but I nonetheless have to take you to some certain materials?-- That's fine.

And in particular to the situation report issued at 5.53 p.m. on 8 January. This is in other materials, but it will be



convenient to tender another copy, which I'll do.

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COMMISSIONER: Exhibit 1047.

ADMITTED AND MARKED "EXHIBIT 1047"

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MR CALLAGHAN: This document would have been prepared by Mr Ayre; is that correct?-- Yes. That's - again I don't have a recollection, but it's safe to assume he would have prepared that. He was the duty engineer at the time. I've never heard anything to the contrary, so-----

Would it be a sound assumption also that even if you can't recall actually doing it now-----?-- Yes.

-----you would have reviewed this document at some stage, either after arriving or during - either on arrival or during your shift?-- Yes, I have an expectation that at some point I would have read that during the shift.

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That would have been the most obvious way to appraise yourself of what had been going on?-- I wouldn't necessarily say the most obvious way. I mean, you can get a good appraisal - obviously you get an appraisal at handover. The other thing I like to do even more so than looking at the situation reports is really examining the rainfall data, particularly over the periods, examining the flow data. It gives you a better understanding of what's occurring at that time, you know, how much rainfall have you had in the last one hour; how much have you had in the last three hours; last six hours; 12 hours; 24. So you're looking back to see what's going on. What are the river flows doing? Are they up or down? What are the dam levels doing? So I'm not a big one for, like, reading a lot of text. I would prefer to look at the data. But there's no doubt I would have looked at this at some stage, because the situation report I wrote at the end of that shift, I would have used this as a pace. That's my standard practice.

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You told us about the sorts of things that are important to you in getting yourself up to speed with what's going on?-- Yes.

What about the choice of strategy pursuant to the manual; is that something that would have been discussed?-- It's not - it's not standard practice to discuss it at a handover. What's more important at a handover is to - as you can see from the manual, and I think as you alluded to before, what's your considerations for that shift? What objective are you following for that shift? Our objective for that shift, as I've written in the flood report very clearly, was that we were aiming to keep Mt Crosby weir bridge and Fernvale bridge open over that period. That's clearly stated. I can't imagine that Mr Ayre wouldn't have explained that to me at handover. So my role in that shift was to - as the flow in

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the river dropped, I was to increase the Wivenhoe releases but not take out the bridges. It was very clear we were focusing on the bridges at that point. You can see the lake levels, both Wivenhoe and Somerset, were falling at that point, and they were falling as if we could go back into W1 at that point. Because if they dropped below 68.5, we would have fallen back into W1. In terms of what strategy we were in, whether - I couldn't say if it was in the forefront of my mind or not if I put my mind to it. I could easily see that we weren't in strategy W1 because it was over 68.5, and I could easily see we weren't in strategy W2, if I had checked, because of the fact that we were just releasing too much water. As I said, whether that was in my mind at that time, I couldn't say. But certainly there's no question at that time, even though we're in strategy W3 - as we're allowed to, and as the manual requires - that we were protecting the bridges - the two highest bridges.

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You're in W3 because you worked out that's what you must have been in?-- Since - you mean in the flood report?

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Yes?-- Yes, that's correct.

And let's just say at the time you did read that situation report, and you read that it, as stated, says, "Will require the application of Wivenhoe Dam flood operations strategy W2"?-- Yes.

Do you have that?-- Could you just go up slightly, please?

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It's further down, I think. Second paragraph from the bottom on the screen now?-- Could you go up a bit further, please? I can't see it. That's it.

Do you see it now?-- Yes, I do.

If you'd read at that time, "Will require the application of strategy W2", the inference being that it's still in W1, you'd agree with that?-- No.

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Well, it's future tense, isn't it, "Will require W2"?-- What you've got to realise about strategies is that even though they are numbered sequentially, you don't necessarily go from 1, 2, 3, 4. You can go from 1 to 2; you can go from 1 to 3; you can go from 2 to 3; you can go from 2 to 1; you can go from 3 to 4. So you can jump around anywhere, depending on what's occurring. What he's saying - I mean, I've read this, obviously, since, you know, this has been brought to my attention in the last few days that it did say strategy W2. I guess what I would have thought at the time or what I did think at the time when I read it, I couldn't tell you. I can't recall. But one thing I would point out to you is that it does say there that the interaction with runoff from the Bremer River and Warrill catchments is an important consideration, as the event magnitude will require the application strategy W2. A better way to think of strategy W2 is that it's used when rainfall in the Lockyer and Bremer catchments dominates, not - W3 is more about when rainfall in

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the upper Brisbane dominates. See, if rainfall in the Lockyer  
Bremer are dominating, that means that the peak that will be  
determined by the flows from those two - from that river and  
that creek really potentially dictate what your highest peak  
in the river is, so that's what you want to try and get under.  
If you're getting little rain there - and this was pretty much  
the January event. You weren't getting so much there.  
Certainly in this early part of the event. I know obviously  
there was a lot of rain occurred there later - then the upper  
Brisbane's dominating. So what you're trying to do then, you  
know, the peak from this uncontrolled part of the catchment  
will be so small, that what will control the peak in the river  
is what you are releasing out of Wivenhoe.

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Sorry, the point is-----?-- Yes.

-----the entry suggests that there will be a requirement to  
move to W2. Do you agree with at least that much?-- Well,  
that was his judgment at that time, yes.

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Yes?-- Yes, no doubt that's what it says.

If you had read that at the time - and I appreciate you say  
you can't recall anything about this - but if you had read  
that at the time, the necessary inference was that you were in  
W1 at that time?-- Why do you say that? Why couldn't have we  
been in W3 at that time, which we were.

Because how do you transfer from W3 to 2? It's only by the  
lake level dropping, isn't it?-- No. It will be determined by  
the change in the-----

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In the flow rate-----?-- -----in the natural peak placed on  
the Lockyer Bremer.

Fair enough. So you say that that could be a transfer from W3  
to W2?-- Well, I don't know what's in his mind. All I can say  
to you - if I read that, that not - wouldn't necessarily have  
looked at strategy W2. What that's saying to me is you'd  
better have a look at Warrill/Bremer, because there's a big -  
potentially, you know, the duty engineer at that time was  
expecting a fair flow of water from that area. So I would go  
and have a look at the rainfall in that area, as I said, over  
the - you know, just the history of rainfall; what was  
happening; whether there was rain occurring at the time; and  
probably have a close eye on that through my shift to see if  
his expectations as to a big flow occurred.

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You just said-----

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MR O'DONNELL: Mr Tibaldi hadn't finished his answer. My  
learned friend has cut him off now several times. He should  
be allowed to finish.

HER HONOUR: Yes, was there something else you want to say?--  
I'm fine, thanks.

Could I ask you though, just so I've got it clear, what are

the conditions in which you could drop back from W3 to W2? 1  
 What would determine that?-- Okay. Just say - just have a  
 consideration of the actual January event, and say on this  
 Saturday, the Saturday that we're considering here, if all the  
 rain just fell in the Lockyer and Bremer catchments such that  
 if you ignore Wivenhoe Dam, the natural peak from those two  
 areas, say, might be in the range of, say, 3,000 CUMECS,  
 something of that nature. What that would mean is that - just  
 say you've got no rain above Wivenhoe, so you had plenty of  
 space in Wivenhoe to store some water. What you would do then 10  
 is you would start shutting Wivenhoe down until that natural  
 peak passed through the river system because you'd have space  
 in-----

I understand the reasoning behind that. But what in the  
 manual permits you to do it and what are the triggers, if  
 any?-- I beg your pardon?

What in the manual-----?-- "What in the manual" - I missed 20  
 the second part.

What in the manual permit you to do it, and what would the  
 triggers be, if any?-- The triggers would be that your  
 estimated natural - so if you just go to - do you want to jump  
 to the flood event summary, I could show you. What or I can  
 explain it, whatever.

Just explain it?-- What the triggers would be is those  
 estimated natural peaks for Lowood and Mogill, they would 30  
 increase substantially, but your lake level in Wivenhoe and  
 Somerset would not rise substantially, and that would cause  
 your transition to W2. There would be a flood like a '74  
 event where Lockyer/Bremer is sort of dominating. I did write  
 something to say that - you know, it could be clearer for  
 people, instead of writing W1, W2, W3, W4, we write bridge  
 protection strategy, Lockyer/Bremer dominating strategy, Upper  
 Brisbane dominating strategy, and then water level danger, dam  
 safety strategy for W 4. So I think, you know, sort of  
 reflecting on this issue over the last few days, you know, I  
 can see that the sequential nature of the way they are 40  
 presented in the report W1, W2, W3, W4, straight way there's  
 an inference that you go 1, 2, 3, 4, and you don't jump  
 around. That's wrong. You can see in the manual where we've  
 talked about that but obviously not given it enough  
 explanation. I think it's on page 22. I'll just find it. If  
 you look at the - say 22 of the manual that was used during  
 the 2011 flood event, look at the second-last paragraph there.  
 As I said, I know the concept that I just provided to you is  
 not well explained there, but I guess that is a reference to 50  
 it where we say, "Strategies unlikely to change during a flood  
 event, as forecasts change and rain is received into  
 catchments. It is not possible to predict the range of  
 strategies that will be used during the course of a flood  
 event at the commencement of each event." So there's going to  
 be a range of strategies. "Strategies are changed in response  
 to change in rainfall forecasts and stream flow conditions to  
 maximise the flood mitigation benefits of the dams." So as I  
 said, it's just probably clear to someone that understands the

intent behind these strategies. We certainly have tried to address that in the latest revision of the manual, and we have changed the - even though we haven't changed W1, W2, W3, W4, we've changed their descriptions. 1

Can I just take you on to this strategy flowchart on the next page of the original manual. What I want to know is at the time that you were talking about, which is 5.53 on the 8th?-- Yes. 10

Was the maximum flow at Lowood likely to be less than 3500 CUMECS and the maximum flow at Mogill likely to be less than 4,000 CUMECS?-- Yes, it was, and again this is the dilemma associated with this flowchart. This flowchart, when you read that, it puts you in strategy W2 - that's where it puts you - at the time we transitioned from 1. But based on the outflow from the dam, which was just so much higher than what's allowable on W2, we couldn't have been in that strategy. That was the dilemma I was talking about before when I wrote the report. That flowchart is - contain an error which is related to that, and I believe that in a statement I gave to the Commission on 1 April I talked about that. And also I've noticed since - actually, I noticed yesterday that - but I may have realised it before - that particular error is also alluded to in the expert reports written by Mr Shannon and Mr McDonald. So that doesn't necessarily help you. But when you look at the strategy descriptions, so if you go down a bit to strategy W2, probably on about two or three pages, and just down a bit more, you can see that when you're in W2 you've got some targets about what you're trying to set as the flow in the river. And when you're in W2, because of the fact that Lockyer/Bremer rainfall and runoff is dominating, you've got a much higher natural peak there. So if you're in W2, what you are trying to do is keep water in the dam and let that peak pass, and once it's passed you start releasing again from the dam so you don't actually increase what that natural peak was. I believe if you look at some recent flood events, just the characteristics of those, most notably the flood event that occurred two weeks before the January event, which was the - I think it's referred to in a report as the late December flood event, you'll see that that has occurred. There's been a conscious decision to invoke W2 where we had quite a high release from the dam, or a release in the order of 350 or 400 CUMECS, something of that order. We've cut it down to 50, let the natural peaks flow through from the Lockyer/Bremer, and then we've recommenced higher release rates, and that's what strategy W2 is about. It's not about 1, 2, 3, 4. And I accept, having drafted those sections initially, that 1, 2, 3, 4 is confusing, because you're just thinking 1, 2, 3, 4. But it's not 1, 2, 3, 4. It's - you've got to think about what the strategy's about, the intent of it, and what you are trying to do within those strategies. So, yeah. 20 30 40 50

All right. Thank you.

MR CALLAGHAN: The short point to be made - we'll get to the manual later on. I want to come back to what was actually happening at the time?-- Yes.

I think you probably summed it up by saying you didn't know what was in Mr Ayre's mind?-- That's right.

You can't recall now any conversation that you had with him or anything that might give us a clue as to what was in his mind?-- Correct.

And for that matter, you can't recall your own state of mind at that time?-- I can't, no. That's correct.

10

In terms of manual strategies?-- That's right. That's correct.

You were on shift from 7 p.m. on the 8th to 7 a.m. on the 9th?-- Yes, that's - to 7 a.m. on the 9th, correct, yes.

And the same would apply, does it, in respect of the strategies to be pursued according to the manual W1, 2, 3 or 4, for a start would you agree that you made no record of the strategy or strategies that you were applying during your shift?-- That's correct. I'd just make the point there too that I think in the - sorry, no. In the Commission's interim report that has been picked up already, and in our situation reports that we issue now it's standard practice to write in the strategy.

20

And you have no memory now of the strategy contemplations that you may have undertaken during that shift from 7 p.m. on the 8th to 7 a.m. on the 9th?-- Well, very - I have no recollection of my contemplations at that time.

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Your shift ended at 7 a.m. on the 9th. As we have agreed, the next engineer on duty was Mr Malone?-- Yep.

1

Again, we have discussed the concept of a shift handover. You have no recollection of any conversation about strategy with Mr Malone?-- No, no recollection of - not only - I cannot recollect that particular handover or - you know, just about any - I'd say all happened-----

All right?-- Except maybe the Tuesday morning, I recollect that handover to some extent, but apart from that I have got no recollection of any handovers.

10

Later that day-----?-- I'm saying they occurred, but I just don't recall them.

Later on the 9th, 3.30 p.m., there was a teleconference?-- Yes.

You were not in the Flood Operations Centre at the time?-- That's right. My recollection of that teleconference was that I began unpacking my car from - as a result of returning from leave, perhaps I'd had a sleep that morning, I can't remember, and in the midst of unpacking my - you know, the conference commenced and I was talking on my mobile phone.

20

You would have seen the entry in the Flood Event Log, which is Exhibit 23 - this is the one we have called the Unredacted Flood Event Log - you would have seen the entry referable to 3.30 p.m. on the 9th?-- Yes, it's been brought to my attention in the last period of time. I have a reasonable expectation I would have read it some time before then.

30

I missed that, I'm sorry. There was a cough?-- Oh, sorry.

"I have a reasonable expectation that"?-- I would have read it at some stage but I can't recall reading it initially, but I think it's reasonable to expect I would have in the course of drafting the report.

40

You would have read that in the course of drafting the report?-- I can't recall reading it but I think it's reasonable to expect I would have, I did go through the log.

N okay. And at this stage it says, "At this stage operating at the top end of W1 and the bottom end of W2."?-- Yes.

Clearly, that's not the way that it's reflected in the final report which you wrote?-- Yes, well, clearly we couldn't be in W1 because the lake level was too high, we couldn't be in W2 because the flow rate was too high, so.

50

So, it was not the appropriate - neither 1 nor 2 was the appropriate strategy to be in at that time?-- You couldn't correctly say that you were operating under either of those at that time.

No. So, to the extent that that records, if it records, the state of mind of all of you at the time, it records the dam was being operated other than in accordance with the prescribed strategy; is that correct?--

1

MR AMBROSE: It doesn't say that, with respect. Our learned friend should use the terms that are actually used in the Log Event Report, "At this stage, operating at the top end".

COMMISSIONER: Sorry, what is your issue, the prescribed strategy as opposed to what's described in the report?

10

MR AMBROSE: Yes, what's written in the report.

COMMISSIONER: Right. Mr Callaghan?

MR CALLAGHAN: Right. If the dam was, indeed, operating at the top end of W1 and the bottom end of W2, it was being operated other than in accordance with the manual; is that correct?-- That's correct. You couldn't be operating at W1 at that time, the lake level was too high and, as I said, you could not be operating in W2 either, so it's just - you can't operate in those - I mean, the manual is clear, you can't - it doesn't give any you allowance to operate in W1 in those times and then you just can't be in W1 because the lake level was physically too high, I mean it's a physical-----

20

I appreciate you're on the phone during this conversation but you don't recall any exchange in which anyone expressed dissent at the proposition that the dam was operating at the top end of W1 and the bottom end of W2?-- My only recollection of that phone call is - you know, having been on that night when the - both lake levels just dropped towards - I thought we were going to go under W1, I thought we were going to back under 68.5 I believe, may not have, but just the way it was dropping if you look at my shift in isolation and the fact that there'd been no rain during the shift, my - I didn't realise - again I'm not at work so you don't realise what's occurred between when you leave and the point of that phone call, so I hadn't realised the physical amount of rain that - you know, obviously I would have talked about it during that call, but it didn't register and I can just remember thinking these guys are getting unnecessarily concerned, but obviously they were 100 per cent right to be concerned at that time and - yeah, I just didn't appreciate what was going on at that particular time.

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40

Right. So, the answer so any question there was no dissent from the proposition?-- Well, I can't recall what the discussion was.

50

You can't recall?-- Apart from my impression that I couldn't understand what why they were getting concerned.

Do you actually have any recollection of your impressions at the time or is this-----?-- No, that's a recollection of my impression at the time, I couldn't understand why they were getting concerned, but I can't - you know, I just remember



unpacking stuff and I was holding the phone and as usual in those situations the three people, and there's someone on the line, the three people in the room or however many there were, I think there was a flood officer there, were dominating the conversation and I was - I was listening - listening in, you know, I wasn't on duty, I was just listening in.

1

All right. Well, move on. There was a Situation Report at 9.04 p.m. on the 9th?-- Yes.

10

It's in the March event report, Exhibit 24, at appendix E, pages 21 and 22. Go to the last paragraph on page 21. Do you recall reading that?-- No, I don't recall reading that. Again - so this is 9 p.m.?

9 p.m. on the 9th. Your next shift was 7 a.m. on the 10th?-- I'd say the first time I would have read this - I can't recall reading it at all - would have been when I wrote - when I was putting the report together.

20

All right. So, you may well have done your shift on the 10th without having seen that report?-- Well, I would have looked at what the previous, like I - when is the next Situation Report, is it at 6 a.m. or is it - is this the most current one to me coming on shift?

Well-----?-- That's what dictates what I would have read. If it's the most current one to me coming on shift I have read it. If there was one at 6 a.m., I haven't-----

30

All right?-- -----in terms of coming on shift.

That's probably all I need to know. You wouldn't have read that one if it was not the most recent one?-- Correct.

Is that right? Okay. Thank you?-- At the time.

At the time you obviously read it when you were preparing the report?-- During a flood event you're concentrating - you're focussing on what's going on and what's going on into the future. I mean, it's good to have an awareness of how things have occurred, but once they occur you are moving on to new model runs all the time and looking at the rainfall that's coming and rainfall on the ground and trying to anticipate what's going to occur and what your decisions are going to be. So, two Situation Reports ago, well, it's not -----

40

Well, I will take you to the next one of 6.30 a.m. on the 10th?-- Yes.

50

That's at pages 25 and 26 of appendix E. This is the one that you would have seen; is that right?-- Well, it's - I'd expect I would have read this for certain because it was the Situation Report leading into me commencing shift.

MR AMBROSE: I will just make a correction, if I may. The next Situation Report is not the one that our learned friend has referred to, the next Situation Report is

Situation Report 13.

1

MR CALLAGHAN: All right.

COMMISSIONER: What time is it, Mr Ambrose?

MR AMBROSE: That's at 1.14.

MR CALLAGHAN: But the point being you said, I think, that you would read the most recent one prior to your shift and that's the one-----?-- Yeah.

10

-----that's on the screen now 14; is that right?-- You're right there. I - to me this would be the one I would have read.

Yes. Thank you. Now, as you will recall, the last time you were here there was a lot of focus on the transition to W4 on the 11th of January?-- Yes.

20

You've confirmed your evidence that the transition to Strategy W4 was made at 8 a.m. on that date; is that correct?-- Yes, it is.

Just moving away from the reports and the data and so on, presumably that was a memorable moment for you?-- Oh, yes, yeah, I can remember that Tuesday morning.

Yes. And specifically the transfer to W4 at 8 a.m.?-- Yes.

30

That is one thing that you would remember without the need to refer to-----?-- Oh, yes, that's clear - I have said in my statement, that's clear in my mind that-----

Yep?-- That period.

Okay. Can I ask you to comment on something said in the statement received from Mr Ayre yesterday? I will tender the second statement of Mr Ayre.

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COMMISSIONER: Exhibit 1048.

MR CALLAGHAN: I might tender the sixth first actually and then the seventh.

COMMISSIONER: All right. The sixth will be 1048 and the seventh is 1049.

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ADMITTED AND MARKED "EXHIBIT 1,048 and 1,049"

MR CALLAGHAN: I am taking you to the seventh and specifically to paragraph 14. Have you seen this before?-- No. If it's a statement from yesterday, no.

Can I ask you to read paragraphs 14 through to 20?-- Is it possible to have a paper copy or-----

1

Yes?-- Just so I can-----

Yes, it is?-- Of just that section is fine. Thank you. Yes.

And did you read paragraph 31? I think I said 14 through to 30, but can you read 31 as well?-- I thought you said 14 through to 20.

10

COMMISSIONER: I think you did.

MR CALLAGHAN: I probably did. Can you read 30, just perhaps just read 31?-- So 14 to 20?

Fourteen to 20 and then 31?-- Okay. I have read that.

Fourteen to 20 are talking about a W2 style release?-- Yes.

20

In effect, I'd suggest to you, holding back water until the natural peak passes; would that be right?-- I believe that's what he's trying to say there, yes.

Yes. Would it be fair to say that that was in broad terms the policy that was adopted until the level got too high to maintain that strategy?-- Well, it depends where the rain's falling. You can do that if-----

I am asking about the January event?-- Oh, the January event. Oh, sorry, ask that question again.

30

I'm asking if that was in effect how the dam was managed?-- In W1 you mean or - what-----

No, as a general proposition that the water was being held back until the natural peak had passed. That was your concern, yours and the other three?-- "Waters being held back until the natural peak had passed."? I thought he was talking in general terms here about W2 style, I didn't-----

40

Yes, I am asking you though-----?-- Yes.

-----about what happened in January?-- Oh, well, it wasn't a W2 style of release because, you know, the peak flows in the Brisbane River were being dictated, in that early part of the event, by what was being released from Wivenhoe as we were - you know, getting as much - getting water out of the dam.

All right?-- This is on - we're talking here about the - you know, the - while we were in - like we're talking here from, say, the 6th to the - say, the Monday.

50

Yes?-- Yes. Right.

Okay?-- Good.

Can we move back to that period and the period immediately

after the peak of the flood? Can I take you to Exhibit 25, which is an e-mail?-- Even after the peak of the flood, so this is on Tuesday now.

1

14th of January. This is an e-mail of 14 January at 3.46 p.m.?-- Oh, yes.

This is the one where Mr Ayre said, "We need to ensure we have a consolidated view on things before information is distributed."?-- Yes.

10

Do you now recall receiving that?-- I don't recall that e-mail, I recall it was raised in the first - correct me if I'm wrong, my recollection it was raised within the first - you know, lot of hearings here. I didn't recall it at that time and I don't recall it now, but-----

All right?-- I believe - oh, yeah, he sent - look, I just don't recall that e-mail.

20

All right. If you don't recall, you don't recall. I will ask you some questions about the 15th of January?-- Yes.

You were on duty until 7 a.m. on that date, I'd suggest to you?-- The 15th, that's the Saturday. Yes, that's correct.

There's an entry in the Flood Event Log, Saturday, 15 January, 11.30 a.m.. That's Exhibit 23?-- Yes.

And it records that Rob Drury rang to request a summary of the Operations Manual for Wivenhoe?-- Yes.

30

"Terry to provide after checking with all duty engineers."; is that correct?-- That's what it says yes, that's right.

All right. You are aware that Mr Malone was - or that reflects that Mr Malone was to prepare a summary of the way things had occurred?-- Was I aware - do you mean as a result of that entry or some other recollection I have? I'm not sure what your question is.

40

Were you aware that Mr Malone was preparing a summary of events I believe to be prepared for Mr Borrows?-- On that day?

Well, that's what that entry reflects?-- I have no - I have no - as I said, I have - my recollection of that day is-----

All right?-- -----extremely limited. My understanding is I did a shift that night, finished at 7 a.m., went home-----

50

I will refresh your memory?-- Good. Thank you.

I will show you an e-mail from Terry Malone at 1.02 p.m. on the 15th of January, an e-mail which attached a draft summary. I will let you read that?-- Yes, that's the-----

That's the e-mail?-- Yep.

Highlight the red, "JT bring out the red pen!."?-- Yes.

Do you remember that now?-- I do not remember the e-mail. The reference to, "JT bring out the red pen.", is for anyone that would know me when I'm sent a document to edit often the document doesn't look the same - you know, there's no comparison between the first document and what I have finished with.

10

All right?-- That's what that's a reference to, but, yeah, I don't remember that e-mail at all and-----

Well-----?-- But it's been sent to me without question, my e-mail address is on it.

Can we look at the summary that was attached to it? I will put a hard copy in front of you. Take your time with it?-- I think someone has shown it to me either yesterday or the day before, so-----

20

Really? I didn't think this one had been in The Australian?-- I don't need to read it in detail. Do you want - do you wish to say - ask me a question about it?

Did you read it at the time?-- Look, I have no recollection of it, but I can't imagine that I wouldn't have.

You were being asked to bring out the red pen so you were being asked to review it with your usual thoroughness?-- Exactly, yes.

30

Exactly. You can't imagine that you would not have done that?-- Yeah, look, just in fairness to me, I would like to explain, you know, the state I was in-----

No, no?-- -----on that day.

No?-- Okay. All right. Keep going.

40

I am asking you-----?-- Yep.

-----whether you-----?-- My answer is I don't recall that e-mail, I don't recall that document, I don't recall ever reading that document. That's-----

Have you been shown that document recently?-- Yes, I was shown it - that's what I said. I was shown it yesterday.

By your own solicitor?-- Yes.

50

I follow. All right. And you have got no recollection of anything you might have said about it, done to it?-- I just have no recollection of that day.

All right?-- Like I just - I just don't.

Okay?-- Yeah, it's just how it is.

I tender that document.

COMMISSIONER: Exhibit 1,050.

ADMITTED AND MARKED "EXHIBIT 1,050"

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MR CALLAGHAN: Can I suggest to you that the Flood Event Log records that you arrived at the Flood Operations Centre at 1.45 p.m. on the 15th?-- If that's in the Flood Operations Log, I would accept that, I would expect that's what occurred.

That's Exhibit 23, and the entry at 2 p.m. on that date reflects that there was a phone hook-up involving a number of people?-- Yes.

20

Mr Malone, Mr Ayre, Mr Drury, Mr Allen, Mr Borrowes, Mr Bradley and Mr Riley; is that correct?-- Yes, I can see that there in the Flood Log.

Do you recall anything about that conversation?-- I cannot recall that hook-up. To be honest, until you showed that to me now, I thought I'd been at 240 Margaret Street all that day because that's where I was receiving and sending e-mails from, or I was sending them from my Seqwater e-mail account. You know, no-one brought this to my attention yesterday so me seeing it now is the first time I am realising that, yeah, I must have visited the Flood Centre that day.

30

The point being that there was a requirement to prepare a report for the Minister. Do you recall that?-- What - I don't recall that. What I-----

You don't-----?-- My recollection is now, that I think about it, is there was to be a press conference and they wanted one of the flood engineers to go and I just couldn't go, I just couldn't. Sorry. I just can't remember that day.

40

COMMISSIONER: Do you want a little time, Mr Tibaldi?-- Thank you.

We will just adjourn briefly.

THE COMMISSION ADJOURNED AT 12.06 P.M.

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THE COMMISSION RESUMED AT 12.13 P.M.

1

JOHN VICTOR TIBALDI, CONTINUING:

COMMISSIONER: Are we right to keep going?

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MR CALLAGHAN: Can I show you a document which is an e-mail sent to you at 6.57 p.m. on the 15th of January? It's titled, "Event Strategy Summary.", it attaches an Excel spreadsheet titled, "Strategy Summary Blog.", and appears to have been sent to you by a Rob?-- Yes, that was shown to me on the 27th of January this year. That's my recollection of it. I mean, I know it was e-mailed to me a year previous to that, but I cannot remember this e-mail, I cannot remember that spreadsheet ever coming to me, even though obviously it's been e-mailed to me, and it's been e-mailed to me, there's an expectation that I would have opened that e-mail and looked at it, but I have no recollection of that whatever.

20

Well, I will show you another e-mail, timed at 7.51 p.m. from you to the duty engineer e-mail account. Now, I'd suggest to you you weren't on shift at that time, Mr Ruffini would have been?-- Yes.

But that document would suggest that you are forwarding the document which had been received from Rob a little under an hour earlier, would it not?-- Yes, that's what it suggests, sure.

30

You have got no recollection of forwarding that document?-- None whatever. I - you are probably going to show me a series of e-mails here and that's fine, I cannot remember that day, I just cannot, but I am happy for you to show them to me and go through it.

40

Well, I am more interested in the attachment than the e-mails. Before I lose track of them I should tender the e-mail of 6.57 p.m., followed by the one at 7.51 p.m.

COMMISSIONER: The first will be Exhibit 1051 and the second Exhibit 1052.

ADMITTED AND MARKED "EXHIBIT 1,051 AND 1,052"

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MR CALLAGHAN: Perhaps I will give you a hard copy of the one from 7.51 p.m. which you have sent?-- Thank you.

Can you look at the attachment? You say you have seen that recently; is that right?-- Yes, I believe that Seqwater

lawyers sent it to me on the 27th - it was during a recent flood event, just before I started a shift, so it would have been a night, probably the 27th, maybe the 26th, I can't remember. Of this month, you know, just several days ago.

1

And you are honestly saying you have never seen that before?-- Well, I have no recollection of it. I'm not saying I have never seen it before because there's an e-mail with my name on it that shows it's come to me and there's an e-mail with my name on it to say I have sent it off. So, I think you could take from that that - I think it's a reasonable conclusion to say I have seen it but I have no recollection of it whatever, and that's all I can say to you.

10

Even the bright yellow lines that seem to delineate the selection of strategies don't ring any bells?-- I have looked at this thoroughly, because it's been brought to my attention. I'm sorry, I don't recollect it. That's all I can tell you. I can't - you know, we could sit here and I could stare at for an hour and I might be able to reconstruct something in my mind, but I have no recollection of that spreadsheet whatever. I do not recall that spreadsheet. There's many things that happened to me in that period that I can't remember and this is one of them. It is just how it is. So, that's all I can say.

20

COMMISSIONER: Mr Tibaldi, your e-mail goes to Duty SEQ, is that duty engineer at Seqwater?-- No. Remember right at the start of evidence today we talked about this generic - the way the Flood Centre was set up there was a generic account, which all the engineers and the flood officers have access to, I believe that's that account. That's my understanding of that.

30

Right. Thanks.

MR CALLAGHAN: If you have been taken to documents from this time on the 15th, presumably you have been taken to one at 9.10 p.m. on the 15th?-- Yes, yes, I have.

See, you were the one who was preparing the report for the Minister, were you not?-- That's correct. Oh, I was preparing a part of a report for the Minister, that's correct.

40

Well, do you recall that process?-- No, I don't.

You don't recall-----?-- I do not recall that at all. On the same day that spreadsheet was shown to me it was put in front of me the e-mail and the Ministerial I prepared and I don't remember them. I have no recollection of it whatsoever. In fact, I thought they were - you know, I just thought it was wrong.

50

You just thought it was wrong?-- That's just how it is. I mean, I can't - you know, my family tell me things I did at that time - you know, can't remember.

I'm interested in something you just said, when you looked at it you thought it was wrong?-- Well, I thought I - you know,



I thought they were saying I have prepared it but, no, I haven't prepared it, someone else prepared it in terms of that being wrong. 1

I see, I see?-- I thought-----

Well, do you accept the necessary inference that you did prepare it?-- The Ministerial document?

Yes?-- I prepared it, yeah. No doubt. It's - I have e-mailed it with a note. 10

Yes. You have got no recollection as to how you compiled that?-- No. On the 15th I cannot - as I said, I remember the press conference issue and Pete Allen was going to do it on my behalf, I just couldn't, I remember - I remember on the Sunday having breakfast in town because - that's it.

All right. You have been shown the e-mail of 9.10 p.m. of the 15th which attaches the first draft of that report. Are you prepared to accept at least that you sent it?-- Yes. I certainly am prepared to accept I sent that. The only comment I'd make about it is that all the e-mails that were shown to me at that time, I'd sent an e-mail - I think there's a table in that that is in question because it's got a wrong strategy in it, I understand that's why you are bringing it to my attention and I fully understand why you would do that, the only point I'd make is from the e-mail trail it appears that at 7 o'clock or around that time I hadn't drafted that table, because I sent a - there's also an e-mail from me sending - sending out a draft but there's no table there. 20 30

Right?-- And then two hours later the full table's there, so I have drafted it in two hours with - and I hadn't slept for a very long time, and - you know, it's wrong. The table, I see it now, I can see it's wrong, but I can't recall. I mean, how would you expect to get something right, you know, working under those circumstances. I mean, yeah, there's an error in it. There's many errors in it. 40

Well, you say, "How would you expect to get it right?" That's because to get it right in terms of what strategy was applicable you have to go through the exercise you went through to write the March report; is that right?-- Exactly. There's, you know, several weeks of work to - you know, get that correct.

Yeah. It's not a question of asking, say, Mr Ayre, "When did you go to W3?", and writing that down, because that may or may not be right?-- It is just that everyone has different recollections but the only thing that really - you know, gives you the truth is the facts about what occurred, because they're undeniable. Like, anyone can look back with a recollection on something and say this happened or that happened and you might have conflicts, but if you look back at the facts, and the facts are in the releases, the lake levels, the river flows, the rainfall, the Situation Reports which are written, the logs, directives, all that stuff, you can work 50

out what's occurred.

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Well, you can out what should have occurred?-- Well, you can work - yeah, true. Well, you can work out-----

It's what should have happened?-- -----what has occurred. In terms of what's in people's minds and what people thought and the conversations that occurred, well, yes, you certainly can't work it out from that information.

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Well, you work out what must - you would say they must have been thinking if they'd been following the manual?-- That's correct.

Yes. Can we go to the manual and the version of it which was applicable at the time, Exhibit 21, and I will tender the 9.10 e-mail from Mr Tibaldi and attachment.

COMMISSIONER: 1053.

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ADMITTED AND MARKED "EXHIBIT 1,053"

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MR CALLAGHAN: Can we start at paragraph 1.7 on page 4? Do you have that?-- Yes, I can see that.

"The manual contains the operational procedures for Wivenhoe Dam and Somerset Dam for the purposes of flood mitigation and must be used for the operation of the dams during flood events." Do you agree that's what's written there?-- Yes, I do.

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It is fairly clear, isn't it, that the manual requires that it actually be used during the event?-- Yes. That's what that seems to say to me.

That's what that says. If we go to 2.4, we can see the responsibility of flood engineers, and in the second bullet point it provides that "the flood operations engineer is to follow this manual in managing flood events." You would agree with that?-- Yes.

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It is not optional, is it? I mean, the manual must be followed save for the provisions about reasonable discretion?-- I believe that to be true.

Right. That means that a strategy must be adopted during the flood event, does it not?-- Yeah. I mean, the manual gives you the conditions for a strategy that, you know, are based on certain judgments but the judgments are pretty prescribed. I mean-----

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Well, if we go-----?-- I agree with what you're saying.

Okay. If we go to 8.4 which is the part of the manual that details the strategies - and these are the strategies we're talking about - they have all got a trigger point in terms of the lake level?-- Yes.

The manual might express it or might have expressed it in different ways, predicted or actual, but the lake level is the key?-- Yes.

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There can only be one strategy at a time?-- Yes.

And each strategy gives you one primary consideration?-- But lower level objectives must be considered.

Quite?-- But, yes, you are right in what you're saying.

Quite. But there is one primary consideration in each strategy?-- That's correct.

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Except for two, where there is a transitional provision?-- That's correct.

And within each strategy there is a discretion as to how much water might actually be released?-- Yes.

But it is a discretion which is to be exercised by reference

to the primary consideration and the other lower level objectives. You would agree with that?-- That's right, yes. You must take all those things into account. I would agree with that. 1

That simply wasn't done during the January flood event, was it?-- It was done, is my belief. You're saying yourself that the manual dictates a strategy and I agree with you. And if you go through the manual, and on that basis of it dictating a strategy, you will see that the flood event report, the summary, is indisputable. 10

But it is a fiction. It is something that you created at the end of January. It doesn't represent a single thing that actually happened during the event, does it?-- Well, we know the facts-----

In terms of choice of strategy?-- Well, just let me talk. We know the facts. We know - you said yourself that the manual - you know, if there is a change in lake level, there has got to be a change in strategy. That's what you put to me before and I agreed with you. So when a change of lake level occurred, we know that there was a change of strategy and that's what's in here. 20

How do we know that? From the March report?-- Well, you just told me that the manual dictates the strategy.

Right?-- Okay? So if the lake level changes and you know the lake level's changed----- 30

Then the strategy must have changed?-- Then the strategy must have changed.

Irrespective of what the actual engineer operating the dam at the time thought?-- That's correct.

I see. So-----?-- But - yes.

-----there is no requirement, and there was no requirement, for the engineer operating the dam to actually turn their mind to the strategy which was applicable at any given time?-- It is a reasonable----- 40

No, you can answer that yes or no?-- Well, the answer is no.

There is no requirement?-- Well, where is it in the manual?

Well-----?-- As you said, if the manual dictates strategy - and I share your view there----- 50

Yes?-- -----you know, that's the issue. But, you know-----

Sorry, you asked me a question. I would like to answer it?-- Okay.

MR O'DONNELL: Mr Tibaldi hadn't finished his last answer. He started saying "but" and my learned friend chopped him off

with another question.

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COMMISSIONER: But I am not sure that it was entirely responsive to what he was being asked. But notwithstanding, Mr Tibaldi, what did you want to say?-- No. Thank you, but I'm okay.

MR CALLAGHAN: Let's about to 8.4. "There are four strategies used when operating the dam." Not when writing about it afterwards, when operating. Do you agree with that?-- Yes, yes.

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Okay?-- Yep.

If we go a bit further down, "The strategy chosen at any point in time will depend on actual levels in the dams." Well, you say you can work that out later from the actual levels in the dams?-- Well, it is not working it out later. The levels are the levels. They don't change over time. The levels that were in January, in 100 years' time, they are still the levels.

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I know the levels don't change-----?-- Yeah. So what's your point?

-----but you chose the strategy by reference to the levels as you wrote the report?-- Yeah, but, as you agree, the manual dictates strategy.

Yeah?-- Can I give you an example that might sort of clarify it for you?

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No, I don't want you to give me examples at the moment?-- If you don't understand it-----

I want you to stick with this-----?-- -----why ask me about it?

MR SULLIVAN: Well-----

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MR CALLAGHAN: I haven't finished-----

MR SULLIVAN: Well, I am objecting.

COMMISSIONER: Why should the witness have the opportunity to answer things he is not asked, Mr Sullivan?

MR SULLIVAN: Well, your Honour, he is trying to give an example to explain his answer.

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COMMISSIONER: He can do that when you ask him questions.

MR SULLIVAN: Well, if he's asked a question, Commissioner, he should be allowed to give the full explanation to give the responsive answer.

COMMISSIONER: He hasn't been asked to amplify on the basis of examples, and I'm certainly not encouraging any witness to

start volunteering examples that they are not asked for, Mr Sullivan. So you are welcome to ask him later what his answer is.

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MR SULLIVAN: As it please, Commissioner.

WITNESS: That's fine. I'm comfortable.

MR CALLAGHAN: The proposition that we're debating at the moment is that the manual does indeed require a flood engineer to turn their mind to a choice of strategy as they are operating the dam?-- I agree that's a reasonable expectation. I-----

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Okay. It is the only-----?-- I agree with you, yeah. I am agreeing with you.

Okay. And that's not the way it happened during the event, is it?-- Why do you say that?

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Well, what evidence is there to suggest that there was-----?-- Because-----

-----a choice of strategy made by the flood engineers at any time during the January event?-- Well-----

Just tell me the evidence?-- In my mind-----

Yeah?-- In my mind, the evidence is the change in levels, the change in flows.

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Yeah?-- The releases from the dam.

Yep?-- And the conditions around that.

And I accept all of those things-----?-- Yes.

-----should dictate a change in strategy - or might dictate a change in strategy, but I'm suggesting to you that there is not a shred of evidence to suggest that it actually did during the January event?-- Well, I just don't agree with that. I think-----

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Well, just tell me what it is?-- As I have just said to you a few times, it is the data. Like-----

All right. If it is the same answer that you've given before?-- Yes.

We understand that. It is what you went through at the end of January?-- Yes.

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Okay. But there is nothing that's recorded?-- There is nothing I found-----

And nothing-----?-- -----outside what's in the five volumes of the flood event report that I could put forward additionally. That's it.

No?-- I - you know-----

Nothing recorded and nothing that you can remember about the contemporaneous operation of the dam which points to the fact that a strategy was actually selected?-- Well, I believe that based on knowing how the dam was operated, which you can form a picture of, that tells you what strategy was in use. That's my belief.

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But it is all hindsight?-- You might - no, it isn't hindsight. It's - am I allowed to give an example?

Go ahead?-- Okay. All right, so let's have a look at the flood event report and let's have a look at-----

It is Exhibit 24?-- -----the flood event summary. Okay? And maybe let's have a look at page 11, and the top of page 11 talks about period 2 of 20. So that's page 11 of the flood event report.

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Yep. We have that?-- You have it? I have it, okay. So take, for example, there the change in strategy from W1A to W1B.

Yep?-- Now, it is - to me, I suppose this is the way I think of it - and, again, I can see you won't agree, but we'll have to agree to disagree - the way that I think of it is that the manual dictates that when the level exceeds 67.5, there is nothing you can do. You go to strategy 1A, 1B. That's what occurs.

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Yes?-- Well, isn't that an example of - you know, don't you see that it has occurred at that point in time regardless of, you know, what's in people's minds?

Well, there is a little problem with that - and this gets to the very essence of the issue - is that it's a bit late to be having primary considerations by the end of January. You agreed with me that the discretion to be exercised has to be informed by the primary consideration dictated by the manual, and that can't happen after the event?-- No, well, you are judged on the releases you make during the event, which are known.

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That might be one way that you're judged?-- Right.

But another way might be in the way you actually manage the dam and what your primary considerations were?-- Of course.

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Of course. And at no stage was a strategy chosen such that the primary consideration could have been dictated front and centre of the flood operation engineer's mind?-- I don't understand how you could say that. Like, on the - on the - well, for example, when you go on the Sunday, or that night to a flow of 4,000 at Moggill, surely your primary consideration at that point has got to be urban protection. Surely it has to be. I mean, you know, what you're saying is you're taking

it up to the limit of damage. I mean, if that isn't clear in people's minds-----

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The problem is that the primary consideration had to be urban inundation much earlier than that, didn't it?-- No, it didn't-----

8 a.m. on the Saturday?-- We're in W3. W3 is a primary consideration. But put yourself in my shoes, for example - for example - on the Saturday night. The levels are falling, there is no rain. We open up the dam, we'll immediately drop into W1, so then we've got to close down. It just doesn't make sense.

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So it doesn't make sense to have the primary consideration protecting urban areas from inundation at that time?-- In my view, you're in a strategy where that's your primary consideration, but you have still got to consider lower level objectives.

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Yeah?-- As I said, if I had opened up - just say I'd made a decision, "Right, I know I'm in W3. I'm going to open up." Well, within several hours I would be straight back - the level would drop such that I would be straight back in W1, right, because you're massively increasing the outflow. So you've just let a flood pulse down the river that's going to cause damage. For what purpose? To fall straight back into W1? And then you're straight back into W1, you're down to your bridges again. It is just a nonsense. Like, you wouldn't - you wouldn't approach it that way.

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So you - in other words, your approach would be that whatever the manual said, you'd have a better understanding of what was actually required?-- Well, naturally a person that's looking at what's happening in real time, when you can have any number of things occurring, as we said, the way you approach it will vary depending on where your rainfall's falling, how much is falling, how much space you have got in the dams. Of course the person that's managing it in real time can make those decisions and can make those judgments because they've got access to a whole lot of data.

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The way you interpret the manual-----?-- Yes.

-----and that is to say to work out which strategy's been chosen according to the way the data suggests that it should have been-----?-- Yes.

-----it really makes it impossible for it to be said that the engineers were ever in breach of the manual, doesn't it?-- I don't think so. For example, just say that the lake level was 69, and all of a sudden you invoke strategy W4. Well, obviously that would be a breach. Just say you're in W1A and you decided to-----

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Sorry-----?-- -----take out, you know, one of the higher level bridges. Well, obviously that would be a breach. So I think it is - what you're saying is not right because there



can be circumstances where if you reconstruct that, you can see that, okay, the lake level was such that you were in W1, but you really operated by your release - just say you released over the 1,900-----

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Yeah?-- -----as if you are in a higher strategy.

But then you'd just - you'd just-----?-- How could you do that? The facts are undeniable that you should be operating in W1, but you've operated as if you are in a higher level strategy, so that's a breach of the manual.

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Well, then, don't you just write that you weren't in W1?-- But the facts don't show you that because the facts are that your release was much higher than is allowed under W1. Don't you see that?

You get to write the story, though. That's the way you interpret it?-- Well-----

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You get to interpret-----?-- -----I would have been very happy if someone else had come in and said, "I'll write that for you." That would have made me very happy.

Well, no-one - none of the other three ever dissented from the way you did it, did they?-- No.

They're fully - well, you can't say what's in their mind but you must have at some stage discussed the method adopted?-- Where I was the primary drafter-----

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Yeah?-- -----and preparing complete - well, that was obvious because no-one else was drafting.

Yeah?-- Drafting words.

But no-one ever said to you - like, Rob Ayre never said to you, "Actually, I wasn't in W3 then because I was writing about W2", whatever reason, "so that part of the report is not actually right."?-- I believe that was never said to me.

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No. Nothing like that was ever said to you. The other three have always agreed with every word that you wrote in every part that you wrote?-- No, that now - no, that's not true.

Concerning choice of strategies?-- Not every word in every part.

Concerning choice of strategies under the manual?-- Concerning choice of strategies, I'd possibly agree with that. I'd have to go back and look at - I guess a tester of that would be where the strategies changed from my very last email draft, because that was still before - I think there was a few more progressions before then and the final report. Now, if nothing's changed from those two points, I would say that what you're saying is correct.

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Okay. Can we-----?-- That would be the tester.

Can we just come back to 8.4?-- Yes.

And confirm that, if we haven't already, the clear requirement of the manual is to compel a choice of strategy during the event. I want to take you to that paragraph on page 22, second paragraph from the bottom. "Strategies are likely to change during a flood event as forecasts change"?-- Yes.

I mean, one-----?-- Have we got been through this before?

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Well, yeah, it is actually Groundhog Day, but we have been through it before. What's interesting now, though, is the use you make of forecasts when you're choosing strategy after the event. I mean, I suppose it is quite convenient because you can work out whether the rain has actually fallen by that stage?-- Yeah, but you can't change what you did, you can't change your releases, you can't change the flows in the river, you can't change the rain that actually fell. You can't - you know, so, yeah.

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And you can't-----?-- But what's - you know, what's your alternative? Like, I agree with you that it is better to write down somewhere and formally, you know, record what strategy you are in at any point in time. That's been recognised by the Commission and that's what we now do. But it wasn't the practice at that time. So how would you - look, you know, what would you have me do?

COMMISSIONER: Could you have asked the others what strategy they were using? Just ask them to give you an email setting out what strategy they were in?-- Not in that - do you mean during the event, or when I was writing the report?

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When you were writing the report?-- Well, my process when writing the report was to complete a draft, because - there was two reasons for that. One is that Mr Ayre and Mr Ruffini just weren't available. They just had other commitments. I think if we'd all been available, the principal author of the report would have been Mr Ayre. I think. You know, that's more logical. Unfortunately, they weren't available. That's one point. The second point is that in my mind, it is not a great process to be sitting around sort of throwing in ideas and then me go away and try and write the report. I think you have got to start with the facts, you have got to start with what you definitely know. That's my view.

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It didn't strike you that they might definitely know which strategies they were in at given times?-- Well, how do you remember - how do you remember the event? How do you remember 14 days? Particularly - you know, I am not overdramatising what occurred, but it was - it was an emotional time and lack of sleep, it just was. And then, you know, even straight after the event you're trying to remember back what's occurred over a 14-day period. You're only there for snapshots of that. How do you remember that?

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So you didn't think they would be able to?-- Look, I just

didn't give it much thought. The process to me - the best process to me was to go through the facts, go through the data and write a story. You know, write a story as to what had occurred and that was the flood event summary and that started off under a number of different names, but containing all the facts, and then put it to them and see, well, is that what occurred, and that gave them something to test themselves against, too, because it had all the numbers in as well. It had all the, you know, detail, plus we had all the model runs. That was the process I used. I agree with you, though, that there's other processes that could be used but that was the one I selected.

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Thank you.

MR CALLAGHAN: Mr Tibaldi, you must agree that every aspect of the manual that's relevant to this question suggests that it is incumbent upon a flood operation engineer to make a choice of strategy during the event whilst operating the dam?-- Yes, as I said before, it is a-----

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Yes?-- Yes.

And I would suggest to you that it is impossible to read the manual any other way?-- Okay. I accept that.

And I would suggest to you that when you came to write the March report, you reflected on that proposition and wrote the report in such a way as to convey that that is exactly what happened?-- Well, no, because-----

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No?-- -----as I said before, for starters, there is that conflict in relation to the flowchart, and that's definitely not in accordance with the manual, that jump from W1 to W3 at the time it occurred.

No, no, no. The proposition is-----?-- Sorry.

-----that you wrote the manual to convey the impression that choices - you wrote the report to convey the impression that choices were made at the time?-- I didn't do it consciously.

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Oh, you knew that people were going to be looking at it?-- Oh, we were aware it was a public document, for sure, yeah.

Yeah. And you knew that people were going to be looking at it to see if you'd complied with the manual during the operation of the dam, didn't you?-- Yes. Yes.

Yes? And so when, for example, on page 190 of the report you wrote, "Accordingly, it was not appropriate to switch to strategy W2 and strategy W3 was adopted for use at 0800 on Saturday the 8th of January 2011", you were intending to convey the impression that the operator of the dam at that time made a decision and adopted a strategy pursuant to the manual, weren't you?-- No. What seems to have caused a bit of an issue here-----

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No, sorry-----?-- Look, I need to answer the question, so just let me answer, please.

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COMMISSIONER: I think in this instance, Mr Callaghan, Mr Tibaldi should be allowed to answer.

WITNESS: Discussions yesterday about the use of individual words like "adopted" or "used" or "transitioned" or "applied", to me they are just interchangeable, and that's just the way I feel about it. I am not a professional report writer. I have written that report the best I could. You know, you can say, okay, I used "adopted" there but in another place I've used "transitioned" and we can talk about those individual single words, but it is what it is.

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MR CALLAGHAN: It is not a single word?-- Okay.

It is "adopted for use". The clear impression you were trying to convey is that it was used at that time?-- Well, I can't recall that being in my mind at that time, I am sorry, I can't. I just can't. And, you know-----

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It is not just at that time; it is in every statement, every piece of evidence, you or any other - any one of the other three has prepared or presented since that time, there has been a unified presentation of the proposition that these things were done at the time?-- Well, I'd take your - I would have to go and read people's statements to, you know, make that judgment but I can tell you that-----

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Well, stick with your own?-- Stick with my own, okay. Well, have I - do you want to point that - point to me something?

Well, how about your statement, Exhibit 51, at paragraph 34. A statement you, when you were on oath here last time, affirmed and stood by. You said at paragraph 34, "At about 8 a.m. on Saturday, 8 January 2011, strategy W3 was adopted"?-- Yes. So if I'd used the word "used" or "applied" or "transitioned to", would that have - would you find that acceptable, or is it the word "adopted" you're objecting to?

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Well, it is the impression you're giving that something else - that something was in fact done at the time. If it was adopted, if it was adopted. It is not a case of saying "we're adopting it now" or "I adopted it for the purposes of the report"; you're implying that it was adopted for the operation of the dam?-- Well, I don't use the word "adopted" that way. You know, as I said, I could have easily said there, "In my opinion, at 8 a.m. - at about 8 a.m. on Saturday", blah, blah, "we transitioned to strategy W3." Would that mean the same thing to you?

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You said "adopted for use" in the report?-- Well, I haven't said that here.

Okay. Does that get you out of it, does it?-- Well, it is not a matter of getting out of anything. I mean, as I said, it is what it is. I mean, that's what I wrote at the time.

There was no conscious - I have used various ways to describe how we've gone from W1 to W3 in the report, I just have. If you want to get hung up about a word, we can, but all I can say-----

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No, it is not just a word, Mr Tibaldi; it is a coherent impression you were trying to create because you knew that people would be examining the operation of the dam to see if strategies were in fact chosen?-- Well-----

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At the time?-- Well, they can make a judgment on that, as I said, based on the data that's available - all the data provided-----

It is not just the data, though, is it; it is the primary considerations that people's whose homes were flooded are interested to know what was the primary consideration of those who were operating the dam. Was urban inundation a primary consideration at an appropriate time?-- Exactly. And there is-----

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And-----?-- Can I just say there is enough information in the report to make that judgment-----

Oh, there is plenty of information in the report-----?-- Because - no, just let me finish, please. Because, again, when we're in W3, we're clearly saying - clearly saying that at times in W3 our - our considerations were on keeping the bridges open. We're clearly saying that. It is not hidden, it is clear in the report. Well-----

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That's right. You couldn't have said it better?-- -----where - so where is the problem?

MR O'DONNELL: Again, he hasn't finished.

MR CALLAGHAN: Go on?-- Well, if people want to make a judgment that that's not appropriate or not right, well, that's a judgment they can make. Whether we like it or not.

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No, the manual makes the judgment?-- I beg your pardon?

The manual makes the judgment. The manual demands what your primary consideration ought to have been?-- But it also requires - we've talked about it. It also requires you to consider lower level objectives. As I've said to you, if we'd upped the release rate at the time when it is just, you know, a few centimetres above the changeover level, within a few hours you just go straight below the changeover level. That's what occurs, because what you're looking for, to go to primary consideration, you know, is the rain. Now, people have said go on forecasts, and that's a valid way to go if people want to go that way. I just point out to you, though, the flood event we're in at the moment, the forecasts were way higher than what we've experienced. I think the Bureau predicted the amount of rain spot on, but a lot of it fell over the ocean, not over the catchments. It is a judgment that you have to make. I mean, the risk is that if you're going to go down

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that path, that's fine. It makes it really easy to operate the dam, but all it means is in situations like we have had right at the moment, this week flood events - well, people don't realise there is a flood event in Brisbane - there will be inconvenience because we'll be making bigger releases.

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And-----?-- So it is just that - it is just - but the way the manual is at the moment, what it requires you to do is consider lower level objectives. That's what we did. When we consider those objectives, it is just clear in the manual, which said we're in strategy W3, we know what the primary consideration of that is, but we're considering lower level objectives, we are keeping these bridges open. That's what it said in the report. That's what we did. I can't see how it could be clearer.

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Oh, it is pretty clear. It is pretty clear what you did?-- Good.

You wrote that report in a way which was intended to convey the impression that strategies were adopted at the time?-- Well, I'm disagreeing with what you're saying.

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I would suggest to you-----?-- I'm saying - you told me before that you thought the strategies were dictated by the manual. I'm agreeing with you with that. Now you're changing your position. But I agree with your first proposition, you are dictated by the manual. We've looked at data, at certain times required a strategy, that's the strategy that was used. That's how it is.

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You've done that all after the event?-- How could you do it before the event?

Well, how about during? That's all that's suggested, that you do it during?-- Come to the flood room, even an event like, you know, this week, and just see how busy people are in the flood room.

Too busy to look at a copy of the manual? Too busy to-----?-- Of course we're looking at a copy of the manual and of course we're looking at release rates and things like that, but in terms of writing the report, I don't think you can write it during the event.

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No, I'd accept that?-- Good.

But the report, I would suggest to you, was calculated to convey an impression because you were afraid of what people would think if they knew that there had been no choice of strategy during the event?-- Look, you know, I disagree with you. That wasn't my intention. My intention was to present the facts. If because of the way I've written it you feel it is not that way, I'm sorry, but I can't agree with you and I can't agree that was my intention. I am sorry, I just don't agree. We can keep, you know-----

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Yeah, we could, but I would suggest that you have - you and

the others have shown a disregard for the manual during the operation of this event?-- I don't agree.

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And that in the preparation of the report, you've simply shown a disregard for the truth?-- I don't agree. That's wrong.

Thank you.

COMMISSIONER: I think we might take the luncheon adjournment before we go on. So we'll come back at 2.30.

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THE COMMISSION ADJOURNED AT 12.56 P.M. TILL 2.30 P.M.

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THE COMMISSION RESUMED AT 2.27 P.M.

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JOHN VICTOR TIBALDI, CONTINUING

MR CALLAGHAN: I have nothing further of Mr Tibaldi.

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MR RANGIAH: It's been agreed that I'll cross-examine first - or next.

MR RANGIAH: Mr Tibaldi, you've said that you wrote part 10 of the SEQWater flood event report, haven't you?-- That's correct.

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And it's been called - or referred to as the March report and I'll also refer to it as the March report?-- To just clarify that, I did the initial drafting and there was input from others, as per my statement.

Part 10 is entitled "Flood Event Summary" isn't it?-- No, that's Part 3, I believe.

All right. Is it the case that you tried to work out what strategies were engaged at what times during the flood event?-- Are we talking about Part 10 or Part 3?

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Well, for either?-- Yes, based on levels in the dams, the release rates, and the other information that was available to me, I determined what the manual specifies as to what the requirements are at any particular time and then-----

And you've indicated that you had a great deal of difficulty in trying to work out just what strategies were in place at particular times, haven't you?-- Well-----

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MR SULLIVAN: Could I just - I'm not sure that was an answer he actually gave to a question which was given before.

HER HONOUR: I thought that was more or less the thrust. But anyway, Mr Tibaldi, you comment on that if you think that's not right. If you had great difficulty, just say so?-- No, well, I mean, it wasn't a short process, because by the time you validate all the data, gather together a picture of what's occurred - as I said, there was a difficulty with that discrepancy in the flow chart of the manual that we talked about, and it's in my statement. It was certainly time-consuming to verify. Look, it was time-consuming, no question about it. It took a while.

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MR RANGIAH: One way you could have done that exercise was to look at the documents that were kept during the flood event itself and examined what they said about what strategies were



engaged when; that's correct, isn't it?-- Well, it is, and I used those documents - well, the documents that were available, which is terms of the directives, event log, situation reports, technical situation reports, they assisted me in the process and they were part of the considerations.

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Well, there was nothing in the flood event log saying what strategies were adopted when, was there?-- That's correct.

And there was very little reference to strategies in place in the situation reports; that's correct, isn't it?-- Yes, it is.

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And similarly, there was very little reference to what strategies were in place in the technical situation reports; that's correct, isn't it?-- Yes. Because the technical situation reports are based on the situation reports, that follows.

And there was no reference in the directives to gate operators as to what strategies were in place?-- That's correct.

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So in other words, there were no contemporaneous records of what strategies were engaged when during the flood event?-- I certainly wasn't able to locate any when preparing the flood report.

Another method carrying out the exercise of finding out what strategies were engaged when during the flood event would have been to ask the flood engineers what strategies they engaged?-- That's a method that could have been used. Except, as I've pointed out before - I think I was questioned on that before. The difficulty is how good is a person's - you know, given the events that took place over that 14 days, at the end of it really how good is your recollection of the events that occurred.

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Are you saying that you made no attempt to ask the flood engineers what strategies they engaged?-- No, I'm not saying that. What I said is that I put a picture together based on all the information and materials and records that were available in the flood centre to put together a picture of the event that was based on that information. That was then provided to the flood engineers for comment or verification. As I've said in my statement, during that process of them providing me back comments, some changes were made to clarify the times when I wasn't in room. I was asked by Mr Callaghan whether my - the strategies that I'd first chosen were changed during that period. What I said - my answer, I believe, was I didn't know, but if you wanted to make an assessment of that you could compare the last draft, which is document 21 that I provided in my statement, with the final product, and I believe that would give a fairly good indication of whether there was changes. Now, I haven't done that. But I'm suggesting if someone wishes to do that, that that will give them an impression of whether changes occurred.

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You formed the belief which you've recorded in the March report that W3 was engaged at 8 a.m. on Saturday, 8 January;

is that correct?-- Yes.

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And Robert Ayre was on duty at that time?-- That's correct.

And is it the case that you didn't ask Mr Ayre whether he engaged W3 at 8 a.m. on 8 January?-- Once the draft was finished, I provided it to him for assessment. My recollection is that he was satisfied with the draft and believed that it did accurately reflect events.

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And you didn't ask him, before providing you a draft, whether he engaged W3 at 8 a.m. on 8 January?-- I don't believe I asked him that question. I may have. I certainly don't recall asking him that question.

Couldn't that have resolved a lot of your discomfort about the question of whether W2 or W3 was engaged, if you had asked him?-- No, because the flow showed that we were certainly in W3, but the flowchart showed that we were directed towards W2, so that dilemma still remained.

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If the strategy-----?-- I accept the point of your question, but as I said, I still - it wouldn't have solved the dilemma. There was still a dilemma there. In terms of if it would have eased my mind, I'm not sure. But as I said, I don't believe I asked him. To the best of my recollection I didn't. That's all I can say.

But wasn't the aim to find out what strategies were engaged when, rather than trying to resolve the dilemma of what strategies should have been engaged?-- Well, that was resolved when the engineers who were on duty at the time that I wasn't on reviewed the draft and made their assessment as to whether the draft accurately reflected what they did or otherwise. As I said, some changes were made. There may have been changes in strategy. You would have to compare those two drafts. But that was the process I followed. Perhaps someone could think of a better process, and that's fine. But that's the process I followed, rightly or wrongly. I judge that to be the process. We're given responsibility for writing the report, and that's what I did.

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Well, if the flood strategy was changed from W1 to W3 at 8 a.m. on 8 January, then it must have been Mr Ayre who made the decision to change it, mustn't it?-- He was on duty at that time, so yes.

So it would have been simple and logical to ask Mr Ayre whether he changed the strategy at 8 a.m. on 8 January and also to ask him to what strategy he changed?-- As I said, that's one approach you could use. I didn't use that approach.

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It's the logical approach, isn't it?-- It's logical to you. The logical approach to me was the approach I took, which was reconstructing the event as accurately as I could from the records available. That's the way I did it.

It took you about two weeks to reconstruct that event?--  
Including data validation, yes. And just remember I wasn't  
just writing one section at a time; I actually drafted all  
sections in the report apart from four, and there's 22  
sections - or 20 sections in the report, so that's the time it  
took.

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How long did it take you to come up with the theory that the  
strategy had been changed from W1 to W3 at 8 a.m. on 8  
January?-- I would say within the first draft or so it was  
obvious to me that the flow rates - even though the validated  
flow rates, you can see through the draft process, hadn't been  
added to the summary, it was obvious to me that looking at the  
flow rates at that time that was no possible way we could be  
in W2.

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And then how long it was before you came up with the  
conclusion that in fact the strategy was W3 at that time?--  
Well, I think if you look at the drafts, it took several days,  
but remember I didn't make assumptions until the validated  
flow information was available and put into those drafts. So  
you can look that through draft by draft, and you will see as  
the validated flow information became available and there was  
no disputing the strategy we were in in terms of what the  
manual requires, that's when I made the changes.

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How long would it have taken top pick up the phone to Mr Ayre  
and ask him what he did on Saturday, 8 January?-- Well, if he  
couldn't recollect what he did on Saturday, 8 January without  
referring to records, the action of doing that wouldn't take  
long. But you wouldn't get an answer, so it wouldn't be  
helpful.

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You didn't even try asking him though, did you?-- I don't  
believe I did.

For a flood operations engineer to change a strategy from W1  
to W3 is a significant event during a flood event, isn't it?--  
Not necessarily, depending on the event. If you look again -  
look back at the events that occurred between October 2010 and  
the January event, you'll see that if a lake level only rises  
to just above the trigger point for W1, which may put you into  
W3, and then falls away and that's the end of the flood event,  
that particular decision isn't relevant for that particular  
flood. What's more relevant, I guess, is the point at which  
consideration is no longer given to keeping the bridges open  
and the releases are ramped up to the level of damaging flows.  
The point at which that occurred is clearly defined in the  
report. You can see in the report for every period -  
certainly I haven't tried to hide the fact, or disguise the  
fact, or whatever else, when we were keeping bridges open and  
making considerations to keep bridges open. It's obvious in  
the report. I can point you to it if you want me to.

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I would just like you to answer the question?-- I am answering  
the question. I'm explaining to you - you asked me-----

Could you answer it directly?-- You asked me when is that

decision significant. I'm telling you it depends on the size of flood event. What is more significant is when you make a change of emphasis to go from keeping the bridges open, to really ramping up your flows for urban protection, and that point is again identified in the report.

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Have you finished?-- Yes, thank you.

So was the short answer that a change in strategy from W1 to W3 is not necessarily significant?-- Yes. Correct.

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Thank you. With the change from W1 to W3 the primary consideration changes, doesn't it?-- It does.

In W3, the primary consideration is avoiding inundation of urban areas?-- Correct.

Such as Brisbane and Ipswich?-- Correct.

And do you say that that is not necessarily a significant change?-- No, you didn't hear what I said. What I said is when - just think about when you're operating the dam and the lake level is rising. It might rise a millimetre above that trigger point. Not a lot is changed in terms of the lake level. It really depends on what's going on in the catchment. Is it raining heavily? Are the dams dropping? How much is Somerset Dam releasing? Is Somerset Dam rising or falling? Depending on all those factors, as we've discussed previously here, a decision is then made as to are we going to ramp up the releases to the limit of damaging flows? And remember, being at the limit of damaging flows has a fair old - has a fair impact on Brisbane. Not necessarily on urban housing, but it will affect roads within suburban Brisbane; it will affect the ferries; it will affect bike paths; it will certainly do flood damage; it will affect parks. The decision is when do you start doing that, and as far as the manual sets out, it depends on the conditions of the event. In some cases, the conditions are such that you make a decision not to take that step, not to go to the damaging flows and not to cause - start that onset of damage. In other cases - and it will just depend on the rainfall - you make the decision to do that. In January we did that. The timing of when we did it is clearly laid out in the report. The timing of when we still considered bridges and the reasons for that are clearly laid out in the report. So it's clear, I think, to anyone certainly we transitioned to strategy W3 at a certain time. It's clear to anyone by reading the report within W3 when we were still considering the bridges, and then the point at which consideration no longer occurred in terms of keeping those bridges open, that's when the significant rain commenced on the Sunday, and going into the fact of taking the flow and the outflow up to the limit of damaging flows. If we had decided to ramp up earlier for this event - for the January event, I have no question it would have reduced flood damage. There's no question about that but.

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Mr Tibaldi, can I interrupt you because-----?-- No, let me just finish-----

No, no, just one moment. Because does your answer now have anything to the question - to do with the question that I asked you?-- I believe it does.

Which was whether a change in the primary objective of a strategy makes the change in strategy a significant event?-- But I was trying to explain to you before you cut me off that it's-----

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I think you've being a long way past simply attempting to answer the question?-- No, I'm attempting to answer the question.

Can you do it as shortly as you can, please?-- I'm certainly doing that.

MR SULLIVAN: Your Honour, the witness now is struggling to continue with the answer that he regards addresses the question. Now, it may not be as short as my learned friend may like, but it is the answer to the question that he's giving.

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HER HONOUR: I'm not sure if it is. But anyway, Mr Tibaldi, continue, and give it a succinctly as you can?-- Sorry, Commissioner. I suppose the point I'm trying to make too is that it is a significant decision whether the decision affects the outcome of the flow. What's more significant is when the decision is made within W3 to ramp up releases to the limit of damaging floods. That's what's significant.

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MR RANGIAH: So after all that, you agree with my proposition that a change in strategy from W1 to W3 is a significant event; is that right?-- I don't know what you mean by "significant event". I'm struggling to understand what that means. Do you mean a significant milestone in the event or-----

It's an important - it's an important event during the flood event?-- Yeah, it's an important trigger to show you that the first section of the flood compartment, you know, the section set aside for rural protection, is full, and then you're now looking at the decision as to whether - when you're going to ramp up to the limit of damaging floods. And yes, that is important.

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Is it the case that you assumed that there must have been a change from W1 to W3 at 8 a.m. on 8 January based upon solely - solely based upon the lake level at that time?-- No, no, there's quite a number of factors. The lake level is purely one. Now I'll refer to my statement here, but this will be a bit of an answer.

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Could you tell me - if there are any other factors that you referred to apart from the lake level in arriving at that decision, I'm just asking you to tell me what they are?-- Okay. Firstly I would refer you to my statement.

HER HONOUR: Do you need to remind yourself from the statement, Mr Tibaldi, or-----?-- No.

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Well, if you could just tell Mr Rangiah and he can-----?-- Okay. You'll see in my statement that strategy W2 puts a limit on the release from the Brisbane River - sorry, puts a limit on the size of the release from Wivenhoe Dam, so it sets a maximum allowable release.

MR RANGIAH: Sorry, can I just interrupt just for one moment. Perhaps I put the question badly. I'm not asking you about whether the change in strategy was from - to W2 or W3. Perhaps I'll just ask the question again. It might shorten things?-- Sure.

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Is it the case that you thought that there had been a change in strategy from W1 to another strategy at 8 a.m. on 8 January solely because the level of-----?-- Yes.

-----Wivenhoe Dam had reached 68.5 metres?-- Yes, the manual requires that. Yes, that's true.

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That's the only basis of your conclusion that there must have been a change in strategy at that point?-- Well, there's a - as I was explaining earlier today too, there's that's not the only instance of that in the event. You'll see as the lake rose past 1A, 1B, 1C, 1D, the manual automatically requires that as soon as those levels are exceeded you're into the next strategy, and in some cases you don't take action because you don't. There's no need to. But certainly there's a reasonable expectation that the flood engineer is aware that that is occurring.

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So what you also assumed, then, was that Mr Ayre had complied with the flood manual?-- I didn't assume anything.

Well, you assumed that because the lake level had reached 68.5 metres, and because the manual required a change in strategy out of W1 at that point, that there must in fact have been a change in strategy?-- Well, the manual requires that as soon as the lake level exceeds 68.5, you go into strategy W3. That doesn't necessarily mean that you have to increase flow.

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I didn't ask you that question, Mr Tibaldi?-- Yeah. Well, the manual dictates the strategy, and it changes as the lake level changes. So if the lake level goes up - goes above a trigger as set in the manual, the strategy changes. You can't say-----

The strategy is supposed to change, isn't it?-- Well, no, it just changes because as soon as you're - this is the point I was trying to make this morning. If you're, say - if the lake level is less than 68.5, for example, okay, and you ramp up the flows above the limit at which is allowed under 68.5, then you haven't operated in accordance with the manual. But if the lake level is - once it goes up above 68.5, you have - you just move into - I guess as the lake level changes, you move between different sets of rules, and that's just what happens.

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Whether you apply that set of rules correctly into to where you moved, that's where the judgment is made.

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Well, the manual requires a change of strategy at 68.5 metres?-- That's right.

Out of W1 and into W2 or W3, doesn't it?-- That's correct.

At that point a decision has to be made by the flood operations engineer to change the strategy from W1 into another strategy, either W2 or W3; that's correct, isn't it?-- Yes, that's right. Again depending on the conditions that are there in place at that time, that will dictate whether you will operate under W2 or W3.

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And you don't know from your own knowledge whether or not Mr Ayre made a decision to change the strategy from W1 to another strategy at 8 a.m. on 8 January?-- I certainly don't know what was in Mr Ayre's mind. But by his actions, his actions show that he's transitioned from strategy W1 to W3.

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HER HONOUR: What were those actions?-- There's a number of them, as in my statement. The initial action was that he was releasing more than what's allowable under W2. If you look at previous flood events - and as I said, particularly the December 2010 flood event - you'll see that in some instances a cutback of flow is made at that point, which then forces you into W2 because you're keeping the flow in the Brisbane River less than a natural peak. So that's an action. Now, by not doing that - and given that he had done it two weeks earlier - by not doing that, straightaway you think he's got an awareness that he's moving into W3. Additionally, if you look at the directives, I think you'll see at 8.15 Mr Ayre's issued a number of gate operations directives to ramp up the flow rate in accordance with W3. That's in the flood log. I could point you to it if you wish to. Again if he had made the choice to go to W2, what it would say to me is those directives would have been to reduce flow. However, given that the release in the river - given the flow in the river was already bigger than natural peaks, really my conclusion was in writing it, you know, it was impossible to apply W2 at that stage. But I think the ramping up of the releases at 8.15 is significant. It certainly shows an understanding of where things are at. I think - you know, you looked at the event log. I can recall a model done around that time - I think it shows at 9 a.m. - again an understanding potentially from Mr Ayre, but I can't say what's in Mr Ayre's mind, that conditions are changing and he's going to run a model. What else? The other two - the situation report at - that was done at 7 o'clock clearly states that the lake level is just below 68.5 and rising steadily, so obviously to me that says an awareness of the level, an awareness that you're about to leave strategy W1. I guess those factors, combined with the undeniable factors associated with lake level and the flow rate from the dam, given that we'd completely violated what's allowable under W2 in terms of having a much bigger flow than is allowed, that was sufficient evidence to me to put in the draft report the words I did in terms of the transition from

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W1 to W3 at - I think I've said around 8 a.m. I would just have to check that again.

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MR RANGIAH: Mr Tibaldi, in your answer you're confusing two different concepts, aren't you?-- No.

One is a change from W1 into another strategy, whether it's W2 or W3; and the other concept you're confusing that with is whether it was changed into W2 or W3?-- There is two factors there. I mean, the fact that - okay, well, the first question is was there a recognition that the lake level exceeded 68.5? And my answer to that is if you read the situation report that was issued an hour before 8 o'clock, I believe there was a recognition based on the words in that situation report. So that's the answer to the first question. Yes, we realised we're leaving 68.5; we're moving into W2 or W3. The other actions - I won't go through them again - indicated to me that there was a - I guess a positive - you know, the gate directive at 8.15 indicated to me that there was an indication or a move to go to W3. As I said, if you compare it to the December event around that time, around that level, a move to cut back the release. So that can sort of contrast as to the W2, W3 sort of approach. Rather than cutting back, he's increased. But as I said, I cannot know what was in Mr Ayre's mind, and that's something you'll have to ask him about.

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Is it the case that the maximum rate that's allowed under W1 is 1,900 CUMECS?-- Correct.

And that wasn't achieved until 8 a.m. on Monday, 10 January?-- The flow rate in the Brisbane River, you've got to look not only at-----

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Could you just answer my question, please?-- Well, the flow rate from the dam, I think Mr Callaghan asked me that this morning, and if you're asking along the same lines, the same question, the answer is yes.

There were gate releases issued under a directive at 8.15 on 8 January 2011, but I suggest to you that the rates of release even at that point could still have been within strategy W1?-- The rates of release - well, but around the strategy W1 is about as well as your release rates, you've also got to maintain the bridges open. So you could be in strategy W1, as we were in the early parts of strategy W1, to keep bridges open if you've got no release at all from the dam. That's what strategy W1 requires. It's balancing your release so that the bridges listed remain open in the order that they are. If some cases if you're getting no flow from the Lockyer and Bremer, you can achieve that 1900 release. In other cases where there's significant flow into the system - sorry, from the Lockyer - where there's a significant flow into the system from the Lockyer where you can't get up to 1900 without taking out everything, and that's violating strategy W1.

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Forget for the moment about 1900. But in your answer to the Commissioner's question you suggested that one of the factors that indicated that Mr Ayre had made a decision to move from



W1 to W3 was the directive issued at 8.15?-- Yes.

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Concerning-----?-- I think it's 8.15. I would just have to check. That's my recollection.

Yes, there is one at 8.15. Concerning further gate releases or gate openings?-- Yes.

What I'm suggesting to you is that there's nothing in that directive that indicates that the strategy engaged was now W3?-- You asked me that question earlier. I told you that there's nothing on the - that I could find on the directives, the logs, or the situation reports generally that consistently - that indicated strategy.

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Thank you. Now, there was a situation report issued at 9 a.m. on January 8 2011?-- Yes.

I'm suggesting to you that there's nothing in that report which is consistent with the strategy necessarily being W3 rather than remaining W1?-- Sorry, what date was that? I didn't - I missed that.

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The situation report was 9 a.m. on 8 January?-- I didn't realise there was one at that time. I thought there was one around 7 or something. Could you bring that up, please, or direct me to it.

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It's in Mr Drury's statement at RD 5-142?-- My apologies. That's - yeah, look, that's a Technical Situation Report, that's - hence the confusion, so-----

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No, no, I am talking about a Situation Report?-- Oh. Well, again, I'd have to see it and I cannot recall now.

It doesn't matter. I can probably pursue it with a different witness?-- Well, hang on, I don't - as I said, I'm not sure - it's in appendix 2 part.

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No, it's all right. I will move on. I can pursue it with Mr Ayre.

COMMISSIONER: Can I just ask you, Mr Tibaldi, what is it about the 8 a.m. directive that would actually tell you you weren't still in W1?-- The 8 a.m. directive?

Gate open directive?-- Well, I suppose my thoughts were that it was a positive indication that, you know, he was - that the flows were being ramped up well above the limit that's allowed under W2, well above the limit that's allowed under W2. If you see in my statement I have got a table showing the maximum allowable releases under W2 and at that time, around 8 a.m., they were only in the order of 80 to 100 CUMECS, so they were very low.

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All right. So, those gate openings would indicate to you it was going to be higher release?-- Well, there was 900 already in the river from the dam and he's ramping it up to 1242, I think, it was approximately that, so he's ramping it up another 30 per cent above what it was, and, as I said, if you go to earlier events you will see when you go to W2, because you want to let that downstream peak pass, it's the opposite, you close up. So, you have got a fair release, you close up to hold the water in the dam and let the water come out of the Lockyer and flow down the river, and then you open up the dam, once it's sort of flowed away.

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MR RANGIAH: See, Mr Tibaldi, just to make it quite clear, the proposition that I'm suggesting is that it's possible that Mr Ayre didn't change the strategy out of W1 and I'm suggesting that the release rates throughout the Saturday are equally consistent with the strategy remaining in W1 as they are with W3?-- Release rates. Yes. If-----

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I suggest that's got nothing to do with W2?-- No, you're correct. I mean, if the lake level had been below 68.5 those release rates would have been appropriate on the W1 because, as it clearly says in the report, the focus was on keeping those two bridges open at that time.

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Now, did you ask Mr Ayre when you commenced your shift at 7 p.m. on the 8th of January what strategy you had engaged?-- I cannot - you know, again we went through this morning - I cannot recall that handover, I just cannot recall that handover. I came - you know, I'd been on leave, I came back from holidays, that's all I remember of that day. What

actually happened on the shift, the handover, you know, I have just got no memory of. 1

Now, after the flood event you had a great deal of difficulty working out whether the strategy was W2 or W3 on Saturday, the 8th of January, didn't you?-- No, no. That's not what I'm saying. No. And that's - I don't believe that's my evidence. What I'm saying in my mind I was - you know, it's obvious from the flows that were in W3, it's pretty obvious but I still wanted the flows validated before I solidified that in the report. What was concerning me is that there's a flowchart in the manual that if you look at the conditions that it directs you to, it's directing you to go from W1 to W2 under the conditions that were experienced that morning, and we didn't - we didn't do that. The flows were obviously well in excess of what's allowable under W2, so there's only one place we could be given the lake level at the time and the outflows from the dam, and that's in W3. That was the only strategy that we were all satisfying the conditions of, it's the only strategy you're satisfying the conditions of. 10 20

Is it the case that the way that the manual works is like this, that, firstly, you look at the predicted or actual dam level and then, secondly, you chose the strategy based on the existing or predicted dam level?-- It's not just based on dam level, it's based on - it's based on a number of factors. Those factors are not just the level, but the outflows that are occurring from Lockyer Creek and the Bremer River into the Brisbane River, and not only outflows that are occurring at that point in time but the outflows that you know will occur based on the rainfall on the ground, given that can take up to 24 hours for the rain from the outer parts of the catchment to actually make their way into the Brisbane River. Similarly, you are making similar - you are making similar - using models to judge how the rainfall that's on the ground is going to move from the - all areas within the upper Brisbane catchment in the Wivenhoe Dam and all areas within the Stanley catchment in the Somerset Dam. Based on all those things, you require all that information to - you know, set your strategy and set your operating considerations within the strategy. It isn't just locally. 30 40

Could the witness see the manual, revision 7, page 23?-- I have got it.

Now, that part of document's entitled, "Wivenhoe Flood Strategy Flowchart."?-- That's correct.

You see there's a box which says, "Start."?-- Yes. 50

And then the only question that's asked next is, "Is Wivenhoe level likely to exceed 68.5 metres?"?-- Yes.

If no, use strategy 1, if yes then you use either strategy W2 or W3?-- Yes, but there's some - see the box - if the answer's yes, it talks about the maximum flow at Lowood, which is - you know, a prediction that comes from - like, well, you need that information to use the flowchart, you need to-----

Can I-----?-- -----understand-----

Can I make it simpler then?-- Yes.

In deciding whether to move out of Strategy W1, the only relevant factor is the lake level?-- Correct. When it exceeds 68.5 you're out of Strategy W1.

All right. And once you decide which strategy you're in, then, of course, it's necessary to examine what is the primary consideration-----?-- Yes. 10

-----under that strategy?-- Yes.

And it's the case that you then adjust the release rates to try to achieve the object of the primary consideration while also keeping in mind local level considerations?-- Yes.

So, it's vital, then, for a duty flood operations engineer to know what strategy he is in at any particular time?-- Yes. 20  
As I said this morning a number of times, that's true.

And you cannot decide rates of release without knowing what your objective is?-- Correct.

The objective is set by the strategy?-- Yes.

Now, is it the case that in the shift that you worked on from 7 p.m. on the 8th of January to 7 a.m. on the 9th of January-----?-- Yes. 30

-----the rates of release could have been consistent with W1 or W3?-- Yes.

And you indicated that your primary aim at that stage was to prevent the rural bridges from being inundated?-- Yes, that's clear in the report.

Now, did you look at Exhibit 1,047, please? So that's the Situation Report that you've already been taken to at 5.53 p.m. on Saturday, the 8th of January?-- Yes, we looked at it this morning. 40

And on the second page of that document there's the heading, "Forecast Scenario Based on Mid-Range Rainfall Forecasts." You see that?-- Yes. We looked at that this morning.

Yes. And the first sentence under that heading says, "Assessments have been undertaken to determine possible increases to releases given the high likelihood of significant inflows in the next few days."?-- Yes. 50

Do you see that?-- Yes.

And then appears the sentence, "The interaction with one-off from the Bremer River and Warrill Creek catchment is an important consideration as the event magnitude will require

the application of Wivenhoe Dam Flood Operations Strategy W2."?-- Yes.

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So, what this paragraph is talking about is that at some point in the future applying W2 because of possible increases in the rates of release?-- No, that's not my understanding of the paragraph, and we discussed it this morning. My understanding of the paragraph is that the author's made a judgment that he's likely to invoke strategy W2 because he's expecting some significant run-off out of the Bremer River. As I said, the Bremer River then can become dominant in terms of your decision making. That was his judgment at the time. That didn't occur.

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Well, there's no-----?-- And as I said this morning-----

But the first sentence that leads to the second one talks about "possible increases to releases given the high likely had of significant inflows in the next few days". Do you see that?-- Yes, I can see that.

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And the second sentence takes its context from the first one, doesn't it?-- You'd have to ask the author.

That's the natural reading of it?-- Well, as an engineer not necessarily to me with an understanding of the catchment, but to a person perhaps not familiar maybe. I mean, I don't know what - as I said, as we said this morning, what I took from - what I'm taking from that, as I read it, is that there's an expectation - you know, and please bear in mind again that strategies aren't sequential, so you can go from W3 to W2. What I'm taking from that, what I'm taking from that is he's expecting something in the Bremer and he's thinking, well, if we do get that Bremer flow, we are going to apply Strategy W2 and probably cut back our releases. That's what that is saying to me, but I'm not the author.

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But the sentence above it talks about increasing releases, not cutting back releases, does it?-- Yeah, it does say "increasing releases", that's true, yes.

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All that this could mean, then, is changing the strategy from W1 into W2, not from W3 into W2?-- Oh, he's saying, "Assessments have been made to determine" - like, he made - you really need to ask him. "Assessments are being made to determine possible increases in releases." Just because he's done an assessment for that, does that mean he's - you know, so - just because he's done an assessment for that does that mean that then he's thought that's going to be the approach?

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He's done the assessment given the high likelihood of significant inflows in the next few days?-- Yeah, but if you get significant run-off in the Bremer it's the opposite, because you will move to W2 strategy and that's a reduction in release.

Yes. They're quite opposite, aren't they?-- Yeah.

Yes. So, the second sentence can only then refer to a change from W1 to W2?-- No. I said it could refer to a change from W3 to W2.

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Okay. Now, there was a Situation Report that you prepared at 6.15 a.m. on Sunday, the 9th of January?-- Yes, correct.

Now, could the witness see that? I can give the reference to you where it is in Mr Drury's material. It is RE 5-164. Your name appears at the bottom of that report; correct?-- I believe I wrote that report. I can't recall it, but-----

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All right?-- I certainly believe I wrote that.

You were engineer 4?-- Yes, that's correct.

Now, on the second page under the heading, "Wivenhoe Dam.", you said that, "The current gate operation strategy will maintain flows of around 1,600 CUMECS in the mid-Brisbane River."?-- Yes.

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That's still consistent with the strategy being either W1 or W3?-- That flow rate, yes.

And then under the heading, "Impacts Downstream of the Wivenhoe Dam.", you refer solely to the possible inundation of crossings and bridges?-- That's right.

And there's no reference to the possibility of urban inundation there, is there?-- No, there's not.

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Now, the impacts on rural communities are the primary consideration under Strategy W1?-- That's correct.

And what you have referred to in this report is that primary consideration but not the primary consideration under W3?-- That's correct.

So, I'm suggesting to you that this report is entirely consistent with the strategy still being W1?-- Can you just go up, please, so I can see it? No, it isn't, because it says, "The current lake level is 68.58." That's in the section under, "Wivenhoe Dam."-----

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Yes?-- -----the first sentence. That is not consistent with being in Strategy W1. That indicates - it says in the manual you're either in strategy W2 or W3.

That's the only factor, the lake level, that points to the possibility that it could be in W3 and not W1?-- There's no possibility. As we established before, I thought, and as I established this morning with Mr Callaghan, as I thought, if you're in - if you're above 68.5 you're no longer in Strategy W1, you're just not there, you can't be because the manual didn't allow it.

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COMMISSIONER: So, there's nothing step jump about this?-- Well-----

Sorry, it is step jump, it's not a transitional thing?-- It depends on the event, it really just depends on the event, like if the rain had started that morning and rained solidly through Sunday, instead of starting that morning and started on the Saturday night, so that we'd come from a level lower than 68.5, you know, sort of rapidly through that, well, then releases would have been ramped up earlier, if you know what I mean, well above. So, it depends on when it rains and it just depends on the nature of the event. It's very - you know, I sort of expect people possibly have an impression that you hit W3 and immediately you let a wall of water go. Well, that's a pretty dangerous approach, particularly when you have got catchments downstream which are unknown, you know, the travel time between the dam and the City is 24 hours. That's just the way the manual is at the moment. You can take another approach in the manual so that you were - you know, more prepared to accept that risk associated with that early rush of water.

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All right. I think you might be missing my point, though?-- Oh, sorry.

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What I was asking you was more about your perception of changes been strategies. In other words, you seem to be saying that once you hit 68.5 it's black and white, you're in W3, there's nothing transitional in that?-- No.

There's nothing gradual about the move between strategies, it is just the lake level with change it?-- That's how I see it and if you - and not - 68.5, you're no longer in W1, that's what it's saying, and you're either then in W2 or-----

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So, it is as black and white as that?-- In my view, yes.

Once you get over that level, the strategy has changed?-- Yes.

Thank you.

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MR RANGIAH: Could the witness see the Situation Report issued at 6.30 a.m. on Monday, the 10th of January? It's Mr Drury's documents RD 291. Now, so you see this is a Situation Report which is apparently prepared by Mr Ruffini?-- Yes.

And by this time, though, there were two duty engineers on at the time, weren't there?-- That's correct, Mr Ayre and Mr Ruffini were on together that night and Mr Malone and myself took over at around 7 o'clock.

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I see. So, were you present when this Situation Report was issued?-- I may or may not have been present but I certainly would have read the Situation Report at that - around that time.

And a copy of it was e-mailed to you?-- Probably would have read it in the Flood Centre when I arrived. I think we established this morning that - you know, the most immediate

Situation Report you'd often read as you'd come on.

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Well, all of these Situation Reports were e-mailed to you, weren't they?-- Every - every one, I think, I'm on the distribution list, but if I am asleep in bed I am not going to read the Situation Report.

But certainly when you came on duty you must have read this report?-- I believe so. I can't recall reading it, but certainly - yes, I-----

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On the second page under the heading, "Wivenhoe Dam.", you see the last sentence of the second paragraph says, "Given the rapid increase in inflow volumes it was necessary to start the increase - the release from Wivenhoe during Monday morning."?-- I'm - sorry, where is that? I am not sure if I have got the right screen up.

There's a heading which is, "Wivenhoe Dam.", and then it says, "Full supply level 67 metres."?-- I see.

20

It's-----?-- Yes.

The point will have to be moved up a little bit?-- No, it's fine, I can see that. I think. "Given the rapid increase in inflow volumes"?

Yes?-- Yes.

And then after that it says, "The objective for dam operators will be to minimise the impact urban flooding in areas downstream of the dam." Do you see that?-- Yes.

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And do the words "will be" mean that in the future the objective would be to minimise urban flooding?-- Well, the words "will be" mean - no. I think - I mean, obviously he's saying he's trying to keep the flow below three and a half thousand, because if you get rain such that under the requirements of the manual you're not allowed to retain that flow because you have got to protect the safety of the dam, well - I wouldn't take that "will be" as - for the rest of the event we're not going to - I wouldn't take it that way, no.

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Well, it doesn't say, "The objective for the dam operations has been to minimise the impact of urban flooding.", does it?-- No, it's true, it doesn't say that.

And it doesn't say, "The objective for dam operations is to minimise the impact of urban flooding."?-- That's true.

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What it indicates is that, "The objective will in the future be to minimise the impact of urban flooding."?-- I wouldn't - look, as I said, I probably wouldn't have read it that way, but, as you're saying, if you look at the correct English of the sentence or the grammar of the sentence, my apologies, you could read it that way for sure.

And what this suggests is that Strategy W3 had still not been



engaged?-- Well, it doesn't suggest it to me, but I could see how somebody just reading that sentence in isolation could think that, yes.

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All right. Could the witness see Exhibit 23? I wonder if it's possible to scroll to the beginning of that document?

ASSOCIATE: That is the beginning.

MR RANGIAH: I'm sorry. Thank you. Now, is that the Flood Event Log?-- Well, it looks like an extract from it. Is it the Flood Event Log that appears in the Flood Event Report?

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No, it's a little bit different in some ways, and this is what I wanted to ask you about?-- Okay.

So the document that is Exhibit 23 which was tendered, as I understood it, as the Flood Event Log, do you know who compiled this document?-- Well, the names of the people that have made entries, it was compiled by people on duty in the Flood Operations Centre which is - as I went through this morning, the flood engineers and the flood officers, and they jointly compiled it.

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So, does that suggest that this is just a print-off from the computer of the Flood Event Log?-- It's on a computer so that if - so it's remaining open so that if someone wants - that was the practice at the time, someone wanted to - if something occurred, a phone call occurred, whatever, they would get on and - you know, put their entry in the log, if some - you know, if I was on with one other person and they happened to be in the bathroom while a call came through - I don't think that occurred - but it gives you the opportunity to quickly put the entry in.

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So, at the end of the flood event, if you simply hit the "print" button on the computer where it's stored, then that should print this document?-- Yes.

And-----?-- Oh, well, yeah, with - I am answering that within my understanding of the - that particular system, but, yeah, I - that seems logical.

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All right. Now, could you just look, for example, at the entry now for 8 a.m. on the 8th of January 2011? I was wondering if that document could be scrolled down to Saturday, the 8th of January? So, if you look at the entry for 8 a.m., there's a reference there to issue Wivenhoe Directive Number 4, and then a series of dot points that sets out what are apparently the contents of that directive?-- Yes.

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And then under the heading, "Category.", it says, "Directive.", and then there are some initials?-- I don't - oh, sorry.

MR SULLIVAN: Could I just object for a moment?

WITNESS: Not sure.

MR SULLIVAN: I am not sure that at least the screen we're showing is showing the entirety-----

WITNESS: It's sort of chopped off.

MR SULLIVAN: -----of the document. Ours is a truncated version and I am aware that there is material to the right-hand side.

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COMMISSIONER: It is just hard to keep it readable and all visible at once.

MR SULLIVAN: And I think the witness is seeing what we're seeing.

MR RANGIAH: I think the witness has a hard copy of the document now?-- All right. So, what time was this?

So, this is 8 a.m. on Saturday, the 8th of January?-- Yes.

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And you see the initials in the right-hand side?-- Sorry, I have got - oh, yeah, okay. Sorry, I'm with you now. So, 8 a.m. on Saturday, the 8th of January.

Yes. I have already asked you about the entries under the heading, "Action.", but further over to the right there's an heading that says, "Initials.", and then the initials, "AN.", that appear."?-- Yes.

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And "AN" is Al Navruk?-- Yes, that's right.

And the initials represent the person who inputs the data into the Flood Log Event; is that right?-- That's right, whoever makes an entry records their initials so that at a later time we know who's made that entry.

Now, if you just bear that entry in mind, can I ask you now to look at Exhibit 24, appendix M, which is the Flood Event Log, entitled, "Flood Event Log.", page 81, and if you look there, there's no entry for 8 a.m. on Saturday, the 8th of January. Do you accept that?-- Yes, I do.

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Are you able to explain why the documents are different?--  
The only explanation I could give you is that for the report we were required to redact out all the names, and as part of that redaction process, one of the young administrative officers, you know, was just given a task of redacting out names. Now, my only explanation I could give you is that in the redaction process that particular line was lost, but whether that was the case or otherwise, I couldn't tell you.

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All right. Who engaged in that redaction process, do you know?-- An Seqwater employee. Her name is Chloe De Marchi.

Now-----?-- I believe that's the case. That's my recollection of it.

Do you recall that in the - in exhibit 23, which is the first version of the flood log event, there was a reference at 8 o'clock to directive number 4 and then to some rates of release?-- Yes.

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Now, have you been made aware that Mr Navruk says that he didn't write those rates of release?-- No, I haven't.

Right?-- Oh, rates of release? Where are you rates - you mean the-----

That was in the previous document that was on the screen?-- Yeah, well, there is the gate directives in there.

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Yeah, I am sorry, the directives, rather than rates of release?-- No, I hadn't been made aware that Mr Navruk had mentioned he hadn't written that.

Now, where would the original-----

MR SULLIVAN: Sorry, could I just take an objection? If he is going to have put exactly what Mr Navruk says, then I would like it put accurately, because I am not sure that's what Mr Navruk says in the statement that I've seen.

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COMMISSIONER: All right. It may not matter much since I understand Mr Tibaldi says he's just not aware of it anyway. But what precisely are you referring to, Mr Sullivan, because I haven't got Mr Navruk's statement in front of me at the moment?

MR SULLIVAN: There was a statement which Mr Navruk has given the Commission-----

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COMMISSIONER: I understand that but what is it about his statement that you say has not been properly put?

MR SULLIVAN: It is not clear to me that he said anything about that particular entry.

COMMISSIONER: Oh, okay.

MR SULLIVAN: I may be incorrect but-----

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MR RANGIAH: Sorry, I don't have Mr Navruk's statement with me, so I won't take that any further.

COMMISSIONER: All right.

MR RANGIAH: Now, in paragraph 9 of your statement, you refer to a series of meetings?-- Can I - I will just get that in front of me, please.

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It is on the screen?-- No, I've got it here, sorry. Yes, I-----

In the second sentence you say that at these meetings people made comments and suggestions in relation to the draft report, and then you say that people at these meetings included representatives from Rowland Consulting. Do you see that? And you say that "Rowland Consulting is an organisation that provides assistance on things like grammar"?-- Yes.

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Does it provide assistance on things other than grammar?-- You would have to ask them. I don't know their - I just don't know their business.

Well, did they also - well, can I suggest that Rowland Consulting is a public relations firm?-- I wouldn't dispute that. I don't really understand their business, as I said.

You just thought they were helping you with grammar?-- Well-----

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And that's why they were at these meetings, is that right?-- Well, as I am - as I've sort of said in my statement, I'm not - I'm not - well, I haven't said in my statement, I just said this morning - I am not a report author, but I was charged with writing a substantial document. They were there to provide assistance with, I guess, layout presentation, grammar, essentially. That's what I understood their role was. Now, they may have - might have had some broader role than that within Seqwater, but I'm not the person to ask about it.

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Thank you. I have nothing further.

COMMISSIONER: Thank you. Who is next. Mr Dunning?

MR DUNNING: We have no questions, thank you, Commissioner.

COMMISSIONER: All right. Mr Murdoch?

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MR MURDOCH: Mr Tibaldi, Murdoch is my name. I am the counsel for the Mid-Brisbane River Irrigators Group. So far as the operating manual is concerned, you would appreciate, I take it, that it has, as well as an operational function, an important legal function in that it sets out in fairly stark terms that there is a protection at law which flows to Seqwater and its servants and agents if there be compliance with the manual. You understand that?-- I don't know the ins and outs of it, but I know the rough theory, yes.

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Well, you'd have had an appreciation of that concept-----?-- Oh, I certainly-----

-----at the time of the flood event?-- -----have an appreciation of the concept, yes. I agree with you.

And you had, I take it, prior to the January 2011 flood event, had previous experience in the control centre?-- I think my first flood was October 2010, and then there was three events in December, and then the January event.

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Approximately, then, how many previous shifts had you done prior to the one you did in the January flood event?-- Oh, a dozen maybe. I could count them but I - that's just an approximation.

I don't need a precise number. You have had experience then in the centre over, what, a couple of years?-- I think-----

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Given we had a long drought?-- I was appointed as an engineer I think - could be either mid-2010 - I think it could be mid-2010. The dates will be there because they are Gazetted - or it could have been mid-2009 - and then the first event was October 2010.

So far as the manual of operational procedures is concerned, have you been trained in the manual?-- The senior flood engineers had been associated with the manual dating back to the early 90s. They provided training. When I came on board, which as I think - I think it is more mid-2009 than mid-2010. It is either 1st of July 2009 or 1st of July 2010. It could be 2009. Yeah, the two experienced guys certainly provided us with training and assisted us, particularly myself, being a non-hydrologist, in the requirements of the manual and the operation of the flood centre during an event in terms of running models and that sort of thing.

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All right. So you'd had training in the operation of the flood centre and the manual prior to the January 2011 event?-- Yes.

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Did you have your own copy of the manual?-- The - if you look at the manual - I can - I don't believe I did. The manual talks about control copies, and inside the front cover it is listed - we would have a register of who the control copies were issued to. I know there were control copies issued to

the flood centre. Whether there was a control copy issued to me personally, because I normally don't work - certainly at that time I was not working in the flood centre.

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Prior to the-----?-- I am not sure. I would have to have a look. But you could certainly access a control copy any time through the electronic system.

Prior to the January 2011 flood event had you ever read the manual through, cover to cover?-- Yes. I was given the responsibility of drafting that manual prior to it being submitted to DERM for approval, which occurred in early 2010. I think that was discussed at length in the first round of the public hearings and I have issued a statement. I think my second statement deals with that. Yeah.

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All right. So when you came to do your shift during the January 2011 flood event you were well aware of the obligation to comply with the terms of the manual?-- I believe so.

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All right. And you were also aware of the legal protection that came with compliance with the manual?-- I was certainly aware of that concept, yes.

You said earlier that you arrived early for your shift?-- I said earlier - which shift is this?

The shift you did during the January 2011 flood event?-- I did a number of shifts during that event.

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All right. Well, the one that commenced on the Saturday?-- Did I say I arrived early? I thought I said I came back - I will have to check the transcripts there, but I thought I said the only recollection I had of that day was coming back from - coming back early from holidays. I didn't think I said I came back early to the shift. I may have. If I did potentially - I can't remember what time I arrived.

Well, irrespective of time, what time did your shift - your formal shift commence?-- 7 p.m.

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On the Saturday evening, was it?-- Correct.

And what was - what if any was the handover process when you came into work that evening?-- I'm happy to go through it again but I have gone through this twice now. You will be the third.

Yes, I'm just-----?-- As I said, I cannot recall anything about that handover process. I just cannot recall that shift. You know, I - you can check back through the transcript. You know, my expectations of what that handover process would be - what do you want me to say? I'm not sure what you're saying.

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I'm really just trying to get a feel for whether you go on line to look for yourself at the status of the event, or whether you're given a verbal briefing-----?-- Oh, I see.

-----or whether you're handed a written memo from the off-going shift?-- Sorry. As I said, I thought I had covered this before. No, the handover occurs generally between the two flood engineers. Now, there is various styles of handover. An engineer might - you know, might want to go through his situation report, he might want to just verbally, you know, tell you what the objectives are of that shift. You know, but, really you're looking for sufficient information from that person so you can understand what your responsibilities will be for the next 12 hours; what you're looking for, what they're expecting, you know, that sort of thing. As I said this morning, when I get a handover from a shift, what I'm interested in, really, is, you know, what's the lake levels doing, what's the rainfall doing, what's happening with the stream flows, is it raining. I go to the - I certainly listen to the verbal handover, then I go to the system, look across the whole catchment, what's the rainfall been in the various sub-catchments for the last hour, three hours, six hours, 12 hours, trying to get a feel for how the weather pattern is developing. You know, sometimes there is no rain, as on that Saturday night, where there was no rain through the night. I will look at the radar, just see what the weather systems are doing. We've come to the habit now of ringing the Bureau. We weren't, you know, doing that religiously in January. You know, look at the lake levels, just look at where they've risen and fallen over the last period of time, look at the inflows into the dam, whether they are dropping off, picking up, what's happening with the uncontrolled parts of the catchment, the Lockyer, Bremer, what's happening down below the dam. So things like that you look at to get a real picture of, you know, what do you think is going to happen in this shift. I mean, is the inflow rising, are we approaching levels, what's going on?

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Would it not be necessary for you to ask the off-going shift what strategy was being applied at the time you were coming on shift - and I mean what strategy was being applied in relation to both Wivenhoe and Somerset?-- Yes. As I said, I can't recall whether it was in the forefront of my mind, but it was obvious to me because of the flow rates and the lake levels we were in W3. Whether that was in the forefront of my mind at the time when I looked at it - look, I just - I cannot recall. But what would be more important to me at that time is not - reasonable expectation I know what the strategy is, but what's my considerations within that strategy. Are my considerations that I'm going to ramp up Wivenhoe towards the limit of non-damaging floods, or are my considerations that I'm still giving some thought to rural protection as it requires you to consider lower level objectives in the manual, and still keeping the bridges open. At that time, as it indicates, the consideration was to keep the bridges open and ramp up the release as the flows - as the natural flows coming in downstream of the dam petered away, and that's what I did through the night.

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Well, when-----?-- There was no rain to speak of that particular night. The level was falling back towards W1. You

know, I thought my actions were reasonable.

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So far as your coming on the shift was concerned, are you able to tell us whether, as part of the handover, you were told what strategy was current at the time you came on duty?-- I cannot recall the handover. I can't - I cannot recall what was said. I can't even picture it.

Surely the strategy current at the time would have been logged?-- I have been asked this again. This is the third time. As I've said, I've been through all the written records I could locate to prepare the flood event report. I could not find anything with the strategy on it. So, you know, and, as I said, this has been a recommendation from the Commission from the first round of hearings as of the event that's occurring at the moment - which possibly finished today - we do put the strategy clearly on the front - on, I think, the front page of the situation reports. So there is no - there is clarity at all times as to what's going on. But that wasn't occurring back in January.

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Under the Operational Procedures Manual for Wivenhoe strategy 1, there is, of course, A, B, C, D and E, isn't there?-- There was in this version of the manual. That same concept is in the current version but the references to A, B, C, D and E was judged by the persons approving the manual, or - anyway, it has been approved without A, B, C, D and E, but certainly it was in that manual, yes.

Wasn't the A, B, C, D, E current at the time of the January 2011 flood event?-- Yes, it was.

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So that coming on duty, did you ascertain whether, through being advised by someone or looking for yourself, whether it was A, B, C, D or E?-- We were in strategy W3 at that time because the lake level exceeded 68.5 and the flow rate was greater than what's allowable under strategy W2.

So your evidence is that when you came on shift it was already W3?-- That's right. The lake level was in excess of 68.5, correct.

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Did you ascertain how long it had been on W3?-- I can't recall it being in the forefront of my mind, but if I wanted to make a determination on that, I would have looked up the gate operations model and seen that it - the lake level exceeded 68.5 at approximately 8 a.m., and that would have been the time that the shift occurred, as required by the manual.

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You said in your earlier evidence that the manual permitted one to go both up in levels and down in levels. Do you recall that?-- Could you repeat - can you please speak up slightly? I am having difficulty hearing you and also just repeat that question. I couldn't-----

Certainly. You said in your earlier evidence that the manual permitted the engineers such as yourself who were on duty to



go up or down in the levels according to their judgment?--  
What do you mean by the levels?

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MR SULLIVAN: Sorry. Could I just object? I'm not sure that's what the evidence was. I thought the evidence was that it didn't just go 1, 2, 3 and 4; that in an event it may go 1/3, or 3/2, and so forth. Not in judgment. But that's my recollection of the evidence.

COMMISSIONER: I am sorry, I'm not quite catching on why - the judgment aspect matters. But your point is, Mr Murdoch, isn't it, that you can go up and down, and that's what Mr Tibaldi had said?

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MR MURDOCH: Yes, Your Honour. The expression the witness had used earlier was, as I noted it, you can jump around anywhere depending on what is occurring.

COMMISSIONER: Mmm, all right.

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MR MURDOCH: Which suggests - sorry?

WITNESS: Well, it is unfortunate you took those words.

MR MURDOCH: Well, they were your words, sir?-- You can't jump around anywhere. What I was saying to you - I think you have missed - are you talking about levels or strategies? I think we need to clarify that first.

Strategies?-- Okay.

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That's how I took it?-- Yes. Strategies - yes, but you were saying levels, so that was my confusion. I thought you were talking about lake levels. Again, just refer you to the second last paragraph on page 22 of the manual, it talks about strategies. Now, in an event, it is quite possible, depending on how the rainfall falls over the course of the event, to go up and down in strategies because the manual will require you to do that. For example, if the lake level just exceeded 68.5, and then as a result of your release, fell just under 68.5, it is possible that you might go from W1 to W2 and then back into W1, or W1 to W3 and then back into W1, depending on what your release conditions from the dam are at that time. Similarly, you can - you could go from a strategy like W3 to W2. Not necessarily - they are not necessarily progressive. What W2 and W3 are about, it is about where the rain falls. If the rain falls in the Lockyer - predominantly in the Lockyer and Bremer catchments, you are in a W2 strategy situation because the flows coming out of the Lockyer Creek and Bremer River are dominating your decision-making. They are what is setting the peak potential - the majority of the peak flow. In those circumstances, look to hold back water in Wivenhoe. Alternatively, if it is a W3 situation, so generally the rainfall is falling above the dam and not so much in the Lockyer and Bremer area, the Upper Brisbane is dominating, you haven't got much flow coming out of Lockyer/Bremer, you're trying to get rid of water in the dam, and you're not so concerned about the level of flow coming out

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of the uncontrolled tributaries, because, as I said, if the rainfall isn't falling there, there is not a lot of flow there. So I guess, as I said, that concept - you shouldn't think of the strategies as sequential. You don't necessarily go 1, 2, 3, 4. 1

In terms of the report on the operation of the Somerset Dam and Wivenhoe Dam - and I am talking about the 2nd of March 2011 report, which is Exhibit 24?-- Yes. 10

In part 2 of that we have Flood Event Summary, don't we?-- Part 2, yes.

And can you show me in that any illustration of the concept of jumping around between strategies?-- Look, jumping around, my apologies for using that language. Jumping around gives you a probably false impression. It is more transitioning between strategies. There is no examples in this flood event because once we went from W3, we no longer - we didn't go back to W2, but had the rainfall pattern been different, we could have. I think a possible one to look at for that sort of - you know, you could have a look at the October 2010 event and just see how the strategies fell at that time. I mean, it just - no two flood events are the same. They are just not the same. So it depends where the rainfall falls in the catchment. The catchment area is 14,000 square kilometres and it just depends where it falls. If it is uniformly distributed, you will get a certain flood. If it is all in the Upper Brisbane, you will get another flood. If it is all down in the Lockyer/Bremer, you will get another flood. It depends where it falls and----- 20 30

COMMISSIONER: Mr Tibaldi, I think the question was just is there anything in this flood, and you said no?-- No, it didn't jump around. I can't give you an example from the log there, sorry. My apologies.

MR MURDOCH: To sum it up, so far as your report's event summary is concerned, it suggests it was entirely sequential, the movement-----?-- With the exception of W2 is missed out, it is 1, 3, 4, essentially. 40

If I could get you to look at that flood event summary, please? In the part that's page 13, column headed "Background"?-- I have missed that, sorry.

Page 13?-- Yes.

In the column headed "Background"?-- Background? 50

Mmm?-- Did you say?

Yes. The heading is "Transition from strategy W1D to W1E to W3 and strategy 3." You then in the third dot point say, "Transition from strategy W1E to W3 as it became apparent Wivenhoe Dam level would exceed 68.50 metres. Strategy W2 was bypassed as it was not possible to achieve this strategy by limiting the flow in the Brisbane River to less than the

naturally occurring peaks at Lowood and Moggill. This is because the calculated naturally-occurring peaks at Lowood", et cetera, et cetera. I won't go on reading it?-- I think it is important to read that bit.

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All right. Well, you go on and read - you can read it then?-- Okay. "This is because the calculated, naturally-occurring peaks at Lowood and Moggill were 530 metres cubed per second and 770 metres cubed per second, respectively. For as the release rate from the dam was already 940 metres cubed per second." So if you've already got 940 in the river, it is a bit hard to get under 530 and 770. That's the point of that.

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What I want to know, firstly, is were you part of the - any decision to bypass W2-----?-- No.

-----strategy?-- I wasn't in the room at that time.

And the reasons that you set out there for bypassing W2-----?-- Yes.

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-----are they reasons that were conveyed to you by the decision-maker or decision-makers-----?-- Certainly not in that first-----

-----who decided to do that bypass?-- Certainly not in my first draft, as I explained this morning, and we've been through that a number of times this morning. The first draft. So particularly if you look in, I think, those drafts that I provided you, which were my work, if exactly those words in there - they may or may not be - you would have to check - then they are exactly my words, and there has been no amendment because those drafts were mine.

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It is fair to categorise what you've set out as the reasons for the bypass as being speculation on your part, isn't it?-- When I wrote first draft, yes, certainly. Certainly.

Well, at any time since you wrote the first draft, has there been any evidence that those reasons which you set out were in the minds of the persons who you say made the decision to bypass W2?-- I think there is evidence on the record from the person that made that decision. Otherwise, I pointed to a number of pieces of circumstantial evidence earlier in terms of decisions that were made at 8.15, and directives that were issued at that time. Again, at the end of the day, it is a matter for the - you know, the person. I have gone through that circumstantial evidence, I think. I can go through it again.

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If there were persons who at the time believed that W2 was in fact a prevailing strategy, it follows from what you've said that those persons were incorrect; is that right?-- Yes. There was - you could not say we were meeting conditions of W2 at that time. You could not say we were doing that. The flood was too high.

Do you accept that there's a distinction between whether you're meeting the conditions of W2 and whether in fact W2 was the intended strategy?-- A difference between whether you're meeting them, whether it's intended. So could you just give me an example of that? My brain - I'm just having trouble focusing-----

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Just to put it very simply, if those who controlled the centre-----?-- Mistakenly increased the release?

No. If they decide that the appropriate strategy is W2 and then issue instructions inconsistent with it?-- Well, if you decided - well, that would be - this is the point I was making before. If you do something like that, you make a firm decision you're in W2, but then instead of decreasing releases which W2 requires, you increase releases, yeah, that would be unusual.

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You see, I thought you said in your evidence this morning that there were times when you were preparing the report that you had real concerns that there had been noncompliance with the manual?-- Yes, I talked about that. That was in relation to the spreadsheet on page 23, which as I pointed out - and I pointed out to the Commission back in April or March in my third statement or second statement, I can't remember which - there's an inconsistency with the flowchart and the manual on page 23. When the conditions that were - that occurred in January actually occurred, it did - does direct you - if you look at that flowchart, it does direct you to strategy W2, which would have meant a substantial cutback in release if you had applied strategy W2 at that time. However, based on the size of the release, it was obvious - well, based on the size of the release, the only conditions that could be - you could say were satisfied were W3 at that time. And by increasing the release under W3 at that time rather than cutting back as W2 requires, there's no question that action decreased the eventual flood peak. No question. But there is an inconsistency there, as I pointed out, and it's also, I believe, pointed out in at least two of the expert reviews of the report that occurred in March or - last year.

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So far as your report - when I say your report, the report that you participated in authoring - is concerned, was W2 ever in play during the January 2011 flood event at Wivenhoe?-- My belief is I can't see any conditions under which W2 could be applied in accordance with the manual. Once the level was above 68.5, which gives you an opportunity to then to apply W2, the flow rates from - the release rates from the dam over that full period were too high at any time to meet the requirements of W2 when compared to the calculated naturally

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occurring peaks. If you read my statement, there's an extensive table in there that goes through that exact concept period by period. I'm happy to go through it with you if you wish.

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Have you seen a copy of an email 8.23 a.m. on January 10, 2011, from Rob Drury to Dan Spiller re technical report W36?-- I believe my lawyer showed me a copy of that. I believe I did sometime over the last two days. Otherwise, I may have just heard about it. I can't recall. Could I see it, please? I can see that.

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You see that the email from Rob Drury is in response to an email from Dan Spiller?-- Yes, I can.

Spiller had asked the specific question, "Are you now operating under strategy W2 or W3?"-- Yes.

And the response was, "W2"?-- I can see that.

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How can we reconcile the response from Rob Drury, who at the time I believe was the dam operations manager, with your evidence-----?-- Sorry, what was that last -----

-----that W2 had never been in place?-- That's just wrong. Particularly at that time on Monday, 10 January, the flows - we were ramping up towards the limit of nondamaging flows at that time. That's towards 4,000, I believe, so you'd be violating every possible - you're not in W2. That's just - it's wrong.

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Nothing further, thank you.

MR MacSPORRAN: Mr Tibaldi, my name is MacSporran. I appear for State and Mr Ruffini. Can I ask you something quickly about the manual. Do you have a hard copy of that still with you?-- Yes.

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Could I take you to page 24. It's Exhibit 21, I think, page 24?-- Yes.

We start on page 24 with the W strategies, commencing with W1 in a general sense firstly?-- Yes.

It sets out that that applies with lake level is less than or not expected to be over 68.5 metres and the maximum release rate is 1900 CUMECS; is that so?-- That's what it says, yes.

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But then W1 is broken down again into a series of subcategories; W1A through to and including W1E; is that so?-- Correct.

And each of those has its own height and release rates that stipulates whether you're in that strategy or the next?-- Yes.

So for instance, 1A is a lake level greater than 67.25 metres and a maximum release of 110 CUMECS?-- That's correct.

So if you are over that level, are you then automatically in strategy W1A?-- Over 68.5, yes - 67.25, sorry, yes.

You're in 1A, and is that maintained, that position, as long as your maximum release is not greater than 110 CUMECS?-- Well, it will depend what's happening - what flows are coming out of Lockyer Creek. There might be hundreds of CUMECS coming out of Lockyer Creek, which may - again it just depends on-----

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What's happening in the global sense?-- That's right. Yes.

I won't take you through them all, but they all have their own heights and maximum release rates up to the maximum for W1 of 1900 CUMECS?-- Right.

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Then W2 comes in, as we've said, for a lake level between 68.5 and 74?-- Yes.

And that's the same lake height relevant to W3?-- That's correct.

The difference between W2 and W3 is the limiting natural flows in Lowood and Mogill?-- That's right. As I said a few times, that this is to do with when the rainfall is falling, whether you're in W2 or W3.

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Bearing those features in mind, can I take you then to the flood event summary in your report section 2. It's at page 13. Mr Murdoch looked at this a moment ago. Exhibit 24. And we see the comment at page 13, the left-hand column under "Background", that the transition has been from W1D to W1E based firstly and primarily upon the proposition that the lake height or level has exceeded 68.25 metres; is that right?-- That's right. And on previous pages there's a number of examples like that.

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Yes. And you give the time of that as being 2200 or 10 p.m. on 7 January, the Friday night?-- Yes.

Now, in terms of what evidence there is as to which strategy you're in at a particular time, when you say you're looking for evidence of it independent of the engineer's say so, that figure of the lake height of 68.25 being exceeded at that time on Friday night, is that an objective fact that can be checked?-- It is.

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Where do you find that? That's just a data set that's available to the engineers?-- Yeah, there's two sources of that sort of data: there's the continuous electronic readout that is received in the flood centre in realtime that measures the water level. To verify that, operators at the dam read a gauge board approximately every one hour and provide a manual reading that can be crosschecked against the electronic data.

I imagine that those sources of that data have to be easily available, because that's a very important consideration when you are managing the dam, isn't it: the lake height?-- That's right. And if - I mean, even between hours if you have uncertainty, it's just a matter of contacting the operators who are on duty 24 hours during a flood event and instructing them to gauge take a gauge board reading for you - a manual reading.

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So the engineer or engineers towards the ends of this event that were on duty would be keenly observing and monitoring the change in lake levels?-- Oh, yes. What happens is that in the gate operations spreadsheet, the manual data must be put in manually. So as you obtain a gauge board reading, you'll actually type that into the spreadsheet. So it's pretty hard not to be aware of the lake level at any time.

The operational spreadsheet, as you call it, that's a contemporaneous record. It's an ongoing record as you operate the dam?-- Yes.

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Is it fair to say that would be one of the more accurate records kept of how the dam is operating?-- Yes.

Because it is contemporaneous?-- Certainly it is, and it's crosscheckable too in terms of the directives and the confirmation of the directives that are received back from the operators and the gauge board. When you've provided with a gauge board reading, it's generally provided either fax or email so you can sort of - there is quite good opportunities to crosscheck the data in that sheet.

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And we see then the next dot point is transitioning from W1E to W3 on the basis that the dam level would exceed 68.5 metres at 8 o'clock on Saturday morning?-- Yes.

That again is a verifiable level from the same records you've just been talking about?-- Correct.

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There's no guesswork or speculation about the lake height at that time on Saturday morning, is there?-- No.

If anyone wants to check that, it can be looked up very readily?-- That's correct. That's a permanent record in a database.

And once the lake height goes over 68.5, the manual dictates that you are in strategy W2 or W3, whether you like it or not?-- That's correct.

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And the engineer, I take it, on duty - or engineers - do not have a checklist beside their workstation that has a box that says W1 or W2 or 3 or 4 which you tick and a bell sounds when you change strategies, I take it?-- No. No, that's right. Although I think it's a good - I guess for clarity it's good to record the strategy. That's why we're doing it now. But at that time a change in strategy like that just simply wasn't

recorded. Primarily, in my view, because it was obvious.  
But-----

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It's obvious when the lake level reaches a certain point you have to be in a higher strategy than W1?-- Yes.

The only issue for determination is whether you're in W2, 3 or 4?-- That's correct.

And as you've set out here, you have analysed the data and very readily came to the conclusion that it couldn't be W2, because the naturally occurring flows at Lowood and Mogill had already been exceeded by the releases from Wivenhoe at 800 or 900 CUMECS?-- That's right. Even if we had completely closed the gates, then we wouldn't have been able to apply W2. There was too much water already in the river, so it just couldn't be applied.

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If, as an operating engineer, you had wanted to be in W2, as you said at one point you thought that was what was required by the manual, and according to the flowchart on page 23, it was?-- Yes.

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You would in fact have been required to close the gates and decrease the release rate?-- That's right. You would have had to cut the release back, as per my statement, from about 920-odd CUMECS - cubic metres per second down to something in the order of 100.

So even though you have been criticised in one sense for in fact not having gone beyond W1, if you had in fact gone to W2 you would have been in a lower release rate strategy?-- That's correct.

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In those circumstances?-- That's correct.

But as you say, the objective data as to the actual release rates meant you had to be beyond W2 and obviously in W3?-- There was no - that's where we were.

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Those release rates, again that's data that can be checked by anyone and verified; is it not?-- That's correct. Again there's crosschecking, because the operators, once they seen a gate operations directive to open gates at the dam, they will - once they have undertaken those actions, they will send back the confirmation that that has been undertaken. The flow rate can then be determined through a calculation that is based on the opening of the gate and the water level in the dam.

Now if I can take you to the far right-hand column headed "Strategy". In the fourth dot point you talk there about strategy W3 also required lower level of manual objectives to be considered. That's the case, is it not, as spelled out in the manual?-- That is in the manual, yes.

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The primary objective of W3 is to minimise inundation in urban areas?-- Yes.



But you're required, as you say here correctly, to also consider lower level objectives, which are protect, in effect, the bridges in this case - the two main bridges?-- That's correct. 1

And that was being done, it seems on the objective facts, as to what the release rates were at this time?-- Yes, that's right. As stated in the flood event report, I think, there's no question that at this time we were operating to keep those bridges open, and that's clearly - there's no dispute with that as far as I can tell. 10

And not only is there no dispute that that is what was happening?-- That's what was happening, yes.

But that was what was required to be happening when you first entered W3, because you're required to keep the lower level objectives in mind; is that so?-- As I said before, it depended - it would depend on the rainfall. I mean, if you got a very intense event - like, such events are possible. So that as soon as you exceed 68.5, you could go straight to the limit of nondamaging flood. That is possible. But the rainfall and stream flow and lake level conditions at the time this transition occurred in my view didn't warrant that. As I said, you don't go to that lightly, because you will cause considerable disruption, not only by taking out the bridges, but certainly there will be low-level flooding around Brisbane. 20

If you, as soon as you go to W3, you open the gates to the maximum allowable under W3, which is 4,000 CUMECS?-- Yes. 30

You close those bridges immediately?-- Well, you couldn't release 4,000 CUMECS because you've got to remember that-----

Sorry-----?-- -----you're also getting-----

-----the combined flows?-- Yeah, the combined flow at 4,000. But you'd certainly close those bridges. Also, again I think it's been before the Commission in previous statements - I've read in some of the later statements - damage curves from the Brisbane City Council indicate quite a few million dollars damage once you go to that 4,000 CUMECS in the river. So it's not something you'd do without some certainty that's required because it's - you know, you're going to cause problems. 40

But additionally if you release that maximum permissible from the dam to make combined flow 4,000 at Mogill, you don't leave any room for the risk that rain might fall to exacerbate the volumes of water below the dam, do you? You take a significant risk in releasing at that rate early?-- That's right, and that was some - I mean, in terms of movement of weather forecast during the January event, there was a continual forecast for a southward moving system which indicated that the bulk of the rain would fall below the dam. That didn't occur. In some ways it's fortunate, because if it had, the flood would have been worse, in my view. 50

With that forecast in mind, it would have been irresponsible to ramp up the releases in W3, would it not?-- That's my - at that point in time I think that would have been a very irresponsible thing to do. 1

If you had been a clairvoyant and had known that the forecast was wrong about rain falling below the dam but that there was a massive event coming in above the dam, you would have released water earlier?-- Yeah, if we had known at that time what was coming three days later, the right decision would have been to ramp up to 4,000 then exactly at that time. If you knew what was coming three or four days later, or three days later, whenever it was, yeah, definitely that would have----- 10

If, as the case, you didn't know, you were required to responsibly hold back the releases?-- You've got to really make a judgment on the best call, and that was the best judgment we made at that time. As you say, if you can see the future, for sure. But you can't, so that was just the best call we made. 20

I understand. Can I take you then to that column with the heading "Strategy". We see there Wivenhoe Dam outflows were more than doubling the natural peak flows at Mogill, increasing releases from Wivenhoe Dam to produce a flow rate at Mogill of up to 3,000 CUMECS would have meant transitioning back to operating strategy W1 in around 18 hours from this time. Is that an example of the ability and possibility of moving down strategies as opposed to sequentially up strategies?-- Yeah, it's I guess trying to provide some explanation as to the consequences of ramping up the release. Like, not only are you going to cause some damage, but you're also going to put yourself back in a lower level strategy. It really just depends what the rain is going to do, and that's the dilemma. Certainly if you want to operate - if you're prepared to accept that damage occasionally, like last week we would have got it, we can ramp up. But what you said is correct. 30 40

Can I take you to the next page, page 16. This is the period Sunday, 8 in the morning until 2 in the afternoon. Again the third column - the last column on the right under the heading "Strategy" you say, "Although the inflow estimate of 1.1 million megalitres was based on a forecast, it resulted in an expectation that if rainfall continued, there may be a need within the next six hours to transition to a situation where minimising disruption to downstream rural life was no longer considered," and so on. "That would result", you go on to say, "in the closure of those bridges and flooding down in Brisbane"?-- That's right. 50

Is that an example of considering the priorities between your primary objective in W3 to minimise inundation in the urban areas, and the need to consider the lower objectives of protecting the rural environment?-- It is. And I believe that notation resulted from a situation report that was developed by engineer Malone on that Sunday. But yes, it's certainly an

example.

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If you finally go to the next page, page 17, which covers 2 o'clock Sunday afternoon to 7 o'clock Sunday night, do we see there in the first dot point in the right-hand column, "It was decided at the end of the period", that is, 7 o'clock Sunday night, "to no longer consider minimising disruption to downstream rural life and to focus only on protecting urban areas from inundation." Now, does that mean that you're in W3 all through this period, but as at 7 o'clock on Sunday night you've been forced to abandon the lower level objectives of protecting rural life and concentrate on the prime objective of W3, to minimise urban inundation?-- That's correct.

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So is that an illustration of the stages that you go through within a strategy to deal with the various objectives within the strategy?-- It is. I mean, they are the sort of considerations that I believe reflected what occurred during the event. You can see even then the lake level is only 68 - it's still at that point only 68.58, but obviously we know there's some inflow on the way. I guess that's the dilemma. I mean, you know, 68.58, you've still got almost 8 metres of space until - sorry, 6 metres of space - 5 and a half metres to allow 47, so there's still a lot of volume still in the dam, and it's at that point at which you make the decision to ramp up. And it's a judgment call, and it's really - we've put on the table when we made that call; why we made it; all the circumstances around it. I think it's for other people to judge it, whether it was right or wrong. But certainly if you consider the information available, I thought the decision was reasonable. If you look at it in hindsight and you know that three days later you've got a massive amount of rain, it's very easy with hindsight to see that yeah, we should have - if you know the full history of the flood event, you'd ramp up before it started.

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As we said earlier, the change from one strategy to the next can be largely based upon the lake level, and in particular levels above 68.5 dictate you go into - or you come out of W1 and necessarily go into W2 or 3. And that would happen with the knowledge of the engineer in control, would it not, because you're monitoring those heights - those levels?-- That's true. There is an awareness at all times through the spreadsheet. Because you're physically typing in numbers, you've got to physically type in gauge board readings, that you know what the lake level is.

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If the engineer in control is making decisions by issuing directives for gate opening strategies to produce a flow at a certain level, he also knows what the release rate from the dam is, doesn't he?-- Oh, he knows the release rate, yes, certainly.

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He makes conscious decisions to regulate the release rate?-- Again at all times you're seeing an hour-by-hour release rate, not only at time now, but also predicted into the future, and that's essentially what you're operating on. So you've got a very clear understanding of release rate at any point in time.

It's just a matter of looking at the screen, and the same as the level.

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So, knowing your level, making decisions about release rates accordingly, whether you have recorded what strategy you are in or not, you have necessarily turned your mind to that strategy, haven't you?-- Yes.

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I mean, you can't do it automatically, you must be aware of what strategy you're in by virtue of knowledge of those facts?-- That's true.

Thank you.

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COMMISSIONER: Mr Tibaldi, in your approach, which is to look at the objective circumstances and draw an inference as to which strategy applies - that's your approach basically, isn't it?-- Yes.

You look at actual lake level. You never factor in prediction; in other words, you know that some of the strategies say lake level is predicted to be between 68.5 and 74?-- Well, in drafting the report, I couldn't - I wasn't in the room so if someone had said, well, really I transition at W3 at such and such a different - an earlier time before it was 68.5, I would have put that in the report. I guess - you know, that's the situation. You know, certainly when the guys read my draft, changes were made, you know, associated with things that I couldn't know because I just wasn't-----

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All right?-- Wasn't there.

But your fundamental approach assumes that prediction doesn't come into it, it's the actual lake level?-- In drafting the report I did that, but I would - as you would no doubt be aware in the manual, it does give you - it does talk about likely lake level, so there is that ability there. For example, if you had a probable maximum flood event where the lake would rise very quickly, there's the ability within the manual to make a release, you know, really ramp up the release before 68.5. That ability is there because it does talk about likely.

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All right. Thank you. I think now if we go to you, Mr Ambrose.

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MR AMBROSE: Mr Tibaldi, I act for SunWater and Mr Robert Ayre. You were asked questions by Mr Callaghan about paragraph 28 of Exhibit 1,049. Can he be shown that, please? Do you see that, "Strategy labels are generally only attributed after the event as part of the reporting process."?-- Is this Mr Ayre's statement?

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Mr Ayre's statement?-- Okay. Yes, I'm with you now. I can see that.

I just want to put that in context, if I may? Could you have a look, first, at paragraph 24 on the same page?-- Yes.

Those terms, the Ws by name, are not necessarily referenced at any particular time during a flood event. What is referenced, it is suggested, are the actual gate releases, rates, the lake levels and the downstream peak flow rates, and that's done because that's the actual operational strategy that's being employed by the flood engineers, isn't it?-- Yes. As I said, the screen you sit in front of as a flood engineer has the information that is referred to in that 24. 1

At paragraph 25, you agree with that, don't you, that, "The flood engineer is focussed on release rates and meeting the appropriate objectives."?-- Yes. 10

And you agree with 26, I suggest to you, "Agencies that receive Situation Reports don't necessarily understand what a strategy label might mean as they have got limited exposure to the Manual of Operations."?-- That is certainly true.

And those people who read the Sit Reports are generally more interested in actual flow rates, flood levels and what might be happening to them or the people that they have to look after?-- That's correct. I'd agree with you. 20

So, 27, just to be complete, strategy labels are sometimes referenced in directives because directives are being given to flood officers or dam operators, I should say, at the actual dams, because they have some familiarity?-- That's true. Oh, well - look, I think it's true, you but I'm just struggling right at the moment - thinking about strategy labels referencing directives, but I - I certainly agree that the dam operators have a much better understanding than others because they do undergo annual training and----- 30

Yes?-- -----regular training, so from that point of view that's correct.

Flood engineers, I suggest to you, cannot obviously influence the amount of water flowing into the dams?-- No.

And, similarly, flood engineers cannot stop the naturally occurring peak flows at either Lowood or Moggill?-- Correct. 40

The only operation that flood engineers can undertake, I suggest to you, is to make releases at appropriate rates and in the appropriate volume?-- That's correct.

So, if a flood engineer were to say at any one time, "I choose to apply W3 strategy.", nothing is magically going to happen?-- That's true. 50

So, in that context have a look at paragraph 29 of Mr Ayre's statement, "The flood engineer selects the strategy by testing different release date rates and then assessing the suitability of release rates in respect of achieving objectives. That action" - sorry, "The action that informs the choice of strategy is, in fact, the gate release rate and how that manages the lake levels and the downstream flows."?-- I'd agree with that.

That's how, I suggest to you, the strategies are chosen?-- Certainly seems reasonable.

So then we go to 30, if you would, and it gives an example, for example, "By Friday, the 7th the Flood Operations Centre was cognisant of the need to protect urban areas", I suggest, "from inundation evidenced by the decision to make releases greater than the naturally occurring peak at Lowood and Moggill.", and it was only when the lake level reached 68.5 as well would W3 be formally engaged?-- I see what you're saying and I agree with that.

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All right. Now, you were challenged again by Senior Counsel assisting the Inquiry about evidence to prove or disprove that you were applying the wrong release rates and hence the wrong strategy; do you recall that?-- Yes.

MR CALLAGHAN: I object. I don't know that I suggested that wrong release rates were being applied.

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MR AMBROSE: Well, the record will show it. Can I move on?

COMMISSIONER: If you want to ask the question, "If that proposition were put, what would you say?", you're welcome to do it.

MR AMBROSE: I want you to assume you were challenged on the absence of the ability to find evidence that engineers applied the wrong strategy?-- Well, as I say-----

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Just assume that's what you were asked about for the sake of these questions?-- I see. I'm with you, sorry.

I want you to assume that you're in W3. I want you to assume that the lake level at Wivenhoe is 68.5 metres and that you have got an abundance of storage capacity. If the decision by the flood engineers was to make a release of 3500 CUMECS, I suggest to you this would cause urban inundation to some extent?-- To some extent, according to the Brisbane City Council damage curves, correct.

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And it would provide evidence, would it not, in very stark terms that you were not operating in accordance with W3, being principally designed to protect the urban areas?-- Yes, correct, and also the - you know, the requirement to consider lower level objectives.

That's right, that's right, because, in fact, while you have got an abundance of storage to effect the principal objective of W3, that would be to avoid higher releases?-- Yes. I agree with that, provided the storage is not threatened by-----

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That's what I said?-- -----intense rainfall, yes, okay.

68.5 and an abundance of storage capacity?-- Well, look, I agree with that premise.

If you made higher releases, then you would be going contrary to the manual at 8.4, I suggest to you, which says that you're obliged to provide optimum protection of urbanised areas from inundation?-- Yes.

You wouldn't be doing that, would you?-- No. In my view, if you did what you're suggesting that would be the wrong decision.

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You wouldn't be operating as a dam mitigation technique, in fact you would be operating as a dam - flood causing operation; isn't that right?-- I - what I'm saying is that would be the wrong decision.

That's right?-- I wouldn't agree with what you're suggesting.

So if, in fact, you used the capacity for storage, you would be operating in accordance with Strategy W3, you would be providing optimum protection for urbanised areas for inundation and at the same time, perhaps even coincidentally, you would still be minimising damage to the rural areas?-- That's correct.

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You would be complying in all respects with the manual?-- I believe so.

Making higher releases would be inconsistent with the operation of the manual?-- Certainly in the circumstances you have described there's no - there would be no justification for higher releases, in my opinion.

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I will take another situation. Here on Friday the 7th, flood engineers might have chosen to effect releases in accordance with strategy W2, they might have chosen to do so if that was their aim. You agree they might have chosen to do this?-- It-----

COMMISSIONER: On Friday, sorry?

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MR AMBROSE: Yes, on Friday. Even on Friday.

COMMISSIONER: What date is Friday?

MR AMBROSE: The 7th?-- Well, they couldn't - in my view they couldn't choose W2 at that time because the lake level was less than 68.5.

COMMISSIONER: Unless we are getting into predicted territory.

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MR AMBROSE: I am talking about releases. They might have chosen to effect releases in accordance with W2?-- Oh, I see what you're saying.

That is to say, releases from Wivenhoe that would be below the naturally occurring peak flows at Lowood and Moggill. You're not at - you're not 68.5 yet?-- You're still in W1. I will just have to consider the requirements of 1A, 1B, 1C, 1 - you



know, the five in Strategy 1, but it's possible and-----  
 Theoretically then if - I will put it easily?-- Look-----  
 No, listen to me. If the lake level is not at 68.5-----?--  
 Yes.

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-----a flood engineer might choose to effect Strategy W2 and  
 in order to do that the flood engineer will choose release  
 rates that were less than the naturally occurring peak at  
 Lowood and Moggill?-- If it's less than 68.5, I don't agree  
 that you can invoke Strategy W2.

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If it is at 68.5, the dam operator, the dam engineer, might  
 choose to effect Strategy W2 by selecting release  
 rates-----?-- Yep, that would be a-----

-----less than the naturally occurring peaks at Lowood and  
 Moggill?-- Yes, that's correct, you can do that.

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One way-----?-- If it was justifiable at the time.

That's right, that's right?-- Yes.

If that was done then the effect would be to make the storage  
 level higher?-- Yes.

It would cause less water to flow downstream and ultimately,  
 as the events unfolded, it would cause the flood engineers to  
 have to release at higher rates later, potentially causing  
 more damage?-- I think, you know, there's no question if we'd  
 gone to W2 at that time the onset of W4 would have been sooner  
 and longer and certainly the flood would have been worse,  
 there's no question.

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So, by bypassing W2 on Saturday morning the flood engineers, I  
 suggest to you, have clearly chosen to move more rapidly to W3  
 where the principal objective is the protection of urban  
 areas?-- Yes, that follows. I agree with that.

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And whilst the storage area is available, this is a proper  
 application of the release rates in strategy W3?-- Yes. As I  
 said, I stand by the Flood Event Report. I think - and that's  
 what it's saying and I still - still believe it to be correct.

And that's particularly so, I suggest to you, given on the  
 Saturday the actual rainfall that had occurred in the previous  
 24 hours and that which was, in fact - that was, in fact, fell  
 on Saturday for the next 24 hours?-- Yes. There certainly  
 wasn't much rain on Saturday night. I just can't recall the  
 totals without consulting something.

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Okay. Now, the rates that are chosen for release from the dam  
 are also subject to a principal consideration; that is to say,  
 to return the dam level to full storage level within  
 seven days?-- That's right, that goes to the matter of dam  
 safety-----

That's right?-- -----in terms of dealing with large floods, so that's correct.

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That's right. So, now, we know that if you release at 1600 CUMECS there can be some interference with the ferries in Brisbane and some low-lying bikeways, et cetera, are flooded and low-lying houses may not be covered or inundated to floor level, but there is some effect. Similarly, at 1900 there's a little bit more damage in the urban areas. Now, I want to put to you if you were in W1E, a flood engineer might choose to release up to 1900 CUMECS?-- It's possible if there was no downstream flows from Lockyer or Bremer, yes.

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Sure. But that would take out the Mt Crosby Weir Bridge?-- Yes. I think its threshold it's 1800.

You understand I'm talking now about making releases within a time period to bring you back to full supply level. If you release at a higher rate, you might take out the Mt Crosby Weir Bridge?-- Yes.

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And that wouldn't be consistent, would it, with the operation of the manual?-- No, I don't believe so. If - again, depending on rain falling, but, no, what you're saying is - I agree with.

So, if you make higher releases for the purposes of bringing full supply level back within a shorter time than is optimally necessary, you're going to more likely than not cause damage to the urban areas?-- You would in the circumstances you're describing.

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Yes?-- And, yes, certainly the manual doesn't require you to use anything less seven days, so you're right.

If you're in W3 and you decided to bring the full supply level back in two days, you could have massive releases, and that would be fabulous, but you wouldn't be complying with the manual?-- I would agree with that. After the peak I'd agree with that.

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You were taken to the Sit Report of the 8th of January at 5.53, do you remember that, by Counsel Assisting?-- I think we have been there - I think Mr Rangiah always - I think I have looked at this a few times, I don't mind looking at it again.

Thank you. The lake level at 5.53 we know was above 68.5, but it was only 68.65. You can see that from the Sit Report, I think?-- Yeah, I'm not looking at the right place, I think.

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If you look down to Wivenhoe-----?-- I have got it. Thank you.

Yes?-- So, yes, at 18.00 68.65.

Yes. And we know obviously that W2 could not be applied because the releases that had been made earlier were higher

than the naturally flowing peaks at Lowood and Moggill?--  
That's right.

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But we also know from that Sit Report that the river levels  
upstream of Wivenhoe had peaked I think the night before?-- I  
have to check that.

You can read it. "River levels upstream"-----?-- Yes, it's  
certainly in the second line.

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Okay. So, we know that at this time on Saturday the lake  
level was only 68.65, the river levels had peaked upstream and  
there had been no significant rain on Saturday. You see under  
the heading, "Wivenhoe.", if releases were increased or if  
they stayed the same at that time you could be back in W1  
within 24 hours, wouldn't you?-- I'd have to do the  
calculation, but just knowing the time and the way the lake  
level dropped that night, that was certainly possible. When I  
left shift that - early Sunday morning, that appeared to be  
where it was heading if there was no more rain.

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So, just under - as an aside, if you like, for the moment,  
under the heading in that Sit Report, "Impacts Downstream of  
Wivenhoe.", it speaks, does it not, of the current Wivenhoe  
releases and what their impact is downstream, and in the  
second paragraph, "The current available assessments indicate  
the combined flow of the lower Brisbane River, the lower  
Brisbane, would only had 50 millimetres", et cetera. Do you  
see that?-- Oh, yes, I see that. Sorry. Yep.

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Just have a look at that. As an aside for the moment, I want  
you to tell me whether that indicates to you that the impacts  
in the urban areas are being considered?-- It's certainly  
considering Brisbane City, so that's-----

That's pretty urban, isn't it?-- It is.

So, go on to the point that I was trying to make before the  
aside, the next section deals with forecast scenarios, and I  
suggest to you this is the first time this appears in a  
Sit Report. Now, read it carefully, if you would. I know you  
have read it before. Tell me when you are there. Okay?--  
Yes.

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It's not talking about what is currently the situation, is  
it?-- No.

It's not talking about what is the situation at 5.53 on  
Saturday, the 8th, it's talking about what might happen in the  
future, isn't it?-- Yes, it is, it's saying "forecast  
scenario".

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That's right?-- It indicates the future and assessments  
relating to what might occur at a future time.

And if in the next few days there was an increase in those  
flows of the rivers and, I suggest to you, given what we had  
discussed earlier, in the 24 hours after Saturday there had

been no rain and you drop back to W1, then in the next few days, that's to say after the three day forecast had come to pass, it might be necessary to increase or ramp up to W2?-- Oh, yeah, there's - you can certainly go - drop back to W3 and then go W2. I mean-----

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Isn't that what it is talking about, now that you read it? It is talking about what might happen over the next few days if the three-day forecast come to pass?-- Yeah, I can certainly see that logic. I - I - it seems, you know-----

You were taken as well to the flood event log at 3.30 on Sunday. Remember that?-- 3.30 on Sunday? That was the phone call, was it?

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That was the phone call?-- I remember that, yes.

Right. Now, by 3.30 on Sunday, you well knew unequivocally that you were operating in W3?-- 3.30 on Sunday. Well, I wasn't there but-----

I know that?-- But it is obvious they were operating at W3, yes.

Sure. But the lake level was still only 68.68, I suggest to you?-- Yes, that's my-----

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There hadn't been any rain, if you remember, over the Saturday?-- Yeah. Well, that is the point. The lake level was still relatively low. I can't see 68.68 actually at 3.30 but-----

That's all right. The record will establish that, if you take my word for it?-- I am certain that the record was such that at that time there was still a relatively low lake level. That was the issue.

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Now, if at that time the releases actually being made were such that Mt Crosby Weir Bridge and Fernvale were still open, that as a matter of fact the operation was still at the top of W1 where Mt Crosby Weir Bridge and Fernvale were still open?-- We certainly weren't in strategy W1-----

No, that's right?-- -----but I could see how a person could - it is a bit like - if you look at the way the descriptions are of the strategies, I can see how you could make that linkage.

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This duty officer hasn't entered that they were operating at the top end of strategy W1 and the bottom end of strategy W2; they were operating at a level, I suggest to you, consistent with being at the top of W1 in terms of the bridges still being open and consistently with being at the bottom of W2 whereby the rural areas are being protected?-- Well, it just comes down to if the person that said that, can recall it.

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Sure?-- If that was their intention, it is a reasonable intention.

Yeah?-- But I wouldn't agree we were operating in W1 or W2 at that time.

Precisely?-- But-----

Indeed, you can't operate in W1 and W2 simultaneously?--  
Yeah. Well, that's - I don't think anyone would make that -  
yes, I hadn't picked up that distinction. I don't think  
anyone would actually say we were operating two strategies at  
the one time.

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No?-- That's incorrect.

In terms of what the operations were effecting, they were  
still keeping those two bridges open and the rural areas were  
still being protected; isn't that right?-- Yes, I see your  
point there. I agree with you.

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Now, at 9 p.m. on the Sunday you were taken to a sit report  
and it was trumpeted that this was the first time that there  
was any mention of minimising the impact of urban flooding.  
But until that time, the urban areas had been absolutely  
protected by the application of the strategy of using the  
storage facility; isn't that right?-- I don't think that -  
what time was that?

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9 p.m., Sunday. Situation report, I beg your pardon?-- Oh,  
situation report.

COMMISSIONER: I think we will adjourn for the day once you've  
finished with this, Mr Ambrose.

MR AMBROSE: Thank you. You remember that? You were  
questioned about the first time that it appears, minimising  
urban areas were mentioned?-- I can't recall the question  
from earlier today but I understand the point you're making.

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Okay. You see, up to that time you'd been using the storage  
facility of the dam to protect the urban environment  
absolutely?-- Oh, no doubt. I mean, if the dam wasn't there.  
You know, I certainly would have been aware of the flood event  
in Brisbane at that time.

So if releases from Wivenhoe weren't causing any urban impact,  
why would anyone reading a situation report have any interest  
in reading that there is no impact?-- That's-----

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Can you think of any?-- That's true. I-----

All right. We'll take it a step further. Sunday night you  
know that the releases have to increase because of the heavy  
rain that's occurred on the Sunday?-- Certainly the people  
that were on duty - I think it was obvious to them from-----

Sure?-- -----all actions, and that's what they did.

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So the storage capacity could not continue to be used as a  
tool to protect the urban environment. Hence, there is a  
need, I suggest to you, for the sit report to tell the people  
who are reading it that they've got to do something over the  
next period because urban areas cannot be absolutely  
protected, it has moved now to a point where the effect has to  
be minimised?-- Yes.

COMMISSIONER: Is that convenient.

MR AMBROSE: Thank you.

COMMISSIONER: We will adjourn until 9 a.m. tomorrow morning.

THE COMMISSION ADJOURNED AT 4.59 P.M. TILL 9.00 A.M. THE  
FOLLOWING DAY

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