

Transcript of Proceedings

Issued subject to correction upon revision.

THE HONOURABLE JUSTICE C HOLMES, Commissioner

MR JAMES O'SULLIVAN AC, Deputy Commissioner

MR PHILLIP CUMMINS, Deputy Commissioner

MR P CALLAGHAN SC, Counsel Assisting

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IN THE MATTER OF THE COMMISSIONS OF INQUIRY ACT 1950

COMMISSIONS OF INQUIRY ORDER (No. 1) 2011

QUEENSLAND FLOODS COMMISSION OF INQUIRY

BRISBANE

..DATE 04/02/2012

..DAY 61

THE COMMISSION RESUMED AT 10.00 A.M.

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COMMISSIONER: I have some things to say at the outset.

You may have seen the front page of this morning's Courier-Mail which bears the headline, "Revealed: Flood Inquiry Sinks Into New Scandal", and across a picture of Commissioner Cummins, bears the words, "Up to his neck in it." Inside is the headline, "Flood Probe Hits Another Low."

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All of that has the appearance of a calculated attempt to undermine the Commission and its worth, but I will not draw any conclusions about intent until I have given the editor and the journalists involved an opportunity to explain themselves.

Whatever the intent, the potential for its effect on public confidence in the Commission is obvious. Consequently, for the benefit of the public, and with the hope that the rational and fair-minded quarters of the press will be interested in the facts, I make the following points.

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Firstly, the article exhibits a very poor understanding of what the Commission is. The Commission is under the Commissions of Inquiry Act constituted by me, alone. I am the Commissioner. It's I who make decisions and I, and I alone, am the one who makes the findings and recommendations and reports to the government.

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This was not an Inquiry, as some are, where three Commissioners are appointed to report. Mr Cummins and Mr O'Sullivan are Deputy Commissioners. You can check this in section 28 of the Commissions of Inquiry Act, but their functions are essentially to assist me as and when I ask them to.

Mine is a full-time role. Mr Cummins, on the other hand, is engaged as a Deputy Commissioner on a part-time basis. There was never any suggestion that he would have to cease all his work as a consulting engineer in order to fulfil the role, provided of course the work he undertook did not conflict with the Commission's inquiries. There has been no conflict.

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The recommendations to which the Courier-Mail article refers are recommendations 2.8 to 2.13 of the interim report.

The principal recommendation among those is for a full and proper review of the Wivenhoe Manual. Mr Cummins did not advise me to make that recommendation. He did not need to. I was able to work that one out for myself.

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The recommendations for review of the manual included a number for committees which would oversee the work. They included 2.10, the specific recommendation which the Courier-Mail article calls into question.

It recommends that SEQWater establish a technical review

committee comprised of independent experts in at least hydrology, meteorology and dam operations to examine all technical work completed as part of the review.

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Those more detailed recommendations were formulated by me working with my staff. Mr Cummins was asked to comment on them. I do not now recall whether he had anything to say about that particular recommendation which was one of hundreds, but I'm pretty sure he did not say it was a bad idea to review the technical work.

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I made the recommendation which seemed to me then, as it does now, pretty obvious.

When the recommendation was made, the Commission gave no thought to whom SEQWater might engage for that role, or any of the other committees proposed. It had nothing to do with us.

It was not until yesterday that I learnt that Australian Dams and Water Consulting had been engaged. Mr Cummins was similarly unaware.

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Mr Cummins has an arrangement with the principal of Australian Dams and Water Consulting which I gather is not a large enterprise. The arrangement is that he will do work for the company when his role in the Commission is finished. That work will not involve the manual review in any shape or form. Mr Cummins does not stand to benefit from that work. He has no financial interest in the company. He will be paid for what he does, but he does not stand to make any money or anything else the company is contracted to do.

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I note that the Mayor of Ipswich is quoted in the paper saying that the arrangement is an absolute conflict of interest.

The Ipswich City Council is a party before the Commission and was represented at all of last year's hearings. Indeed, it has leave, as it knows, to appear at these hearings. If the Council thinks it has an argument that a conflict of interest exists, it can appear before me to make that argument, today, tomorrow, or any time next week.

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I am concerned that the work of this Commission not be undermined by sections of the press desperate to pump a headline out of nothing.

I urge the rest of you to resist the temptation. Think about what is at stake for this State in not only this hearing, but the work of the Commission in respect of all the terms of reference, and to report soberly and responsibly.

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Thank you. Mr Cummins?

MR CALLAGHAN: I think we're up to Mr Murdoch's cross-examination of Mr Ayre.

COMMISSIONER: That's right. Thank you. Mr Murdoch.

ROBERT ARNOLD AYRE, CONTINUING:

MR MURDOCH: Mr Ayre, might we return to the document which was the Flood Control Centre Event Log which is part of Exhibit 430. When we left off yesterday afternoon, we had got as far as the entry at 4.30 a.m. on Sunday, the 9th, which is described as Wivenhoe Directive 6 and in the ultimate column on the right-hand side headed "D", Directive Strategy W1E, and you had said that you dissented from W1E being the appropriate description of the strategy in place at that time?-- Yes, certainly on Sunday the lake level was in excess of 68.5, so W1E couldn't be in place at that point in time.

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If we go over then to the entry at 10.30 a.m. on the Sunday, we have Wivenhoe Directive 7 and in column D, a third direct reference to directive strategy W1E?-- Yes.

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And I take it you would also say that that is erroneous?-- It's incorrect, yes, because again the lake level was above EL 68.5. So strategy W1E could not apply.

And if we go down a little further, staying on Sunday the 9th, do you see the reference to strategy W2 appearing in column C?-- Yes.

Then we can follow over column D in the box immediately below, and the notation is "Situation Report Strategy W2", and I take it from your evidence to date that you would also say that the reference there to strategy W2 is erroneous?-- Yes. I believe that reference is taken from the Situation Report. It's not really a Situation Report. It's a comment on the duty engineer meeting, and I believe that reference to W2 is taken from the phrase "At this stage operating at the top end of W1 and the bottom end of W2", and that's erroneous because the lake level again was in excess of 68.5 at that time and, therefore, strategy W1 certainly couldn't apply. Strategy 2 could apply. However, the peak of the naturally occurring flows at Lowood was only 530 and at that time the release rates were in excess of that, so strategy W3 would have been in place.

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If we go then to the entry at 5.51 p.m. on Sunday, the 9th, we see in column D that the entry is "situation for strategy W2", and I take it in light of your earlier evidence you'd also say that that's an erroneous entry?-- Yes, for the same reasons.

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And coming further down the page, we see that with no specific time reference, that there's another entry in column D to "Situation Report Strategy W2" and again, I take it, you'd say that that's an erroneous entry?-- Yes.

And if we go to 7.15 p.m. on Sunday, looking at column D, the entry is "Correspondence strategy W2 transition to W3", and, again, I take it, in the light of your evidence that you would

say that that also was erroneous because that was not the time at which there was a transition from W2 to W3?-- Well, yes, certainly W2 wasn't implemented as such. My interpretation of the correspondence was that the phrase "ramp up releases to around 3000 CUMECS" is a reference to the sort of flows that you can get in W3, and I think the phrase "ramp up" means or implies a transition between strategies.

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Now, so far as that Flood Control Centre Event Log is concerned, I've been through quite a number of the entries where you say it is erroneous?-- Yes.

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I understand you've had a good look at this document?-- In the last week, yes.

And have I covered all of the entries that you say are erroneous, or are there further erroneous entries in that?-- There are further erroneous entries. There's references to strategy for W4B which relates to the fuse plugs. No fuse plugs were initiated in this event, so that strategy could not be implemented. In my statements, I think there are also a number of references to a transition between strategy W3 and W4 as well. Obviously you can only be in one strategy at any particular time, so that is - the transition references are also incorrect.

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So that it's fair to say, is it not, that the document which is styled the Flood Control Centre Event Log is riddled with errors?-- This particular version, yes.

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Well, when you say "this particular version", was it not sent to other agencies as the Flood Control Centre Event Log?-- No. My understanding is that document was sent from the Flood Operations Centre in an e-mail at 6.57 p.m. on Saturday, the 15th, and the attachment at that stage was called the Strategy Summary Log.

Well, when did it morph into the Flood Control Centre Event Log?-- It didn't morph into it. I believe - and I don't have a clear recollection, but when Rob Drury came to the Flood Operation Centre at about 5.30 and we were discussing the actions that needed to be undertaken to prepare the Ministry or Briefing Report, I believe one of the flood officers was delegated with the task of doing a high level filter of the Flood Event Log - the true Flood Event Log, and in that process they took a copy of the true Flood Event Log and made a separate copy, renamed it the Strategy Summary Log, and then stripped out all the information that was not pertinent to strategies, and then made an assessment based on the information in that document as to what strategy could possibly be implemented at that time. But it ignores other relevant information such as lake levels, the release rates, and the magnitude of the naturally occurring flows. So that analysis is flawed. You won't get the right answer by just looking at the information in that particular document.

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Well, so far as this document that we've been looking at is styled the Flood Control Centre Event Log, has there ever been

a further version of the Flood Control Centre Event Log?--
Well, I've just told you the two versions that I'm aware of.
I'm sorry, of course there's the version that was also put
into the report and, effectively, that version was simply
a version where people's names and contact details were
removed because we knew that was going to be a public
document.

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So far as this document that is riddled with errors goes, was
that authored by one or more of the duty engineers who served
in the Flood Control Centre over the flood event in January?--
I don't believe a flood engineer would have made that
assessment. I think they would have realised that you indeed
need to have lake levels. I believe it was a flood officer
who made the assessment and assigned the strategies to those
entries in the log.

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COMMISSIONER: Can you assist us with which flood officer?--
Well, all I know on that day, Al Navruk was doing the
day shift and Dave Pokarier did the night shift. I just -
I don't recall which one of those guys it could have been.

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MR MURDOCH: And are you saying that it was created by one of
the flood officers without any vetting or reference to a duty
engineer or engineers?-- Well, the whole purpose of that
document was to give a high level review, and that document
was sent to John Tibaldi for him to assess and then use in the
preparation of the briefing that report.

So far as the logging of relevant events during the flood is
concerned, isn't it the case that the SEQWater Flood Procedure
Manual requires that the operators in the Flood Control Centre
keep an ongoing record of events during the course of the
event?-- And that's the intention of the Flood Event Log,
yes.

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But is it not the case that there was a requirement under the
Flood Procedure Manual that there be a handwritten log of
significant events that is maintained during the flood
event?-- We used to do handwritten logs, but in most of the
recent floods we've been using an Excel spreadsheet and just
typing it in.

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You see, the difficulty that we face is that the Flood
Procedure Manual requires a handwritten log of significant
events. You say you've gone from handwritten to an Excel
spreadsheet?-- Yes.

But when we look at the Excel spreadsheet, which is this
document that I've taken you through-----?-- Well, no, that
document you've taken me through is, to my understanding, the
Strategy Summary Log document.

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Even though it's styled the Event Log?-- Well, as I said, it
was - my recollection is that it's a copy of the Master Event
Log. So they've just copied the document, renamed it, and
then stripped out the information that wasn't relevant to
strategies. So it's not the actual Flood Event Log. It's

a copy of that particular log.

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So in relation to the recording of the strategies that were in place for Wivenhoe as directed by the officers in the Flood Control Centre, is it the case that there is no contemporaneous record which stipulates the strategies that were in place at particular times?-- Generally speaking we didn't assign labels to the strategies. I'll point out that in the Situation Report that I sent on Saturday lunchtime, and I included the Dam Safety Regulator in that distribution list, at no point during the event did the Dam Safety Regulator stipulate that we should actually label the strategies. There was obviously opportunity for the Dam Safety Regulators to specify that, but he didn't, and he'd be the most logical person to request such information.

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Well, the SEQWater Flood Procedure Manual, as revised in January 2010, appears to have been the document in force at the time as to procedures that needed to be applied in the Flood Control Centre?-- This is the SEQWater Flood Manual, yes.

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And without being repetitive, it did seem to explicitly require a handwritten log of significant events, and if we put aside the handwritten versus Excel spreadsheet issue, it would seem explicitly to require that significant events were recorded at the time?-- Yes.

And a movement from one strategy to another is surely a significant event?-- It is, yes.

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Why were those strategy changes not recorded at the time they occurred?-- We believed that the Situation Reports that we prepared every 12 hours, or more frequently, was actually capturing the state of play, as it were, in terms of what was being operated at that particular time.

So that when the officer who prepared this Flood Control Centre Event Log came some days later to do his work retrospectively, there's been a long series of erroneous entries?-- No. I believe the document, the Strategy Summary Log, was worked on for perhaps an hour or so and, at that point, the sole purpose of that particular document was to provide this high level assessment of when strategies were applied through the event for input into the Ministerial Briefing Note Report. That's the only time that I'm aware that that document would have been used. The Master Event Log was still being maintained because, as I said, on that Saturday and Sunday, we were still operating the dams. So that event log continued to be populated with entries of relevance.

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But don't you accept that if the failure to contemporaneously record the strategies which were introduced at particular periods led to one of your colleagues, the flood officer preparing a Flood Control Centre Event Log replete with errors, that it shows up a very serious deficiency in the practice that you and your colleagues, the flood engineers,

were following during the event?-- I agree there's an improvement opportunity and I'd imagine in place now is a process whereby these labels are included on situation reports. But at the time our practice was not to include them, and that was a practice that the Dam Safety Regulator was aware of.

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But the obligations under the Flood Procedure Manual were obligations that were directly imposed on yourself and the other duty engineers, weren't they?-- Yes, and I believe we were fulfilling those obligations because we had gate operation spreadsheets that were relevant to particular times, we had the record of directives, and we had the Situation Reports which all capture the necessary information that you need to be able to assess what strategy you're in.

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Can I take it from your earlier answer that you were aware that one of the flood officers was preparing this document that ultimately issued with the title, "Flood Control Centre Event Log"?-- Well, the document he was working on was the Strategy Summary Log and, yes, I was aware one of the team was looking at it. I don't recall which one because at that time I was focused on the Tuesday, January the 11th, and I was populating a gate operations spreadsheet with comments in respect to the directives. So I was focused on that activity because it was mentioned that the Ministerial Briefing Note, the focus was on the Tuesday, the 11th, releases.

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Were you aware that an officer or officers had completed this document, the Flood Control Centre Event Log?-- I can't say because I don't recall actually sending the e-mail, and I don't know whether that was Rob Drury or myself. If it was me, then obviously I would have been aware he'd completed it.

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You obviously made no arrangements for either yourself or one of the other duty engineers to check the document-----?-- Well, the document was-----

----- the Flood Control Centre Event Log?-- The document was being sent to John Tibaldi. He's a duty engineer. John was going to have a look at that and make an assessment was my understanding of the arrangement.

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So far as the flood officers are concerned, they are persons rostered in the Flood Control Centre during the event?-- Yes.

What level of qualifications do they generally have?-- There's a variety. They are junior engineers, or they're - in some cases very senior technical officers. A number of the technical officers have been flood officers since 1996, so they've had quite a range of experience. Some members of the team are relatively new. Certainly the SEQWater personnel on the team were probably - had only had that wet season's experience, so they'd only been working from probably the October and December floods, but the fact was that they had been exposed prior to the January flood.

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So they were persons with either experience or professional

qualifications, or both?-- Yes.

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And you regard them as professional colleagues?-- Yes; hold them in very high regard.

So the persons with that level of experience or qualification, professional colleagues, we see that one of them has prepared this Flood Control Centre Event Log which is replete with errors?-- At the time we simply said, "Here's a copy of the manual. Have a go at allocating what your interpretation is of the strategy at that given time", and it was a highly level filter to cover the rest of the event whilst I was looking at Tuesday, the 11th, releases. It was a delegation of duties because we'd been given a request to prepare this report within 24 hours. We were still operational. We only had three of the four available duty engineers to put time to this in association with the dam operations manager. We'd just completed 10 days of operation, and it was the biggest 10 days of operation we'd experienced on Wivenhoe. We were all fairly fatigued, so we were delegating the duties.

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What we ultimately see starkly illustrated by this document, the Flood Operations Centre event log, is that as between yourself and one of your professional colleagues, there has been a vastly different understanding of the strategies which were in place in the operations centre in that critical period?-- Well, no, I don't think it covered the Tuesday, if that's your meaning of the critical period. That eye level filter was to examine the remainder of the events, if you like, the pre-limbs, the lead-up to the Tuesday releases.

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But surely, sir, the events over the Saturday, Sunday, Monday were highly relevant to the events of the Tuesday?-- Well, you have to take up that with the minister's office because they said focus on the January, Tuesday the 11th flows. Yeah, I mean, we were trying to - we were attempting to meet the requirements that was placed upon us at the time.

I suggest this to you, that the evidence that you gave earlier was consistent with the theme that one didn't need labels because one could retrospectively look at what happened and very readily identify the strategy that was in play at any particular time. Is that a fair summary of your evidence?-- Yes, that's correct. If you have all the relevant model results, you have the lake levels, you have the release rates, you can determine where you are, and that's indeed even if you were doing it contemporaneously, that's the information you'd look at.

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So that the professional colleague who prepared this flood control centre event log obviously came to a different suite of conclusions in relation to those labels that you said are erroneous?-- Yes, certainly the entries in the strategy summary log for this document are vastly different to what happened in reality, and I'd point out that one of the difficulties we have is that people work shifts so you're not in the Flood Operations Centre for the entire event so you are not necessarily aware of decisions or activities that occur in periods of time when you're not in the - the flood centre, so if this person hasn't been on at particular times, they would not necessarily have an awareness of what happened on that particular shift. Look, in hindsight, yes, the process was flawed. At the time it seemed like a good idea because clearly we could not go through every model run that had been taking place to January the 15th, extract out all the relevant data and do the fit. We were - we didn't have the time to do that. We didn't have the resources to do that, and in terms of the state of fitness, if you like, of the people, I think it would have been grossly unfair to make any of the off-duty flood engineers spend the entire night just working through that. We, as I said, we were still operational and we had Somerset Dam and Wivenhoe still releasing at that point in time. That was our priority, in my view.

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Isn't that why, in a situation such as a flood operations centre, it's essential that there be appropriate contemporaneous logging of events?-- Yes, and I believe we had sufficient records that enabled us to fulfil that

requirement.

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But how can it be sufficient if you're not recording the strategy in play of any particular shift?-- I believe the situation reports provide the relevant information to show the intent of the operation at a particular time, and in association with the directives and the gate operations spreadsheets, if you wanted to know at any particular time what strategy was in play, you could determine it.

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Why should an oncoming officer have to go through the process of determining what strategy was in place when it would have been so simple to record the strategy that was in play at any given time, and if there is change, record it?-- In hindsight, yes, I agree, that's - in fact, after this experience, most definitely recommend it.

But it's not only a matter of recommending it, I'd suggest to you that it clearly was a requirement at the particular time given the terms of the flood procedure manual?-- Well, my reading was that the practices that we had in place were consistent with what had been done previously. The Dam Safety Regulator was aware of those practices and he had not made comment. During the event he had the opportunity to make comment if he wanted to see the strategy labels. On the Tuesday, I do believe he asked for more technical information and he did send over a template report. I can't recall at this point in time what was contained in that particular report, but, you know, I think we were just following the work practice that we had in place and had adopted for all previous events.

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Did you personally receive any training prior to the January 2011 event in the Flood Procedure Manual issued by SEQWater?-- Specifics of the Flood Procedure Manual? I know I did review it. Training in it? I'm not sure that there was a specific session held but I do recall having been involved in a review of that particular document.

When you used the expression "a review of the document" what do you mean by that?-- I was provided a draft of the document and requested to provide comment.

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And when was that?-- Sometime before February 2010. I don't recall.

So in terms of the January 2011 procedure manual, are you saying that you'd never read it?-- Pardon? That I never read it?

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Yes?-- No, I just said I reviewed the draft so, yes, I've read it.

Well, you reviewed a draft prior to its issue, is that what you've said?-- Yes.

You never read the document when it issued?-- Yes, I believe I did.

You believe you did?-- Yes.

And when was that?-- I would imagine shortly after it was issued.

And you told us already that the event log requirement for a handwritten log of significant events was something that was not observed because an Excel spreadsheet was used. When you reviewed the draft, as you said you did, why didn't you suggest that the reference to the handwritten log be replaced with a reference to an Excel spreadsheet?-- I believe the - we were still using handwritten event logs for the February/March 2010 event. I can't be sure. I'd have to check the actual event reports. They'd have a copy of what was provided. At that time it was probably still the case, we were using handwritten logs. I am aware that in the October 2010 flood, we changed to the - using the Excel spreadsheets.

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And so far as the manual of operational procedures for flood mitigation at Wivenhoe Dam, Somerset Dam is concerned, at the time of January 2011 event, the issue which was current was Revision 7 which was introduced in November 2009?-- Yes.

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Have you received training in that manual?-- I was part of the review team for the preparation of that particular manual.

And when were you part of that team and when did that team do its work?-- Well, during the course of 2009. I think it took about six months, sometime from May through to November.

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And when Revision 7 was introduced, what training, if any, was given to the engineers who in the event of a flood event would man the Flood Control Centre?-- We had to modify the flood operation spreadsheets to account for the changes in the operational strategies. I was part of that process in terms of looking at those gate operation spreadsheets. I don't recall any specific situation or simulation exercise being undertaken at that particular time that I was directly involved in.

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COMMISSIONER: Mr Murdoch, I'm concerned that we may be getting away from the central point of this hearing which is how those strategies were presented to the public and the Commission and when they were formulated. A lot of this question of training was explored at the earlier hearings of the Commission, so would you bear in mind that we are working to a pretty close -----

MR MURDOCH: Thank you, your Honour.

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COMMISSIONER: -----timetable.

MR MURDOCH: Yes.

COMMISSIONER: Thank you.

MR MURDOCH: Just in terms of one of the expressions that

you've used, and it's an expression which comes from the manual of operational procedures, the naturally occurring peaks at Lowood and Moggill-----?-- Yes.

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-----so far as the natural occurring peaks at Lowood are concerned, do we take that in a practical sense to refer to the peaks which are produced by the Lockyer Creek?-- Yes. It's effectively the residual catchments downstream of Wivenhoe - includes the majority of Lockyer Creek. In terms of being able to determine what that value is, it's really a modelling artefact because obviously in real life, flow at Moggill is the combination of the releases out of Wivenhoe and flows out of the downstream tributary catchment. So you can't actually measure it specifically. It's simply a model value if you like.

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Just to be sure, that modelling, does it have any notional component for the pre-Wivenhoe Dam flow down the Brisbane River which pre-dam would have reached Lowood?-- We do have a suite of models that we can use that represent the no dams scenario, if that's what you mean, but we don't use them in an operational sense. They're used when we again do the reporting to demonstrate the effect of the operation of the dam against what would otherwise have occurred, yeah, so we do use it in that sense-----

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So the reference to natural occurring peak at Lowood doesn't include any notional component for what would have come down the Brisbane River?-- No, it's the flow at Lowood, if you like, excluding Wivenhoe releases.

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And just one further question. When the introduction of strategy W3 occurred during the January 2011 event, that took place against the backdrop of significant inflows from Lockyer Creek, didn't it?-- I wouldn't necessarily call a 600 CUMECS peak overly significant. It's a minor flood, yes.

And what short-term and medium-term consequence did the introduction of W3 have insofar as releases from Wivenhoe were concerned?-- There was no real material difference in that situation, and I think strategy W3 was actually imposed upon us as opposed to us naturally selecting it. It was really driven by the volume of the upstream flows into Wivenhoe that in combination with the releases that were occurring at that time meant that the lake level exceeded 68.5. It can or can't be a conscious decision to move to W3 in that respect, and in many respects there are a number of the strategies that are put in place whereby you have no control. For instance, when you start, you are imposed by being put into strategy W1. You don't have a choice. That's where you start.

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Just to round off on that, if I may. Under strategy W1E, the manual says, "If the level reaches 68.5 metres in Wivenhoe dam, switch to strategy W2 or W3 as appropriate."?-- Yes.

There is a discretion there, isn't there?-- There is a discretion and that relates to the choice of the release rate. So in relative terms, if you release below the naturally

occurring peak you are choosing to go to strategy W2. If you release above the naturally occurring peak, you are choosing to go to strategy 3.

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But so far as that choice, or that discretion is concerned, what are the prime elements that determine which one you select?-- It's the overall objective of the - of the event, so depending on what objective that you wish to satisfy, so if you want to optimise protection to downstream flooding, you'll be considering W3 but if you want to minimise disruption to rural life then you will probably be selecting strategy W2 or W1, depending on what the lake level is, of course.

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Nothing further.

COMMISSIONER: Mr Dunning, do you have any questions?

MR DUNNING: We have no questions.

COMMISSIONER: Mr MacSporran.

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MR MACSPORRAN: Thank you, Commissioner. Mr Ayre, my name is MacSporran. I appear for the State and Mr Ruffini?-- Yes.

Could I take up something Mr Murdoch was asking you questions about in terms of those spreadsheets that you think were compiled by the flood officers as opposed to the flood engineers?-- Yes.

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You've confirmed for us that, in your view, and it seems fairly clear they contain a number of errors?-- Yes, there they are certainly not a true reflection of what actually occurred.

Perhaps the most serious error so far as these proceedings now are concerned is the attribution of the strategy numbers in a particular column towards the right-hand side?-- Yes.

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They are simply wrong, you say?-- Yes. Like I say, based on the information contained in that document, and my assessment of that information, they're the sort of conclusions you can make, but it ignores some fairly relevant information in terms of the lake level, the release rate and also the relative magnitude of the downstream flows.

Can we just have a look quickly at one example of that perhaps. If we go to Exhibit 1052 which is the material from Mr Tibaldi on 15th of January at 7.51 p.m. Can you turn up in that material to the entries for the 8th of January. Do you see those? There seem to be just the three of them 4.55 a.m.-----?-- Yes.

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-----8 a.m and 11.30 a.m. Now, as we know from the official report, Exhibit 24, 8 a.m. on Saturday the 8th of January is

very close to the time that you were going to W3?-- Certainly from the information, the lake level was exceeded at that point. Reviewing the flows that were occurring in the Lockyer, it - here it peaked about 530 CUMECS at Lowood and the release rate when I came on the shift were 890 so that forms, I suppose, all the conditions regards - to say you're in strategy W3.

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Just having a look at this document, we have at 4.55 a.m. on the 8th, that's the first entry for the 8th?-- Yes.

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We scroll across to the right-hand column, or the second last right-hand column we see the author has attributed this to directive strategy and then W1D?-- Yes.

Now, that just can't be right, can it?-- No, well, at 4.55 - based on the information there, all the directive information will tell you is actually the release that's occurring at that particular point in time.

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Yes?-- It's got no reference to the lake level. All the strategies in W1 are dictated to by lake level with association of maximum release rates.

More particularly, perhaps, if you go to the next one which is 8 a.m. on the same day, the 8th of January?-- I'm familiar with that one.

We see again the notation to the right is directive strategy W1D?-- Yes.

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If you go to the flood report itself, Exhibit 24 in section 2 - section 9, I beg your pardon, we see, do we not, that at 8 a.m. on the 8th of January, the lake level had, in fact, risen past 68.5 metres?-- Yes.

And was, in fact, 68.52 metres. Now that, according to the manual, dictates immediately that you are in W2 or W3 as opposed to W1A to E?-- Yes, you certainly have transitioned out of W1. You can't be in W1 in that instance so it's either 2 or 3.

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So the author of this spreadsheet, so Exhibit 1052, to attribute W1D to the entry at 8 a.m. on the 8th of January, has simply made a mistake?-- They have ignored the lake level which is, I suppose, the primary criteria, yes.

Can you tell us from the information that is contained in this spreadsheet which is an extract from the official log what data that may have led them to believe in error that it was W1D as opposed to W3?-- It was a directive, so from a directive you can - know the gate increments you know what the flow or the release will be out of the dam. In that case I think the 4.55, I think it was 400 CUMECS. Sorry, are we looking at the 8 o'clock or the 4 o'clock?

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The 8 o'clock?-- The 8 o'clock, sorry.

Because that's the time we know the lake level had gone over 68.5?-- So the directive at 8 o'clock was the one I produced and I was directing releases to go up to 1250 CUMECS, so knowing 1250 CUMECS, you can go into strategy W1 and see which range of flows that meets, and that will give you a result in terms of a possible interpretation.

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No one is suggesting, certainly I'm not suggesting to you that whoever made the entry is guilty of some misconduct. It would seem to be someone trying to cobble together information to go to the Minister for a background briefing in urgent circumstances, and has concluded wrongly that the release rates dictate it's below the maximum level for releases for W1E?-- Yes.

10

So it must be strategy W1 of some sort-----?-- Yes.

-----as opposed to 2 or 3?-- Yes, that's true.

And they've ignored crucially the lake height which, in fact, is the most important consideration-----?-- Certainly.

20

-----as to which strategy you're in?-- Certainly in strategy W1 the level is the primary determinant.

Can you just confirm for us before we leave this lake height topic, from section 9 of the report that the lake level goes above 68.5 at 8 a.m. on the 8th of January, the Saturday-----?-- Yes.

30

-----and remains above that level right through until the 17th of January at 6 p.m.?-- Yes. It never fell back below that transition line.

So for that whole period starting at 8 a.m. on Saturday the 8th right through to the 17th, you necessarily had to be in strategy W3 or 4?-- Yes, you had to be - yeah, you couldn't be in any other.

In terms of a flood engineer's knowledge of which strategy you were in, a prime source of that data again is the lake level?-- Yes.

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That's one of the sources of data you get in real time in the Flood Op Centre?-- Yes, we get continuous feed out of the automatic gauges plus the operators are required to provide an hourly update of manually-read readings. Both of those bits of information are captured in the - well, the automatic stuff comes in - continuously into the real time model. The manually-read information is actually inserted into the current gate operations spreadsheet. For comparison purposes in terms of determining if the model is actually reflecting reality.

50

The gate operations spreadsheet is an important tool, we've heard, in operating the dam?-- Yes, yeah, vital.

In fact, the engineer on duty or engineers on duty would have

it open on their console while they are operating the dam?--
Yes, it's always accessible as such.

1

You make entries in that spreadsheet as time passes during the shift?-- Yes, that's how you keep tabs on whether you've entered.

Depending on the activity going on during a shift, there might be several models that are produced from the spreadsheet to assist you?-- Yes, certainly we'll have concurrent no rain and forecast rain models open. On the odd occasion we'd be perhaps looking at the scenario such as the three-day outlook so I would have created another model for that particular, or another gate operations spreadsheet for that particular instance.

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Now, can I show you one of the examples of an operational spreadsheet that has been tendered here, Exhibit 1054?-- Yes.

If you just have reference to that for a moment?-- It can get quite big once there is a long duration event.

20

Yes. Can you just confirm, if you scroll to the bottom of the first page on the left just to see the date and time that this relates to, the actual bottom of the sheet, actually, the first sheet. I'm looking for the designation date and time of the document itself?-- So there's - well, an easy way of actually seeing-----

Yes?-- -----the relevance of the lateness of it is to actually have a look at the yellow column, so in Somerset Dam -----

30

Yes?-- -----if you scroll up and find a number in that column then that's probably the-----

The cut-off point?-- The cut-off point.

I think we can accept. We don't need to spend some time on this but I think we've had the evidence that this is a snapshot for 9 a.m. on Sunday the 9th of January?-- Yes, so - actually that one looks like it's got data to midday on the 9th.

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COMMISSIONER: It doesn't seem to have an entry for "Wivenhoe".

MR MACSPORRAN: "Somerset".

COMMISSIONER: It's got "Somerset".

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MR MACSPORRAN: Yes?-- Sorry, if you - yeah, you scroll across to the right-hand side there's the calculated level and then the recorded gauge-board level, so -----

MR MACSPORRAN: Yes?-- Yeah.

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So, what you can do is you - if you had it open on your screen in the Flood Op Centre, you'd have - the last entry that was made by you on your shift would be like here, for instance, close to the end of your shift, perhaps?-- Yes.

And if you wanted to you, you could print out from the system that spreadsheet?-- Yes, you could. I mean, the usual - I suppose, generally speaking, what we would do we'd keep this thing as a live document. So, we just keep adding to it.

10

Yes?-- Every now and then, we'd back it up. So, we'd save it, perhaps, just ensure that we can recover the situation and not have to go back to the start of the event, but, yeah, no, it gives you the current status, if you like, of where we're at.

That will give you all of the information contained in this document that you've used as a tool to operate the dam during your shift?-- Yes, that's right, yeah. It's a-----

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And as you say, they are all saved on the system, or select ones that are more important than others, perhaps?-- No - well, as far as I'm aware, mate, they're all saved. There's a naming convention associated with them. So, yeah, we'd save them all.

So, we have an exhibit here that is 1054, which is at 9 a.m. on Sunday, the 9th of January 2011, but Commissioner, I haven't warned your associate - I'm not going to ask that it be done now, but just for future reference - as I understand it, some of these are snapshots from earlier periods of operation of the dam that are relevant here were given to Mr Babister for his purposes as part of Exhibit - just bear with me - 5 - I think it's 524 - Exhibit 524, attachment 24.

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COMMISSIONER: So, what are you wanting to do with them?

MR MACSPORRAN: Attachment 34. Just to note that so we can come back to that with perhaps another witness.

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COMMISSIONER: Hm-mmm.

MR MACSPORRAN: But for our learned friends, just to note that, as we understand it, that contains contemporaneous data of this kind that relates to the operation of the dam through this period that has been captured and saved as part of the process Mr Ayre has been talking of-----

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COMMISSIONER: Yes.

MR MACSPORRAN: -----and that was reviewed by Mr Babister when he was looking at the-----

COMMISSIONER: Mr Babister.

MR MACSPORRAN: Sorry, Babister.

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COMMISSIONER: Babister.

MR MACSPORRAN: Mr Babister when he was reviewing the operation of the dam and the work done by these engineers.

And that information could now be interrogated from the system at the Flood Operation Centre; could it not?-- Yes.

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It's still there; in other words?-- Yes. Well, I believe so. I haven't been associated with the Flood Operation Centre for a few months now, but, yes.

You'd expect that to be - you could go there today, if you wanted to, and print out a spreadsheet that related to 8 a.m. on the 8th of January to see what the figures revealed as to what was then-----?-- What the status were at that point, yeah.

20

-----happening?-- And that was the problem on that Saturday evening, was recognising, well, we'd have to go to each and every model run basically and pick out the data that was relevant to that point in time to make a thorough assessment.

All right. Now, staying with the shift that you came on, which was at 7 a.m. on the Saturday morning-----?-- Yes.

-----the 8th of January, and Mr Ruffini was coming off shift; he was handing over to you?-- Yes. John handed over to me, yep.

30

Now, you've described the process that's gone through in the handover and did I understand you correctly to say that there's no discussion of which strategy you're in by reference to a W number?-- Generally speaking, no, no.

And is that because, firstly, as engineers operating the dam, you are firstly completely familiar with the manual's requirements?-- Yeah, I would say all four of us have a good working understanding of the manual.

40

And that when you operate the dam in accordance with the manual, you're required to make decisions about whether to release water and if so, how much?-- Yes.

Whether to decline to release more water, for instance?-- Yeah, we can store, yes.

And all of those decisions mean that you are in fact operating the dam?-- Yes, indeed, that's, I guess, the management aspect of the flood.

50

And when you're operating the dam in making those decisions, you are necessarily choosing a strategy within which to do so?-- Yes. We'd perhaps test a range of release rates, but, yes, we effectively were choosing a strategy.

Perhaps it's a bad way of putting it. I think you put it in a better way yesterday when you said you don't choose a strategy, it's imposed upon you?-- In certain circumstances, the strategy is indeed imposed. You always start in W1. All floods start small, so that's where you start. Once you're above 68.5, you are not in strategy W1. Whether you go to two or three really depends on the relative magnitude of the upstream flood or the downstream tributaries. W2 is traditionally used when there's large downstream tributary flows. So, we'll release on the back of those particular floods. W3 is really - there's a large flood above Wivenhoe and we just need to be able to move that water through the system.

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And on this occasion during this handover, you would have discussed - and I think you've told us this already - you would have discussed the current release rates?-- Yes. John had indicated we just hit 890, I think, and then he said, "Well, I've got this proposal for the next couple of hours. Have a look, see what you think. Does it achieve what we need to achieve and if so, you're going to have to then prepare a directive and send it."

20

You would have open one of these operational spreadsheets almost certainly on the computer?-- Yes. No, they're always there, basically.

And you'd see not only the lake level, but you'd see the flows - predicted flows at Lowood and Moggill?-- Yes, we run the realtime operations model. We extract the flows. That's the inflow into Wivenhoe Dam, the inflow into Somerset Dam and then the downstream tributary estimates. They're put into the input data tab on this spreadsheet and then we analyse that information and make the decision about the release rates.

30

So, as at that changeover time, the releases were up around the high 800 CUMECS?-- Yes.

So, that's a fairly significant flow, is it not?-- It is in - well, certainly in relative terms to the Lockyer at that point in time, yes.

40

And the lake level as at 7 o'clock that Saturday morning had not gone over 68.5, but was rising steadily?-- No, I recall when I walked in it was just below 68.5.

But rising?-- But rising, yes.

And so it looked almost certain it was going to go through 68.5?-- Yeah, I believe we were going to transition, yes.

50

And we know, of course, as we've confirmed, that it did in fact go through at 8 o'clock?-- Yes.

That meant immediately you were in fact obliged to be in W3?-- With the release rates as they currently were, 890 as opposed to the naturally occurring peak of 530, yeah, you were in W3.

Now, because you were in W3, it doesn't mean that you're obliged to immediately release the maximum allowable release rate in that strategy, does it?-- No. Obviously you have to take into account aspects of what's happening upstream of the dam. Be mindful, of course, of the objective you're trying to achieve. In this case, we were looking to optimise the protection to downstream areas. We knew from the October and December floods, that 1600 CUMecs in the mid Brisbane River was sort of the maximum rate of release - or, sorry, not maximum rate of release, the maximum rate of flow in the mid Brisbane that will optimise that protection.

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All right. I won't take you back to the reasons why you went straight to W3. That seems to be reasonably clear?-- Hm-mmm.

You've told us about that, and there's other evidence about it. But once you're in W3, you are then releasing - ramping up on this Saturday on your shift to, as you said, 1200 CUMecs by midday?-- Around about that, yes.

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And then later beyond that, as we know, but steadily?-- Yes. No, it is a gradual increase. Obviously we're mindful of the impacts that we were going to have. So, you don't necessarily open the - or engage the releases quickly, you'll do it over a relatively steady period of time; so, six or eight hours, as it were.

Now, one of the reasons for that is that if you release water from the dam, it takes how long to get downstream to, say, Moggill?-- Moggill is about 16 hours, I think, from memory.

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And into Brisbane?-- Oh, It's about 26.

So, once you've released the water from the dam, you can't take it back?-- No, no. Once it's gone, it's gone.

And once it's gone, it's on its way to Brisbane?-- Yes.

And if you get rain below the dam, the flows will increase its runoff?-- They will, yes. So, yeah, you can't do anything about that. The only thing you could do is throttle back if indeed the downstream tributaries start to rise.

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So, you necessarily need to take a conservative approach and factor in the weather forecasts?-- Yeah. We were cognisant of what the weather is doing. On that Saturday morning, however, there was not a lot of prospect, as I recall. The QPF was - well, the current QPF was the Friday evening one and that was quite small, 20 to 30, or something like that. So, it wasn't until I got the 10 o'clock update that I would have the most recent forecast information.

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But that's a very important part of the equation, is it not?-- Yeah, we're certainly looking at the outlooks so that we can bear that in mind when we were determining how long a drainage period we can have for the dam.

So, you're always looking to, if necessary, increase the release rates, but in a very steady fashion and based upon judgments about what might be happening downstream with the weather in particular?-- Yes. So, you've got to take those things into account and it's really trying to strike that balance of storing and releasing, making sure that you're getting that balance right.

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So, although a strategy is imposed upon you, as you have said, by the lake level, the more difficult task is to manage the release rates within a strategy-----?-- Yes.

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-----balancing those issues you talked about?-- Yeah, that's, I guess, the main judgment part, yeah.

And it would be, for obvious reasons you've explained, entirely irresponsible to go into W3 or have W3 imposed upon you at 8 a.m. on the 8th of January and immediately open the gates to have a combined flow of 4000 CUMECS at Moggill?-- Yeah. Well, for a start, the upstream peak in the Brisbane River was only 1850. So, if we did indeed choose a release rate that was in excess of that, we wouldn't be operating as a mitigation dam; we'd obviously be doing damage as opposed to minimising it.

20

What you'd be doing is creating a flood?-- Yes. Yeah, you'd be making that situation far worse downstream than otherwise would have occurred.

And the situation you would create in that situation may itself become worse by rain falling downstream of the dam?-- Certainly if there was rainfall forecast for the metropolitan areas or the Bremer or Lockyer, yeah, you'd be - well, you've committed the release, so no pulling back. It would certainly make it worse.

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So, what you did do was to be in W3 and try and hold the water back for as long as you could based on the judgment calls you made as flood engineers?-- Yes.

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And in W3, which you were from shortly after or about 8 o'clock on Saturday morning, your prime objective was to minimise urban inundation?-- Yes. We were focussed on making sure that our releases were not having any detrimental effects, or minimal detrimental effects, in the lower Brisbane.

But you were also required under the manual to, at the same time, consider the lower objectives, the W1 objective, which was to protect the rural downstream of the dam?-- Yeah, minimise the disruption to rural life and fortunately at that point in time, the release rates that we had meant that the two high-level bridges could remain open.

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And that's the case, isn't it, you kept the releases as low as you could for the period to maintain those two bridges; that's the Fernvale bridge-----?-- Yes.

-----and the Mt Crosby Weir-----?-- Yes.

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-----open right up until about midnight on the Sunday night, or thereabouts?-- Yes. Certainly is, I suppose, trying to achieve that as best we could, yeah.

And as we see in the Situation Reports and official record in the report itself, the ideal of keeping the bridges open and maintaining those lower objectives finally had to be abandoned at 7 o'clock on the Sunday night; it just wasn't feasible?-- No, it wasn't feasible and that was really because of the magnitude of the inflows in the in-system upstream of Wivenhoe. So, on the Saturday, we were managing about 400,000 megalitres, roughly speaking. On the Sunday, that had escalated to about 1.5 million. So, over - well, nearly four times as much volume meant there had to be a change in approach. We now had to actually release more.

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And if you hadn't released more, what would have been the consequence?-- Well, we would potentially run the risk of tripping the fuse plugs and possibly overtopping the dam.

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Where you have real dam safety issues and uncontrolled releases?-- Yes.

So instead, you increased the releases, although, again, steadily-----?-- Yes.

-----from that point forward?-- Yeah, we - I can't remember the transition time, but it was certainly a number of hours, yeah.

30

But again, you were still below the maximum permissible for W3 at 4000 CUMecs combined flow for quite some time?-- Yes. We were trying to meet that target flow as best we could.

So, you are still storing water, it's coming in, but you are releasing more and more to try and keep pace with it?-- Yes, and obviously - well, on the Monday, the difficulty arose in terms of assessing accurately what water was actually coming out of the Lockyer, given the events that occurred there. So, that become a difficult exercise to take into account.

40

Because again, those flows combined with the releases from the dam to impact on Brisbane?-- Yes, they did.

So, throughout that whole period, you were monitoring the weather forecasts for areas above and below the dam?-- Yes. We were looking, well, obviously at the synoptic of those - of how it was developing. I think on Sunday, the Bureau were insisting that that system was moving south, so we were obviously aware that areas in the metropolitan area - and the Bremer, in particular - were likely to be impacted. So, we were bearing that in mind when we were selecting the release rates.

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And that was the process until you could no longer maintain strategy W3, but necessarily had to go into W4 on the Tuesday

morning?-- Yes. It was touch and go there. Early Tuesday morning we thought we might just scrape by, but the second rainfall burst that occurred immediately over Wivenhoe effectively sent us over the edge.

1

And was that where the issue of the possibility of exercising a discretion arose, to have the lake level going higher but to maintain the lower strategy for a short period in the hope that you could bring it under control before going into W4?-- Yes. That was sort of late Monday evening that that concept came into play. Like I said, the events on Monday in the Lockyer meant that getting a good handle on exactly how much water was coming out of there was difficult. We'd lost a number of the gauges in the upper end of the catchment. So, in terms of modelling, it was a little bit difficult to know - or be confident as to what exactly was coming out of that. I think our estimates ranged from 1800 to possibly 5000. So, it was, you know, a significant variation there that we were trying to accommodate in what we were doing.

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All right. Now, you have, as we know, reported that you were in W3 from 8 o'clock Saturday morning through until Tuesday, when you went into W4?-- Yes.

The experts that have reviewed your work have assumed that you were in that strategy for that period of time?-- I believe so, yes.

And the experts have reviewed your conduct and the conduct of the other engineers based upon the releases made that have been documented when you were in W3 for that period; is that so?-- Yes, that's correct.

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And have concluded, it seems, that you operated the dam entirely appropriately in W3, albeit with lower releases within the maximum permissible?-- Yes.

And you maintain, do you, that you did operate the dam appropriately?-- In my view, yes.

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All right, thank you.

COMMISSIONER: I think we'll take a morning break now and then I'll ask you, Mr O'Donnell, to examine next. Twenty to by that clock.

THE COMMISSION ADJOURNED AT 11.18 A.M.

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THE COMMISSION RESUMED AT 11.42 A.M.

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COMMISSIONER: Yes, Mr O'Donnell.

ROBERT ARNOLD AYRE, CONTINUING:

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MR O'DONNELL: Mr Ayre, we'll hand you, if we haven't already, a copy of the manual?-- Yes, I have one of those.

The complete Flood Report?-- Yes.

And also Mr Drury's statement, volume 1, which contains a complete set of the Situation Reports?-- Yes, I have those.

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We'll come to those later. You were asked some questions about the manual at page 26; could I go to that, please. It was the last sentence on page 26: "If the level reaches 68.5, switch to W2 or W3 as appropriate."?-- Yes.

And you gave answers at transcript 5218 along the lines of, once that condition is satisfied, effectively you move out of W1 into either W2 or W3?-- Yes.

30

You also said that you, personally, made no conscious decision to move from W1 to W3 on Saturday, the 8th. You said that was effectively implemented when the lake level crossed 68.5?-- Yes.

I just want to explore that with you a little bit. You as a flood engineer reading that instruction could you tell us, please, how you interpret that as governing a change in strategy?-- Effectively that 68.5 is simply a threshold level. Once that's exceeded, you have no other option but to work to move to either the W2 or W3 strategy as such.

40

In other words, it's mandated by the manual if that event occurs?-- Yes.

It's not an election for the flood engineer on duty at the time to say, "I now invoke the higher strategy", or "I choose not to invoke the higher strategy."?-- No. I take it - and as I said before, if it's a small flood, you can deal with it in W1, but if it's a larger flood then you're likely to exceed 68.5 so you will have to move to a higher level strategy, and so-----

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COMMISSIONER: Can I just ask: is it when you're likely to exceed 68.5 or when you do exceed 68.5?-- Well, I've always taken it to be when we do.

Thank you?-- That was my interpretation.

MR O'DONNELL: Is your evidence that when the lake level actually crosses 68.5, the transition in strategy is mandated by the manual?-- Yes.

That is, it's not a question of an election for the flood engineer on duty?-- No, not necessarily. The situation is effectively imposed upon you by the magnitude of the flood upstream of the day.

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COMMISSIONER: And what does "not necessarily" mean?-- Well, you do have decisions on the way to reaching that level in terms of the release rates you select. So if your release rates are kept low, then there's a greater likelihood you'll actually exceed the level for a given volume of storage. But if you increase the release rates early in the event, then there's a possibility you won't exceed that particular threshold level.

I'd understood your answer to the question of whether reaching 68.5 mandated a change of strategy so that there was no discretion was that there was not necessarily any exercise of discretion?-- Yes, but-----

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And I'm interested in what that contemplates, not necessarily implies it won't always happen but in some cases it might?-- Well, when you're in strategy W1, you have a range of different flood rates that you can achieve depending on which bridges you're trying to keep from being submerged. So it's really the relativity of which bridges you're trying to keep out and that's affected by the downstream tributary flows as well as to what sort of release rates you can actually achieve in that situation. It's very hard to necessarily make a conscious decision during that period because there are too many variables to take into account, I suppose, and the dominant factor tends to be the magnitude of the upstream flow.

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So are you telling me that in identifying what strategy you were in, there are a number of variables including the upstream flow?-- Yeah, there's the flood volume upstream, plus the relativity of the releases you make against the target rates and the downstream flows.

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So it's not a simple matter of lake level?-- Well, I suppose it's a continually moving target as such, as the event develops. At the start of the event, you don't know how big the flood is necessarily going to be. That volume will increase as the rain falls and so you do have to try and take into account the effects on different parts of the catchment.

50

It sounds as if there's an exercise of judgment involved?-- There is in applying each of the substrategies, but you'll reach a point whereby the magnitude of the flood will dominate and then you won't have any other option except to move to a higher strategy.

And how do you know you've reached that point?-- Well, we are

making predicted estimates as we progress. So there's a prediction based on an assumed gate release sequence and according to the manual, when you hit a prediction that will exceed 68.5, then you can contemplate the move, I suppose.

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And that again sounds like an exercise of discretion if you're contemplating a move?-- Sure. Okay.

All right. Thank you.

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MR O'DONNELL: But your last answer to the Commissioner was talking about making a move based on a prediction of the lake level reaching 68.5 in the future?-- Yes.

I'm not asking you about that. Let's be quite clear. I'm looking at the situation on Saturday morning at 8.00 a.m., the lake level actually reaches 68.5?-- Yes. In that case I know that I've transitioned out of strategy W1.

And is it your evidence that you as a flood engineer read that instruction on page 26 as mandating the change of strategy in that event?-- Yes.

20

That is, there's no discretion on the flood engineer to say, "I choose not to invoke the higher strategy."?-- No, I took it as being I've now moved away from W1; I'm into W2 or 3.

COMMISSIONER: Can I just explore that a little more? Once it hits 68.5, you say the strategy is mandated, but there seems to be this earlier period where a rise in the lake level may be contemplated and you may move to the strategy?-- Yes.

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How can someone tell then at what point - this is looking at it objectively, at what point you decided to move to the strategy?-- Well, I-----

If you can just bear with me a little longer. It seems to me on what you're telling us, they can identify a point at which you must, according to the manual, have adopted the strategy, that's when the lake reaches 68.5?-- Yes.

40

How do they know about that earlier period where you might or mightn't?-- Well, the model runs are done at various times. So I think the 7 o'clock run on that day indicated the predicted lake level will reach 68.8. I think that was an indication that it was very likely that we will exceed the threshold limits.

So is that the point at which strategy W3 came into effect?-- In that - well, following the flowchart then, yes, that is an interpretation, yes.

50

You see, somebody has to work out what you did. How are they to do it when there seem to be different possible answers?-- Yes, I can take your point, but I suppose when I came on which was at 7 o'clock and we did the handover, John indicated that the lake level was just below, but we were both fairly confident we were going to exceed the EL 68.5 based on the

predicted model run; then we were fairly sure we were going to transition out of W1 very soon thereafter.

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Thank you.

MR O'DONNELL: Was that actually discussed between yourself and Mr Ruffini at the handover?-- Certainly the lake level and the fact that it was still rising, yes.

What's your best recollection of what was said, or the substance of what was said?-- Well, John showed me his Situation Report. He also had his gate operating strategy model open. He said, "Right, we're currently just below 68 and a half. The releases at the moment are 890 and I've put in a projection, have a look and see what you think".

10

Was anything said about transitioning out of the strategy when the lake level crosses 68.5?-- No, I can't recall a specific discussion about the fact that we're transitioning but I guess - well, I certainly recognise the fact that it was a transition that was about to occur.

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And as you understood it, on that morning, the transition was mandated by the manual when the water crossed that level?-- Yeah, I believe that satisfied all the conditions, yes.

And your role as a flood engineer is then to use the higher strategy in managing the dam?-- Yes.

So is that a fair summary of your role as a flood engineer in that situation on the Saturday morning? It was not your role to decide to invoke the higher strategy; you say that was mandated by the manual. Your role was to use the higher strategy?-- Yes.

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Thank you. You also gave some evidence yesterday about Mr Ruffini's actions at 5 a.m. I'll just take you to one passage of the transcript yesterday. This is at transcript 5212. You were asked some questions about what Mr Ruffini did at 5 a.m. and at 5212 line 10, you said, "What I meant was that John Ruffini made the conscious decision to make releases in excess of the naturally occurring flow at Lowood."?-- Yes.

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And that was referable to an earlier answer you gave where you said, "The conscious decision to move to Strategy 3 was taken at 5 a.m. When John issued the directive to increase the flows above the naturally occurring ones." That's at 5209?-- I must admit that's my interpretation. We didn't certainly discuss that during the handover. I guess that's a retrospective interpretation of what happened. John may also have just simply increased the release rates whilst being in W1E in response to the rainfall that had recently fallen. We didn't discuss that as such in the handover.

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Can I attempt to articulate what I think you're trying to say. Can you tell me whether I've got it right or not? You're trying to say that Ruffini's decision as to the release rates,

before you came on shift, was such that the release rates from Wivenhoe would be greater than the peaks occurring at Lowood and Moggill and, therefore, predetermined that when the lake level crossed 68.5, W2 would not be an appropriate strategy?-- Yes, that's right. I could not influence that decision as such.

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So, in other words, the requirement to transition to W3 was a combination of (a), the lake level crossing 68.5 and, (b), the fact that W2 was not then an appropriate strategy because of the releases already determined from Wivenhoe relative to the downstream flows?-- Yes.

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Thank you. Can we look, please, at the Situation Report Mr Ruffini put out at 6 a.m. That's in a couple of places. You'll find it in the Flood Report, Appendix 2, at page 13?-- Yes.

If you scroll down to the heading, "Wivenhoe Full Supply 67 AHD", and if you go to the third sentence: "It is intended to ramp up the release from Wivenhoe to 1200 CUMECS by midday, Saturday, the 8th."?-- Yes. That was John's proposed strategy that was in the gate operation spreadsheet.

20

And is that the decision he took about releases from Wivenhoe that you're referring to as the 5 a.m. decision?-- No. He had done two earlier directives, I believe, in the course of the morning. The ramping up was the directive that I issued, so that was directive number 4.

30

All right. Let's identify them. If you look in Appendix 3, the directives are at the start of Appendix 3 of the Flood Report; at page 4 there's a directive at ten to five on Saturday morning?-- Yes.

Is that the Ruffini decision you're referring to?-- That's John's directive, yes.

And you say that the effect of that was that the releases from Wivenhoe would be in excess of the natural occurring flows at Lowood and Moggill?-- When I came on shift John said, "We've currently got 890 CUMECS out of the spillway". I think he made reference to the fact that Lockyer had peaked earlier on Friday night and it was lower as then the current release rate.

40

Thank you. You can close that up. Thank you. On the basis of your evidence we've discussed before, your role as flood engineer wasn't one of deciding to transition it to the higher strategy, your role was to use the higher strategy in managing the dam for the balance-----?-- Yes.

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-----while the water remained over 68.5?-- On that occasion, yes.

And you've given evidence yesterday and in your earlier statements that you were conscious that the water level had gone over 68.5 and, therefore, you were required to apply

a higher strategy?-- Yes.

1

And you also said in evidence yesterday that during that day, you appreciated your primary consideration had to be protection of urban inundation?-- Yes.

And do you have a natural recollection of those being your thoughts on Saturday, the 8th, while acting as a flood officer?-- Yes. I suppose having done the previous Thursday night shift and also having talked to Terry Malone when the event was being mobilised and, indeed, when Terry first proposed a strategy at the start of the event, I was very much aware that the sequencing they were putting in place was going to be designed to meet the objective as such.

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So it's your sworn evidence to the Commission that during your shift on the Saturday, after 8 a.m., you were conscious that you had to apply a higher strategy?-- Yes. I was conscious that we were looking at the objective of optimising the protection of urban areas.

20

And that you did apply the higher strategy in managing the dam during your shift?-- I believe I did, yes.

You gave an answer yesterday along the lines that although you could actually recall an appreciation of transition to a higher strategy, you couldn't recall at that time if you were conscious of whether you were in W2 or W3, and you said at transcript 5220, line 50, "Nothing happened at that time that meant I needed to differentiate between strategy 2 and strategy 3."?-- Yeah, I - well-----

30

Explain what you meant by that?-- Well, all through the day I guess the volume that we had to manage was effectively the same. There was no additional rainfall on the catchment, so there was no real decision to be made necessarily once I put that gate sequence in place. Nobody asked me what strategy we were in, so I guess I didn't really need to actually know at that point, I suppose.

40

And is it your evidence that whether you were in 2 or 3, your prime consideration was protecting urban areas from inundation?-- Yes.

And that was your conscious thought as your prime consideration in managing the dam during that day?-- It was, and recognising the release rates that we were putting in place. We also had the advantage of keeping the high level bridges open.

50

There was another aspect of your evidence yesterday I want to ask you about. At transcript 5220, the question was put to you at about line 42: "And for your purposes it is didn't matter whether those releases were within W1 or W3?" You answered, "Not particularly, no, except that they were being made with the intention of providing optimum protection to downstream urban areas." You were asked: "Were you consciously operating within W1 or W3?" You said: "I was

conscious we weren't in W1. I knew we had transitioned." Then you referred to flows downstream over 1600 CUMECS. You said that the reference to flows downstream of 1600 CUMECS was referable to the primary consideration of protecting urban inundation?-- Yes.

1

Can you explain, please, why that is?-- Well, we'd just had a number of recent floods in October and December where similar sorts of release rates were achieved. Feedback from talking to the likes of Brisbane City Council indicated that those particular floods, whilst they did inundate - the release rates whilst they did inundate some low level areas and did have some impacts on infrastructure like walkways and bikeways, and the like; interrupted ferry services to some extent, they were the sort of tolerable range of impact that the downstream users could accommodate. So, in my interpretation, that was the optimal protection we could provide.

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How did you act upon the notion of not making flows in Brisbane greater than 1600 CUMECS?-- Well, we selected the flow of 1250, recognising that the Lockyer was still flowing so there was a contribution from the Lockyer occurring as well into the mid-Brisbane so we could establish that 1600 CUMECS flow.

If you look in the directives which is in the flood report appendix 3. If you look on page 5, directive 4?-- Yes.

10

That's the directive you issued at 8.15-----?-- Yes, it is.

-----to increase releases from Wivenhoe?-- Yes, it is.

It was then increasing about 880?-- Something like that, yes.

You are directing a release - to increase releases up to 1247 by 2 p.m.?-- Yes.

20

Did you calculate what impact 1247 CUMECS would have in the lower Brisbane area?-- Yes, from the gate operations spreadsheets we've got an estimate of the flows at Moggill and that was keeping within that 1600 CUMECS target-----

Okay?-- -----taking into account the downstream tributary flows.

Do you say that was giving effect to the prime effect of protecting against the inundation?-- Yes.

30

That's recorded, if you can look at the situation report that you issued at - Saturday at midday. That's in the flood report appendix 2, page 15 under heading "Wivenhoe Full Supply 67 AHD." If you look, please, at the first paragraph, the last two sentences commencing, "It is intended to increase the release from Wivenhoe to 1250 CUMECS by 2 p.m. on Saturday. This will maintain flows of up to 16 CUMECS in the Brisbane River throughout the afternoon."?-- Yes.

40

So you say that was actually giving effect to the prime consideration of protecting urban areas from inundation?-- Yes, I believe so.

And your sworn evidence is that was made with that thought in mind at the time?-- Yes, it was. I guess made in recognition of the impacts that are described in the section under "Impacts Downstream of Wivenhoe" and what the SEQ and BOM assessment was of the magnitude of increases on the tide levels down in the Brisbane River reach.

50

If you look in your 7th witness statement, please, Exhibit 1040, paragraph 21, the last sentence discusses this, but in a tortured way?-- That's probably the style of my writing.

Sees it says, "1600 is considered to be the maximum flow that provides maximum protection to urban areas."?-- Yes.

1

Could you explain what you mean by that?-- Well, as I said, in recognition of those recent floods that was probably the maximum flow in Brisbane that you could limit the damage that's occurring down in the lower Brisbane. Releases other than that, you are going to have more significant impacts.

Would a better way to put it would to say that's the maximum flow that provides optimum protection to urban areas?-- That's probably a better wording, yes.

10

That was a term you used in your evidence yesterday. If I could take you to that passage at transcript 5188, at about line 10. The answer begins, "At that particular point in time I cannot say it was necessarily recalled knowing whether I was in strategy 2 or 3 but I was aware of the facts in terms of the lake level and it seems that the fact that the naturally occurring peak had been exceeded. I was aware of the fact that the objective that we were actually achieving was the optimisation of protection to urban areas." Then in the next answer you go on to say that, "That consideration caused the releases to be limited to a level which would achieve a flow of 1600 CUMECS."?-- Yes.

20

That words optimisation, you said in your evidence, that situation changed on the Sunday, I think, after lunch?-- Yes.

And you no longer use the word "optimisation"?-- No, given the magnitude of the flood and flood volumes upstream or in system above Wivenhoe, it was obvious we couldn't keep operating in this sort of context where we're storing water and releasing at the optimal rate. We wouldn't be able to store all the water that was actually in train so we are going to have to actually move that water through the dam which meant we were going to have to raise the release rates.

30

Above 16-----?-- Above-----

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Above rates would achieve 1600 -----?-- Yes.

-----in Brisbane?-- Yep.

So, in other words, you would be providing flood protection for Brisbane but not the optimal-----?-- No, we will be releasing rates that will actually cause damage.

I think the change in terminology used in your evidence yesterday was from optimisation of protection from inundation to minimising the risk of urban inundation?-- Yes, yes, and that was just a reflection that the rates were going to have to go up to account for the increased volume.

50

Moving to the Sunday, you said at transcript 5193 about line 47 an answer, "Terry's model." This is on the Sunday, "Terry's model had indicated that we now had over a million

megalitres water in system upstream of Wivenhoe Dam as opposed to the previous 30-odd hours where we were managing around 400,000 megalitres."?-- Yes.

1

Now, Terry's model, can I take you to that please, is that an email he sent to all the flood engineers and others around about 2 p.m.? Maybe if I show you a document?-- Yes, I'm concerned - I'm just having trouble picturing that.

Mr Drury's - if you just have a look at Mr Drury's document at page 200?-- Yes.

10

Is that what you are referring to as Terry's model?-- No. I was actually referring to the gate operations spreadsheet that Terry had open at - when we were having the duty engineer conference.

Maybe I'm getting ahead of myself. Let's take it in sequence on the Sunday. You're not on duty?-- No, no, I'm at home.

20

Yes. You received this email-----?-- Yes.

-----at a time of about 12 o'clock, 12 p.m. that day?-- Yes.

What was your reaction reading that email?-- I - well, I had been looking at the Bureau website so I was aware of the heavy rainfall that was occurring in the Upper Stanley, in particular, but the forecast rainfall of 200 to 300, I was just very much aware that that meant we were going to have very significant increase in volumes to accommodate, and that's what prompted me to - to call the duty engineers conference.

30

Sorry, forecast rainfall of 200 to 300 millimetres?-- Yes.

That's a reference to the opening sentence?-- Yes.

If you look down under the expected run-off, for the Wivenhoe catchment, the three-day total is 500,000 to a million, and for Somerset it's up to half a million?-- Yes.

40

What was your reaction to that?-- Well, in recognition that the floor storage compartment of Wivenhoe is only 910,000, that was just the - I suppose the flag, if you like, to say, well, this event is building and building quite quickly. We're going to have to look at it, a vision of what we were doing in terms of objectives.

And you call the meeting between the four flood engineers?-- Yes.

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And you attended that?-- Yes.

Do you now recall - have an actual recollection of the meeting?-- Well, when we arrived, Terry had-----

No, I'm just asking you at the moment, do you have an actual recollection?-- Yes.

Could you tell us please, as best you can recall, what was said or the substance of what was said during the meeting?-- I can't say verbatim, but - so Terry had the gate operations spreadsheet up. It was reflecting the numbers that he had generated earlier in the day. In fact, I think they might have been even greater. It was indicating that the lake level at Wivenhoe was going to get to - or over 72 metres. I can't remember the exact number.

10

Try and give us what's said, the substance of what's said?-- I believe there was discussion about where we are at the moment which I think-----

What was the substance of that?-- That was the phrase that - I believe it was John Ruffini said in terms of saying we were on the cusp of W1 to W2/3 transition. The lake level was only, from memory, 68.6 or 68 or something, so we were effectively just above a small flood-type volume at that point in time but with this extra volume to come in, the lake level will escalate quite quickly and, as I say-----

20

You are now telling us what was said in the meeting. Try and concentrate on what was said?-- Yes. So, we discussed the forecast that was available at that time and noted that it was supposed to be trending south. We had a discussion about the release rates and potentially the range of release rates that we'd have to contemplate and there was a discussion about, well, what sort of options could we have in respect to those release rates.

30

What was said about that?-- Recognising that there may be some large tributary flows down in the Bremer, we may need to actually not ramp the releases up too quickly so as we could accommodate those flows coming from the lower tributary.

What else was said?-- I think it was then agreed that Terry do a bit more modelling and actually try and put a release - a gate sequencing around what those suggestions were.

40

Was there a discussion about the risk of inundation?-- Yes, there certainly was recognition that the releases we were going to now contemplate were going to be fairly significant, I suppose, in terms of what they had been, so, you know, contemplating a doubling of the release out of Wivenhoe.

Try and tell us what was being said rather than your interpretation of it. What was the substance of what was said on the topic of urban inundation?-- I think it was a recognition that we couldn't keep maximum or optimising the protection. We were now going to have to damage or release flows that would damage Brisbane.

50

And was there a discussion of rates of releases, or rates of flows that would damage Brisbane?-- Well, we were contemplating releases I think at least double what we already had, so two and a half to 3,000, from memory. I can't recall exactly the numbers we discussed at that time.

You've already mentioned there was a discussion about having two flood engineers on each shift from now on?-- There was - no, I don't recall necessarily that meeting. I know that John Ruffini was scheduled to do the night shift, Terry was doing the day shift. I know Terry was - after - or wrapping up the meeting Terry said, "Well, I'll do a couple more runs and I'll do some options in terms of release sequences.", and of course then the QPF came in just at the conclusion of the meeting so we had a recent forecast so Terry was going to use that in his modelling.

10

Can you recall anything else being said in the meeting?-- My recollection was that, well, this is starting to build now, so we'll have to be on our toes.

You said evidence in your evidence at transcript 5194 that, "This time I knew we were in W3."?-- Yes.

Do you have a conscious recollection of thinking that on that day?-- Yes, very much so, and that was in recognition of the volume - the volumes that Terry was telling us were now in system.

20

And you also said in evidence yesterday that your thinking was, "We'll have to make releases that were going to be perhaps the largest that have ever been made out of Wivenhoe in its history."?-- Yes. As far I am aware, 1800 CUMECS in '99 was the previous largest rate although the April 1988 or '89 floods, they may have been of a similar magnitude but I don't think we'd ever tracked 2,000 before.

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You recall having these thoughts at the time of the meeting at 3.30?-- Yes.

Could I go back to something else. If you look in your 7th witness statement, please, paragraph 28. The reference to strategy labels are generally only attributed after the event as part of the reporting process?-- Yes.

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You were asked some questions about that yesterday in the transcript at 5190 at about line 40. You were taken to that statement, and you answered, "Yes, as a matter of course or practice, we haven't necessarily recorded those strategy labels as the event progresses." Mr Callaghan says, "Recorded or even really turned your minds to them?" You answer, "We turn our minds to them because we are looking at the objectives and also we're obviously cognisant of the lake level."?-- Yes.

50

I just want to clarify this. Is it your evidence that while the flood engineer is managing the flood, the flood engineer does or does not have in mind, "What is the current strategy I'm using?"?-- I believe we are aware of the objectives. We are aware of all of the associated parameters or conditions that describe the relevant strategies but do I go around necessarily thinking W3? No, not necessarily.

Well, for example, on Saturday the 8th you said you were aware your primary consideration was protecting urban areas from inundation?-- Yes.

1

And you consciously recall that was your primary consideration?-- Yes.

You said on Sunday the 9th you were conscious that the governing strategy was W3?-- Yes, and I suppose recognising now that we had a large upstream flood which is going to require releases that are going to damage Brisbane. That's effectively the W3 strategy. That's what it's designed for.

10

Could I go to something else. In the situation report you issued on Saturday at 6 p.m., I think you'll find that's in Mr Drury's witness statement at page 154, and you were asked about the last two couple of paragraphs in that situation headed, "Forecast Scenario." As I understood your evidence you see that was based on some modelling you'd been doing at about 3 p.m.?-- Yes.

20

Can I take you to the modelling which is appendix to the flood report. If you look, please, to page 224?-- Yes.

Just explain for us, what does this tell us?-- This particular hydrograph is the estimated - estimated inflow into Wivenhoe Dam. It's a blue line search. It's simply a model estimate recognising that the time now or the time I did it was 3 o'clock on the 8th of January. You can see it projects in the future and shows a second major inflow into Wivenhoe as a result of the three-day rainfall that was predicted.

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So on this model it shows the inflows to Wivenhoe would decrease from Saturday at 3 p.m.-----?-- Yes.

-----down to below 200 CUMECS?-- Yes, and then-----

Then would increase, is that on the 11th into the 12th?-- Yes.

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So that's Tuesday into the Wednesday?-- Yes.

Having a peak of inflows at what time?-- It would be shortly before midnight on the 12th - sorry, midnight on the 12th, probably about 9 o'clock in the evening or something.

And the reference to the mid-range forecast in your situation report is referring to what part of the model?-- Mid-range means a 72 hour duration rainfall forecast.

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Right?-- So it's a three-day rainfall total as opposed to the QPF which is a 24 hour rainfall forecast.

So is it referring to the inflows we see peaking around the 12-----?-- Yes, it's - so the inflows that would be generated at that point in time would be due to the three days of rainfall that would commence on Saturday afternoon.

You say in the situation report under the heading "Forecast Scenario", in the second paragraph below that commencing, "Projections based upon forecast rainfalls suggest flows of up to 1200 CUMECS will emanate from the Bremer River."?-- Yes.

1

Flows of 1200 CUMECS in the downstream tributaries was different from the flood event you experienced in '98, wasn't it?-- Yes. The Bremer on the Saturday was not peaking particularly high. Most of the rain had been in the upper Brisbane and Stanley and a bit in the Lockyer, but the Bremer and the metropolitan areas hadn't received that much rain, so I don't know recall the numbers exactly but I think it would have been of the order of 200 CUMECS or something like that in the Bremer.

10

If you had a rainfall event around the Tuesday, Wednesday of that order, and with those sorts of levels of flows from the downstreams tributaries, how would that allow you to manage that at the time?-- Since we had already - or already established the 1250, obviously the addition of a 1200 CUMECS flow means that we would potentially have to reduce the flows out of Wivenhoe to allow that - that peak to pass.

20

And then you would, what you call, I think, in your witness statement, you piggy-back on the downstreams?-- Yes, so you allow the peak to pass and then you piggy-back, so you elongate the peak of that particular hydrograph.

That would be a different method of handling release from Wivenhoe from what you were using on Saturday the 8th?-- Similar but we did store the water before the Lockyer peak came past, but instead of holding it to the Lockyer level, we actually had ramped up, so a similar technique to, you know, a degree, but, yeah, different in the context that on Saturday we actually had exceeded the peak of the Lockyer, whereas potentially you could have matched the flow coming out of the Bremer, but that was all predicated on the forecast rainfall actually arriving and falling in the right spot.

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Could I ask you also looking at this model, let's assume that the inflows from Saturday 3 p.m. onwards were as per the model?-- Yes.

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-----at the time you were doing the model. The level in Wivenhoe is, if we are look in your Situation Report under the heading "Wivenhoe - full supply 67", you record at 6 p.m. the level was 68.65?-- Yes.

So, it's 150 millimetres above the 68.5 level?-- Yes, it hadn't - or hadn't exceeded that threshold by very much, no.

10

About 150 millimetres, or six inches in the old measurement?-- Yes.

So, you are then releasing 1250 CUMECS per second?-- Yes.

At that rate of release, if the inflow is slow - the inflow as to Wivenhoe is slow as per the model-----?-- Yes.

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-----there's a good likelihood that the lake level will fall back below 68.5?-- Yes. Once, well, the inflow and outflow equalise, obviously the lake will remain constant, but if your releases are higher than your inflows, the lake level will drop.

And if that occurs, you are back in W1?-- Yes, you'd fall back, and indeed the recorded water level over Saturday night on both Somerset and Wivenhoe did drop.

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On this model - should this model come to pass - can you estimate when the lake level will fall back below 68.5?-- Yes. That would be incorporated in the Gate Operations spreadsheet.

And can you tell me what that is?-- Not from that particular plot. You'd have to look at the lake level plots, effectively, but it would have been some time late Sunday, I guess.

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And then if the rainfall came with the inflows on Tuesday or Wednesday increasing the lake level, if it goes back above 68.5, you're back in either strategy two or three?-- Yes, that's correct.

All right, thank you. You can close that up, thanks. Could Mr Ayre see, please, Exhibit 1053? Now, it's the email on Saturday, the 15th at 9.10 p.m.. I have just one brief question about this. If you scroll down the email to the event decision making columns - that's it, just up a little bit for us, please - if you look on the entry for 3 p.m. on Friday, the 7th, commencing "Wivenhoe releases commences"-----?-- Yes.

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-----Mr Callaghan put to you the reference in the opening in the first line there was to operational strategy W1 in use?-- Yes.

And you agreed with that?-- Yes.

1

Would you mind looking closely. I think you'll see it's a "W!?"-- Yes, I'd agree with that, yeah.

Thank you. You can close that up, thank you. You were asked a number of questions about Saturday, the 15th, what you did, the documents you sent, and at transcript 5202 line 20, you said that you were fatigued on that day?-- Yes. That was-----

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Can you elaborate on that, please?-- Well, that was the first day I had actually had off in 10 days of operations. So, I'd done a series of night shifts from the Sunday night through to the Friday night. The first time I went home was actually the Friday morning after I finished that shift. Saturday, I was scheduled to be off for the entire day, but I was called back to the flood room for the 2 o'clock teleconference. So, I was feeling still pretty fatigued at that time, as I recall.

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How much sleep had you had over the previous few days?-- Oh, I would have been lucky to have had about 20 hours sleep in the week from Sunday to Friday.

All right. Now, can I ask you something else - or moving to another topic. You know there is a question whether the flood engineers in fact applied W3 in use over the weekend, Saturday and Sunday-----?-- Yes.

-----and there's an issue about that? I want to now sidestep that issue and what I'm interested in doing is analysing the prevailing circumstances over those two days, and if we assume that W3 was the strategy in use from 8 a.m. Saturday morning - just assume that - assume someone's written it in the log book, "W3 now in use."-----?-- Yes.

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-----I want to consider were rates of release in fact adopted appropriate in a strategy W3 situation; are you with me?-- Yes.

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So, I want you to walk us through what were the circumstances applying inflows to the lake, lake level, rainfall forecast, all those considerations and address were the rates of release that were adopted in fact appropriate to a W3 scenario-----?-- Okay.

-----as from that 8 a.m. Saturday morning. Could you take us through that? You've got the Flood Report there?-- Yes.

You also have the Situation Reports. Is an appropriate place to start by looking at the lake levels - the changes in lake levels, the changes of inflows and outflows recorded in the Flood Report?-- Yeah. It's section 9 of the dam inflow and flood release details.

50

Yes?-- That's where I'm at.

COMMISSIONER: Mr O'Donnell, I don't propose to stop you doing this, but can you do it as expeditiously as possible because I suspect you're going to want to do it with every witness and it takes time. So, as quickly and succinctly as can be achieved, please.

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MR O'DONNELL: Yes.

COMMISSIONER: Thank you. And I put everybody else on warning I don't propose to let the exercise happen twice. So, this is the one time it's going to happen with this witness. Thank you.

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WITNESS: So, starting at 8 a.m.-----

MR O'DONNELL: Yes?-- -----the lake level had just exceeded 68.52. It is 68.52.

And the total rate of inflows from the second column to the right we see is 1515 CUMECS?-- Yes.

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And the rate of outflow is 927 CUMECS?-- Yes.

Right?-- So, inflows are still exceeding outflows. My expectation is the lake level will rise, but the outflows are less than the inflows. I think that's an appropriate rate of release.

All right. Well, what's happening with rain both present and forecast?-- I'd be using John Ruffini's Situation Reports that was issued in the morning in terms of a summary of the rainfall that had just occurred. So, John indicated over a Friday night - or over Friday to that point in time widespread falls of 20 to 40 over the North Pine. Somerset and Wivenhoe had received isolated high totals of 70 in the upper reaches, but there'd been no significant rain in the last 12 hours. So, I suggest those flows that we're seeing are probably the results of the rain that's already occurred. He's got an outlook, which says: "Light rain at times, five to 15 millimetres higher on the coast." So, my expectation for the upper Brisbane would be that that would be towards the lower end of that number and obviously the outlook - the four-day outlook is for some significant rain ahead.

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And the action taken is to increase releases up to 1247 CUMECS by 2 p.m.?-- Yes.

And was that appropriate in applying W3?-- Well, I believe so because you're obviously releasing - increasing the releases to - going to match the inflows as estimated at that time. You're arresting the rate of rise of the storage. You wouldn't operate on that forecast rainfall. It is a potential threat, but it hasn't materialised yet, so you're dealing with the volume of water in storage at the moment.

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And you said before you're increasing up to the limit of having a flow in Brisbane of 1600 CUMECS?-- Yes. So, you're effectively using the dam as a flood mitigator. It's

providing that protection and limiting the damage as such.

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All right. Well, let's move on then during the day - what occurs during the day. Do we see at page 1 - Flood Report, page 155 to 156 that the lake level rises slowly during that day until about 11 p.m.?-- Yes. Sorry, what time was that?

Till about 11 p.m. on the 8th?-- Yes. Okay. So, it effectively-----

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And the inflows-----?-- Yeah, it effectively peaks at 68.65.

The inflows also rise until about 2 p.m. on the Saturday. Then the rate of inflow starts falling?-- So, there wouldn't have been a lot of rain on the catchments. Effectively the streams - upstream are now receding. So, at that point, your release rate is in excess of your inflow. So, my expectation, yeah, the lake level starts have now dropped.

Which it did as from about 11 o'clock on Sunday night?-- Yes.

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And it continues falling until about 0 o'clock on Sunday morning?-- Yes.

Now, the releases were steady at about 1240 CUMECS until about 1 o'clock Sunday morning-----?-- Yes.

-----when the releases are increased-----?-- Yes. The gate opening there, yeah.

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-----up to about 1330? Now, was that an appropriate step in a situation where W3 applied?-- Yes. If the upstreams are receding and also if the downstream tributary streams are receding, if you want to maintain that 1600 CUMEC flow, then obviously you've have to increase the release out of Wivenhoe to compensate for the drop in the downstream tributary flows. So, effectively, you're allowed to - well, you're releasing more to make sure you keep a constant flow in the mid Brisbane.

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Should the releases have been greater in a W3 situation in the circumstances then prevailing?-- Oh, I wouldn't have thought so because you're controlling the lake level. In fact, you're draining the dam at that point in time. So, I think it is an appropriate level to be working in.

What about the weather forecasts - or the forecast rain?-- Well, the forecast rain is indicating rain building on the Sunday. So, it's saying: "Widespread rain with totals of 50 to a 100," and that's reflected in the increase in inflows from about 2 a.m., I suppose, on the 9th. So, there were some falls in the upper - well, upstream of Wivenhoe in that early morning period.

50

All right. Well, as from about Sunday, 11 a.m., the lake level begins to rise?-- Yes.

And it rises pretty much for the rest of that Sunday, and the rate of inflows also increase?-- Yes.

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Can you walk us through those, please?-- So, do you want me to pick a particular point in time or - effectively, what's happening is obviously with the rain arriving, the inflows are increasing. So, as a consequence, the inflow rates exceeds the outflow rate, so the lake will start rising. So, again, the dam is operating in that - providing that flood protection side of things.

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The rates of release are increased slightly?-- Yes.

Do we see that?-- Yes, they're increased during the course of the day - it looks like about midday - and then again it's - oh, it is a gradual increase over the afternoon.

All right. Should the releases have been greater if W3 was the strategy we're using?-- Well, I guess there's a couple of considerations, I suppose, is knowing - well, since I know that the high-level bridges are open, I wouldn't be trying to make too much more in terms of releases. This table doesn't actually tell us what the Lockyer is doing at that point in time. So, without knowledge of what the Lockyer is doing, it would be hard to say whether you could actually increase the releases at that point in time.

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Well, let's look at all the evidence?-- Okay.

You've got the balance of the information there if you want to access it?-- Well, yes, we'd be considering increasing the releases on the basis of the fairly large increases in inflows, but to make a determination, you would have to know what was happening downstream as well.

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All right. You don't have that evidence there?-- I can go to Schedule 1 of my supplementary statement. I know where the data is in there. So, throughout Sunday evening, the Lockyer is starting to pick up again. It was down to about 200 CUMECS, but by midnight on Sunday night, the Lockyer was about 600 CUMECS. So, it's picked up again. With the 600 CUMECS coming out of the Lockyer, plus the release out of Wivenhoe, obviously the Mt Crosby Weir bridge is under threat at that point in time. So, until such time as you know that the bridges are closed, I wouldn't be increasing releases at that point.

40

Now, you came on duty at about 7 p.m. on the Sunday evening?-- Yes, I was recalled. I wasn't scheduled to come back in, but that was when I think certainly we all recognised that this event was building probably a bit quicker than we anticipated.

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And you say in your second witness statement at paragraph 72 that the plan was to incrementally increase releases to about 2600 CUMECS by Tuesday?-- Yes.

Now, was that appropriate in a W3 situation?-- I believe so, yes.

And why is that?-- Well, it's releasing - taking into account the downstream flows and maintaining the target flows at the locations as indicated in the manual. So, I think we were targeting the release rates at that point in time.

1

During that shift on the Sunday evening, were you conscious that the applicable - or the strategy being used was W3?-- Yes, I believe I was conscious, yes.

So, is it your evidence that on the assumption that W3 was applied on both days, the rates of release were appropriate?-- Yes.

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All right, thank you. Thank you.

COMMISSIONER: Thanks. Mr Sullivan, I think I'll ask you to examine next. Are you ready?

MR SULLIVAN: Sorry, I didn't hear you.

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COMMISSIONER: I was going to ask you to examine Mr Ayre next if you have questions for him.

MR SULLIVAN: Thank you very much.

MR SULLIVAN: Mr Ayre, could I take you to the Operations Procedure Manual, Exhibit 21, and page 22, thank you. Can I ask you to look at the bottom of that page at the second last paragraph?-- Yes.

30

You see that begins "Strategies are likely to change"?-- Yes.

Can you just read that paragraph to yourself?-- Yes.

Is it your understanding - or is it a correct proposition that in a flood event, the stages are not necessarily one after the other, that is, W1, 2, 3, 4?-- No, there is - it's possible to do so, but it's not necessarily the case. You will, generally speaking, be going to either two or three as such.

40

And you were asked some questions yesterday about transition, in a general way, possibly between W3 and W2; do you recall that?-- Yes, I do, yes.

And is it correct that, for instance, in an appropriate case, that if - and I'm not suggesting at the moment - I'm not talking about the January event itself-----?-- Sure.

50

-----but in a situation, for instance, where at Lowood the predicted peak is at 530 CUMECS-----?-- Yes.

-----and there may be a release of a 1,000 CUMECS from the dam-----?-- Yes.

-----that there may be a larger predicted flow-----?-- Later
in the event. 1

-----later in the event?-- Yes.

And whilst one may be applying earlier in the event a W3
strategy-----?-- Yes.

-----circumstances may change later in the event which means
it's more appropriate to have a W2 strategy?-- In terms of
the fact that you are releasing below the naturally occurring
peak, then, yes. 10

Yes. So, that in this hypothetical situation, at one point in
time, the naturally predicted peak is 530 CUMECS, but another
point in time, there's a predicted natural peak of, for
instance, 1600-----?-- Yes.

-----or 1800?-- Yes, in that sort of situation, that scenario
could apply. 20

And that you have to, in that scenario, deal between the W2
and W3 situation as the flood event develops?-- Yes.

And as you get more information?-- Indeed, yes, and bearing
in mind the priority of the objectives as well.

Yes. So, with that understanding, there are scenarios where
it is appropriate to move from a W3 to a W2?-- Yes, I believe
so, yes. 30

Could the witness be shown Exhibit 1047, please? Now, I
believe you were shown this before. This is the Situation
Report at 6 o'clock on the 8th of January 2011-----?-- Yes.

-----and could I have it on the screen on the second page,
please, where the heading is "Wivenhoe Full Supply Level 67
Metres AHD". Thank you. Now, you've been asked about - well,
sorry, could I take you down now to towards the bottom of that
where it's got the forecast scenario based upon mid-range
rainfall forecasts?-- Yes. 40

And you've been taken on a number of occasions to those two
paragraphs. Is it fair to say that what that's communicating
to the engineer who is coming on after yourself, that he or
she better have a look at the Warrill and Bremer because
there's a big potential in relation to expected rain?-- Yeah.
I believe I was trying to draw attention to the fact that
based on the rainfall forecasts available, that the -
certainly the Bremer system was - sounded like it could spring
into action and produce a relatively large peak relative to
the discharges or the release rates we were playing with at
that point in time. 50

And if an engineer looked at that and thought that is what it
was trying to communicate, that wouldn't be regarded as silly,
would it?-- I would hope not, but I've got to admit it's
fairly clumsy in its construction, but I hope the message

would get through.

1

I think you gave some evidence yesterday in relation to the drafting procedures?-- Yes.

And is it correct to say that there were a large series of parts which Mr Tibaldi was drafting?-- Yes. John took the lead on a number of those.

And there were a smaller group of parts that another engineer was drafting?-- Oh, yeah. The sections were split between Terry and John and myself - yeah, John Ruffini.

10

But certainly less than what Mr Tibaldi had to deal with?-- Yes. And I guess the rationale was the modelling side of things, the data, that was the most labour-intensive sort of stuff to get organised compared to the words, so-----

And certainly Mr Tibaldi and Mr Malone, were they in a flood centre room somewhere?-- Yeah, Terry, John and myself, we were basically there full-time writing the report.

20

I was just going to ask you about that. You work at SunWater?-- Yes. My - well, I used to work at SunWater. My desk was on the same floor as the Flood Operation Centre, yes.

So, in that respect, you were near to where they were working?-- No, I was - for a large portion of the time the report was being put together, I was operating from out of the flood room. I was actually taken off line from my day job, as it were, to assist in preparing the report. Having said that, obviously the proximity of my work station meant that I was also dealing with matters that related to SunWater work at the same time.

30

Yes. Well, can I put it this way: you still had responsibilities for SunWater at that time, didn't you?-- I did, yes.

And to the best of your knowledge, Mr Tibaldi and Mr Malone had been put specifically full-time in relation to the drafting?-- Yeah. I believe they were taken off their ordinary duties and dedicated to that task.

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Thank you.

COMMISSIONER: Thanks. I think we'll - you're finished, are you, Mr Sullivan?

MR SULLIVAN: I think so, yes, Commissioner.

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COMMISSIONER: I think we'll take the lunch break now before we come back to you, Mr Burns. 2.30.

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

THE COMMISSION RESUMED AT 2.30 P.M.

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ROBERT ARNOLD AYRE, CONTINUING:

COMMISSIONER: Mr Burns.

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MR BURNS: No questions.

COMMISSIONER: Thank you. Mr Ambrose.

MR AMBROSE: Your Honour, I tender the requirement from the Queensland Flood Commission of Inquiry to Mr Ayre dated the 25th of January 2012.

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COMMISSIONER: That will be Exhibit 1055.

ADMITTED AND MARKED "EXHIBIT 1055"

MR AMBROSE: And the requirement to provide a statement to the Commission addressed to Mr Ayre of the same date.

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COMMISSIONER: Are they not one and the same?

MR AMBROSE: The requirement identifies the Executive Summary and the other three parts that he has to address. The first is a requirement to deliver all correspondence, et cetera.

COMMISSIONER: All right. The requirement for delivery of correspondence is 1055. The other requirement is 1056.

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ADMITTED AND MARKED "EXHIBIT 1056"

MR AMBROSE: Could I ask you to be shown Situation Report number 9 for Saturday, 8th January 2011, at 1422 hours?-- Yes, I still have that.

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That's the first Situation Report that you were the author of?-- On that shift, yes.

That's right. Yes, that's right, on that shift. I see that it's a little bit different to earlier ones in that it appears to be addressed to the Dam Safety Regulator saying, "I have added you to the distribution list of the Situation Report for

SEQWater dams...Let me know if you do not wish to get this."?-- Yes.

1

You obviously wrote that?-- I wrote that, yes.

And it's new?-- It is, yes.

What motivated you to write that at that time?-- I believe the 11 o'clock Bureau of Meteorology four-day outlook had been just updated and is referenced below under the "Rainfall" section there. Recognising the fact that we already had flows in system, plus the outlook with some fairly substantial rainfall, it occurred to me that this particular event could actually become somewhat larger, so I thought it prudent to just advise the Regulator that this may be the case.

10

All right. Did you get a response?-- I don't recall, no.

Was the Dam Safety Regulator included in the list of recipients after that?-- Yes. I believe I added both Peter Allen and Ron Guppy to that distribution list.

20

When you were giving evidence, Mr Callaghan was asking you some questions about the consolidation of Situation Reports into one document; do you remember that?-- Yes.

As I made a note of your evidence, you said that that was all done at about the time of the drawdown or thereabouts?-- It wasn't necessarily - oh, there were Situation Reports but there were things like the model runs as well-----

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That's right?-- -----that were included into the Flood Event Report, and I suppose in recognition that we'll need to be producing the reports soon after the event ends, so we just wanted to bring all that information together.

My note of your evidence was that took place on about Saturday, 17th of January, bearing in mind that the 15th of January was a Saturday. Were you intending to convey that this took place at about Saturday the 15th or Monday the 17th?-- Well, I think the process actually started probably on the Thursday preceding and extended, or possibly extended through the Saturday. I don't really recall the exact date, but it was in that timeframe.

40

You were asked some questions by Mr Murdoch. Do you remember Mr Murdoch asking you questions?-- Yes.

About a document which was - if it can be brought up and shown. It's described as RD5 at page 1678. Now, you see that's the first page of that document?-- Yes.

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And it's headed, "The Flood Control Centre Event Log."?-- Yes, that's the-----

No, no, no. That's the document that you were looking at when you were answering questions by Mr Murdoch?-- Yes, it was.

Could we scroll down, please, to the bottom of the page. Just stop there. Can you see there's a cipher there, or a footnote on the bottom, "Procedure FLX 41107 Appendix 1"?-- Yeah.

1

Do you see that?-- Yes, I do. Yes.

Do you know what that is?-- That's a reference to the, or as it was in those days, the SunWater Procedure Manual for the operation of Somerset, Wivenhoe and North Pine dams.

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When Mr Murdoch was asking you questions, you were describing what you described as a Strategy Summary Log?-- Yes.

Does this document come with any description which you can find of a Strategy Summary Log?-- No, I don't believe so.

All right. I want you to see Exhibit 1049, Annexure 10, which is the spreadsheet that you've annexed to your statement to this Inquiry?-- Yes.

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Thank you very much. We can see that that's the e-mail that was sent at 6.57 p.m. on Saturday, the 15th of January?-- Yes.

Could we scroll down, please. Now, that document doesn't have a title being the same as on the title that you saw in the annexure that Mr Murdoch was showing you, the Flood Event Log?-- No, it doesn't.

And if we can scroll down please. Just stop there. Can you see the footnote on the bottom left?-- Yes.

30

That's the Strategy Summary Log (2)?-- Yes.

Is that the document that you were referring to as that Strategy Summary?-- I believe so, yes.

That's the document that you say had been created from the existing log and added to?-- I believe that was the source of the original data, yes.

40

And in the original Event Log, in column D, there was no reference to the, shall we say, directive or the Situation Report to evidence when a strategy with a W had originated?-- No, that seemed to be in addition.

Right. Could the witness be shown - I think it's the next exhibit which is the e-mail from Mr Tibaldi at about 9.15 that evening. I beg your pardon, it's 1053. No, it's not. Sorry, I don't know what exhibit number it is now. I want the e-mail which - you're way ahead of me. You have it up on the screen already. Thank you very much. Can we see the annexure please, the attachment, the full document? No, that's not it. Can we see 1052, please, and I hope I have this right. It commencing with an e-mail. So we're talking Exhibit 1052, it's an e-mail from John Tibaldi, the subject is, "Strategy Summary Log", and it was sent on the 15th of January at 7.51. Do you see that?-- Yes, to the duty engineer e-mail address,

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yes.

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That's right. Could we see the document, please. Now, that's another version, is it not, of the Annexure 10 to your affidavit which was the Strategy Summary Log?-- Yes.

Could we see the cipher down the bottom right, please, or footnote, whatever it might be called. Is there such a one? Is there a cipher down the bottom? Can we read the cipher down the bottom of each page, please. I want you to have a look at this document, please. I suggest to you this in fact is a copy of the e-mail with the annexure sent by John Tibaldi to the Duty Seq at 7.15 p.m. on the 15th of January 2011 where the cipher is readable down the bottom?-- Yes. The cipher being "Strategy Summary Log (3)".

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All right. So what do the numbers Summary Log, what does the number (3) mean?-- Well, my interpretation is this is the third draft of that document.

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The one that was Annexure 10 to your affidavit was number (2)?-- Number (2), yes.

All right. I tender that, may it please the Court.

COMMISSIONER: Exhibit 1057.

ADMITTED AND MARKED "EXHIBIT 1057"

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MR AMBROSE: Now, you say, as I understand your evidence, that you didn't create that annexure to number 10 to your affidavit, that Strategy Summary Log?-- I don't believe so, no.

And the truth is, as you say, as I understand your evidence, you don't know who did?-- I don't recall, no.

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So far as the entries that appear in column D where the titles - the W strategies - are identified and attributed to certain times, can you tell this Commission whether in fact you wrote those?-- No, I don't believe I wrote those.

You were taken by Mr Murdoch through a number of those entries and you identified where you thought they were wrong?-- Yes.

Do you have a copy of that Strategy Summary Log with you?-- The number (2)?

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Yes?-- Yes.

Does that document in fact tell a reader where to look so as to make a decision about whether a particular W strategy took place?-- Well, I believe in the "Category" column towards the right-hand side, there is a description of the particular

piece of correspondence or Situation Report or directive. So it identifies that's the source of the labelling of the strategy. 1

All right. Can we go, for example, to the 8th of January 2011 at 8 a.m. Do you see in the "Category" section off to the right, there's a reference to there being a directive?-- Yes.

And then the second reference is "Strategy W1D"?-- Yes. 10

Now, to know what directive the author of this is referring us to, do we go across to the "Action" column in the middle and see that it refers to "Issue Wivenhoe Directive No. 4."?-- I believe that to be the case, yes.

All right. Can we go to Wivenhoe Directive No. 4, please. It's in Appendix L, page 5. If we read that, can we see underneath the various gate opening operations: "It is noted that the hydro will continue releasing 13 CUMECS", and then this: "At the completion of these gate operations, the dam will be releasing 1247 CUMECS."?-- Yes. 20

All right. Now, that doesn't mean anything to anyone unless we have the Manual of Operations, and if we have a look at page 26. Now, have a look at strategy W1C?-- Yes.

That refers to the lake level being greater than 67.75, but importantly the maximum release is 500 CUMECS?-- Yes, that's correct. 30

If, as per Directive 4, the gate operations will be releasing at 1247, it's suggestive from that directive alone that it couldn't be operating in W1C?-- No, that's correct.

So if we go down to the next strategy on page 26, W1D, we see that the maximum release is 1900 CUMECS?-- Yes.

And from that directive if the release is 1247, it is within W1D, is it not?-- It fits those conditions, yes. 40

What it doesn't fit is the lake level?-- Yeah, there's no reference to the lake level in the directive.

So if one is looking alone at the directive, one might be seduced into thinking that at that time you were operating in 1D?-- That's true, yes. That's my interpretation.

Can we take another example. The 7th of January at 12.34-----

COMMISSIONER: Mr Ambrose, isn't this dealt with in some detail in Mr Ayre's statement? 50

MR AMBROSE: It is dealt with in Mr Ayre's statement. I'm having him explain so that there's no doubt what it means.

COMMISSIONER: All right. Well, it would be unfortunate if you simply repeated what was in his statement, but I will leave it with you.

MR AMBROSE: If your Honour is perfectly satisfied that you understand precisely what's in the schedule to his statement, I will not pursue it any further.

COMMISSIONER: I don't think it's complex. I don't think I have any difficulty understanding it.

MR AMBROSE: Thank you.

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You were asked some questions about this choice, if you like, to move from W1 to W2 or 3?-- Yes.

Now, if the lake level is at 68.5 - I'm talking about the precise moment when the lake level reaches 68.5?-- Yes.

Does a flood engineer have the choice as to whether in fact he is in W2 or not?-- Well, on page 26 the note at the bottom indicates when the level reaches 68.5, you switch to strategy W2 or 3.

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I know it says that. But I'm saying at the moment the lake reaches 68.5, can a flood officer choose something at that point to be in W2, or is it already dictated to him by virtue of whether the releases that have been made take it above or below the natural flow peak at Lowood and Moggill?-- That's right. The second condition needs to be met. So to be in W2, the releases have to be below the naturally occurring flood peaks.

30

So at the moment the lake reaches 68.5, is it already predetermined whether W2 is engaged, and it is if the releases are below Lowood and Moggill?-- Yes.

And you've no choice about that?-- No.

If in fact the releases are above the natural flow peaks at Lowood and Moggill, you've got no choice then either?-- No, you're directed then to W3.

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So at no point when the lake reaches 68.5 does a flood engineer have a choice to move to W2. It's already determined for that flood engineer by virtue of the releases that have been set in train?-- Yes, I believe so.

If the releases that have already been set in train are below the natural flood peak at Lowood and Moggill-----?-- Yes.

-----then the flood engineer has the choice to remain in W2, I suggest to you, or to move to W3 if it's appropriate?-- Yes, and they do that by increasing releases above the natural peak, yes.

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Can I ask you whether you were trying to convey that to her Honour when you were asked questions by Mr O'Donnell about those choices and you were saying "not necessarily"?-- Yes, I believe that would be the sort of context that I was talking about.

It was put to you that the Flood Event Report was different to other statements that were made such as the summary by Terry Malone and the brief to the Minister, do you remember that?-- Yes.

Just dealing with Mr Malone's Strategy Summary at the moment - I beg your pardon, it's called "Summary of Manual of Operational Procedures", and it's Exhibit 1050. Now, this was created or sent, I should say, at 1.02 p.m. on Saturday, the 15th?-- Yes.

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From Terry Malone to various people, including yourself?-- Yes.

And if we have a look at the document itself, please, the first page doesn't seem controversial, would you accept that?-- Yes. I think it's just background stuff.

The second page, the first bullet point sets out the W1 strategy by way of a summary, and it says: "Primary consideration is given ..." et cetera "... where the predicted water level is below 68.5", do you see that?-- Yes.

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And then underneath that in italics: "This stage was exceeded at 8 a.m., Saturday, 6 January 2011."?-- Yes.

If we assume that that 6 January is in error and it should have been the 8th of January-----?-- I believe it would be, yes.

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-----then does this appear to be the first time in, shall we say, chronological order, at 1.02 p.m. on the 15th, that anyone has attempted to write when W1 was exceeded?-- Yes, I would say so. Yes.

At 8 a.m. on a Saturday which we now know is the 8th?-- The 8th.

The next one is W2, and it speaks about it being the transition phase, et cetera, and underneath that there's italics: "This stage was exceeded approximately 6 p.m., Saturday, the 8th of January". Well, the date is right, Saturday, the 8th of January, but you would say that that's wrong in terms of it being exceeded at that time because we know what the release rates were in relation to the natural peak flows at Lowood and Moggill?-- Yes. Certainly being the duty engineer at that time I was aware of those two factors.

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And then W3, we can read what it says there easily enough and then in italics: "This stage W3 was exceeded approximately 9 a.m., Tuesday, 11 January 2011."?-- Yes.

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Can you make any comment about the accuracy of that?-- Well, I wasn't on shift as such, but I knew it occurred early on that Tuesday, so I would be, I suppose, persuaded by Terry that that's an appropriate time that that decision was taken.

All right. Now, at some time after 1.02 p.m. when this exercise appears to have been done for the first time-----?--
Yes.

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-----we've got this spreadsheet summary that we've discussed, version 2, version 3, emanating at around about three minutes to seven, for example, on the one that you've got annexed to your statement?-- Yes.

That's in error, you say?-- Yes.

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And it's a document that's created later in time apparently?-- I believe it to be so, yes.

And by the looks of it there appear to have been lots of fingers all over it?-- Yeah. I'm unsure who actually was responsible but, yeah, it could have been some - or a number of people's input, I suppose.

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It would seem as if the author of that spreadsheet, or I should say more precisely, column D of that spreadsheet where the attributions of the Ws are made, at the very least didn't have recourse to Terry Malone's email, the summary of the manual of operation or procedures?-- Yes, certainly there are inconsistencies between the two, yes.

1

You were referred to the report to the minister and, again, there were lots of hands involved in the creation of this document, weren't there?-- Yes, from what I know there were inputs from myself, Terry Malone, John Tibaldi who was the main collaborator of it, I suppose, Rob Drury and John Ruffini.

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And in answer to the learned Senior Counsel assisting, Mr Callaghan, he asked you whether you considered it or read it and you explained that you didn't get it on the Saturday night?-- No.

You may have got it on the Sunday because you were on duty, and you probably read it, but you were more concerned with the accuracy of the Tuesday attributions of the strategy because that's what you worked on the day before, with the gate operational releases?-- Yes, that's the focus I had on the Saturday, yes.

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In terms of the briefing to the minister insofar as the work that you did on that document for the Tuesday, are you satisfied that those entries were correct?-- I believe they're a reasonable reflection of what I had put together.

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Your evidence has consistently been that at this distance from the event, you cannot now be confident that you're not reconstructing knowledge if you were to say that you had a conscious appreciation at 8 a.m. on Saturday the 8th that you were in W3?-- No, I suppose, you know, because it's a year since that's happened, and I guess in the last couple of weeks I've been looking at these periods quite closely. I believe if I said I was in W3, that being a reconstruction on the facts as I know them now, like I say, I have a distinct recollection of transition but I don't recall was that transition to 2 or 3.

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So far as your description of it being a transcription is concerned, that's been consistently your evidence from the first statement I think you made to this inquiry?-- I believe so, yes.

Is the flood event report correct - true and correct?-- I believe it is, yes.

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Have you misled this Commission in any way, shape or form?-- I don't believe I have, no.

Did you conspire with the other flood operation engineers to manipulate the facts and portray an inaccurate account of the operational procedures during the flood event?-- No, I don't believe we did.

Thank you.

COMMISSIONER: Mr Callaghan.

MR CALLAGHAN: A couple of questions about the so-called strategy summary document which you've been asked about today. I think it's annexure 10 to Exhibit 1049. If I could just recap on a couple of things you've said both yesterday and today. You say you don't recall who actually did it?-- I don't - well, in terms of the creation of the documents or-----

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Yes, who created the document?-- I don't recall who that was necessarily.

You even allowed, I think, a possibility that you may have done some work on it?-- It's possible I - I may have copied the flood event log and made some suggestions as to how to go about doing things.

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And I think you even suggested a short time ago that there could have been a number of people responsible for the creation of that document?-- Well, I'm not sure if the flood officers or - and Rob Drury, necessarily, they may have collaborated on it; I don't know. I just don't recall because I was focused on the gate operations spreadsheet for the Tuesday.

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Well, can I just bring you back then to some answers you gave Mr Murdoch because, as I understood your evidence to him, you clearly suggested that it was, in fact, prepared by a flood officer, did you not?-- Well, my - my thoughts are I probably would have delegated that job to somebody like a flood officer.

You probably would have delegated it to someone like a flood officer?-- Well, I can't physically remember who I talked to when I said - was tasking that particular thing to do. It could have been Rob Drury, it could have been Al Navruk or Dave Pokarier. I just don't recall.

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All right, well, we have those names but do you now recall actually tasking someone to do it?-- I believe I would have been involved in that discussion. I don't know who came up with that suggestion. It could have been - again it could have been John Tibaldi, Rob Drury or myself. I don't know.

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Well, are you at least able to say that it was one of you or-----?-- Yes, obviously it would be one of us but I just don't recall specifically who that was.

All right, can I take you back to some other evidence you gave this morning when you said words to the effect of, "We said, 'Here's copy of the manual. Have a go.'" Do you recall giving that evidence on oath this morning?-- Yes, I do, yes.

Was that an actual recollection of something that occurred?-- Well, somebody obviously instructed the person to do what they did, but I-----

When you gave that evidence on oath this morning, when you said, "We said, 'Here's copy of the manual. Have a go.'", was that an accurate recollection of something which actually occurred?-- No, that's probably a reconstruction.

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Thank you. You also said this morning that you believe that it was worked on for an hour or so, or words to that effect. Do you recall saying that on oath this morning?-- Yes.

Was that an accurate statement on oath of how this document came into existence?-- Well, it's my belief that we would have started working when Rob Drury came in which I knew was about 5.30. The email was sent at 7 o'clock so somebody spent some time doing it in that period.

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So you think the whole document was brought into existence in the space of that period between 5.30 and when the email was sent?-- That's my assumption, yes.

Well, is there any other possibility?-- Not to my knowledge, no.

All right. Now, I just want to clarify one aspect of some evidence that you gave when answering questions from Mr O'Donnell. You were referred by him to some evidence that you gave yesterday at transcript 5220. The question was put to you there, and Mr O'Donnell reminded you of it this morning, "And for your purposes it is - it didn't matter" - sorry, the way it reads is, "It is - didn't matter whether those releases were within W1 or W3." You answered, "Not particularly, no, except that they were being made with the intention of providing optimum protection to downstream urban areas."?-- Yes, I recall-----

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I'm still quoting Mr O'Donnell's question. This is still him talking. You were asked, "Were you consciously operating within W1 or W3? You said, 'I was conscious we weren't in W1. I knew we had transitioned.' Then you referred to flows downstream over 1600 CUMECS. You said that the reference to flows downstream of 1600 CUMECS was referable to the primary consideration of protecting urban inundation?", and your answer to that long question was, "Yes." With me so far?-- Yes.

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You were then asked by Mr O'Donnell, "Can you explain, please, why that is?" You said, "Well, we'd just had - similar sorts of release rates were achieved. Feedback from talking to the likes of Brisbane City Council indicated that those particular floods, whilst they did inundate - the release dates whilst they did inundate some low-level areas and did have some impacts on infrastructure like walkways and bikeways and the like, interrupted ferry services to some extent. They were the sort of tolerable range of impact that the downstream

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users could accommodate so in my interpretation, that was the optimal protection we could provide." Okay?-- Yes.

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That's not so long ago. When you say you were talking to the likes of Brisbane City Council, who at Brisbane City Council are you talking about there?-- That would be feedback from people in the flood information centres, so the likes of Ken Morris and James Charalambous, you know, those are the names that spring to mind.

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When you say the likes of Brisbane City Council, are there others from whom such sort of information may have been received?-- Certainly feedback from Somerset Regional Council, largely with respect to the low-level rural bridges and/or Ipswich operates or look after Kholo Bridge so they'd be in that sort of frame as well.

And when had you received this information?-- Well, we'd been speaking to them in between floods or especially after the October flood and during the December floods.

20

Had there been any such communication about 1600 CUMECS during the January flood?-- Not at that point, no.

Who at the Ipswich City Council or Somerset Regional Council would you have been speaking to?-- The main people there are Tony Jacobs and - sorry, I can't recall the name of the other gentleman.

Is that Ipswich?-- Yeah.

30

You can't recall anyone else at Ipswich or anyone at Somerset?-- Sorry, anyone at Somerset. Andy Bickerton I know we talked to but I don't think it was him. No, I can't recall the other name.

Commissioner, may I ask that Mr Ayre be stood down.

COMMISSIONER: Yes, Mr Ayre, you're stood down for the duration of the hearing, thank you.

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WITNESS STOOD DOWN

MR CALLAGHAN: I call Terrence Malone.

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TERRENCE ALWYN MALONE, SWORN AND EXAMINED:

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MR CALLAGHAN: Tell the Commission your full name and occupation, please?-- My name is Terrence Alwyn Malone. I'm a principal hydrologist with SEQWater.

Mr Malone, can I make it clear that in all my questions to you, if I use the word "strategy" without otherwise defining it, I'm referring to a strategy W1, 2, 3 or 4 within the Wivenhoe manual; you understand that?-- Yes.

10

I understand there are other things - other options which might be exercised within those strategies that might involve gate releases and that sort of thing. That's correct?-- That's correct.

They might also sometimes be described as strategies, or not?-- I wouldn't call them strategies. I would call them actions within the strategy.

20

All right. So we're of one mind then that the word "strategy" refers to W1, 2, 3, 4? That's -----?-- Correct.

-----a yes? You would agree that for engineers operating the dam during a flood event, one of those strategies must be engaged?-- At any one particular point in time, yes.

At any one particular point in time. You can't be in more than one strategy at once?-- That's correct.

30

And to comply with the manual, one or other of those strategies must be adopted and applied at the time the dam is being operated. You agree with that?-- Well, when you say at the time the dam is being operated, the dam was operated over several days.

During the flood event?-- So you'll be adopting different strategies at different times.

40

One or other of them?-- Correct.

But whenever you're in a flood event, you're adopting and applying a strategy?-- A strategy.

And a strategy involves a state of mind, does it not, that is to say, a primary consideration?-- A primary consideration, yes.

50

Whoever is operating the dam must have a primary consideration in their mind at any one time during the flood event?-- Yes.

You agree with that? That's a yes?-- Yes, but also to be mindful of possible other strategies which may or may not occur.

Possibly other strategies?-- In the future.

Yes, I suppose you're always mindful that a strategy might change but you're only ever, you've agreed, in one at a time?-- At a particular point in time.

At a particular point in time, thank you. You'd also agree that it is important for it to be known which strategy is engaged?-- Known by whom?

Well, for a start, by the engineer who is operating the dam at the time?-- Often intuitive. 10

Often intuitive? What does that mean?-- Well, at any particular point in time you'd be fully aware what the situation is and you'd be fully aware what strategy you're in.

But the strategies are prescribed in the manual?-- Yes.

The primary considerations are prescribed in the manual?-- Yes. 20

You might know the manual very well, but there's nothing intuitive about what is prescribed there; it's either in the manual or it's not?-- I don't understand.

When you say it's intuitive, you can't mean, can you, that you can do anything other than what is prescribed by the manual?-- Oh no, no, but I don't need to write down the fact that I'm above 68.5, for example. 30

You've agreed previously that it would be desirable if such records were made, though, haven't you?-- I said - no, that's not quite correct. I said that the manual should be a little bit clearer in that certain terms should be made clearer and some of the technical data should be reorganised.

Well, you were asked, and you probably read this in recent times, the Commissioner at page 378 of the transcript put to you that, "It would certainly make it easier for people to review what you did later, wouldn't it, if it were clear exactly what happened when?" You said, "Yeah." "And that's an issue for clarity within the document, the flood manual itself." You were agreeing with the proposition, were you not, that it would be easier for people to review what you did later if it were clear exactly what happened when?-- Well, it's clear from the data that you in front of you. 40

No, you were agreeing with the proposition that it would be easier for people to review what you did later if it were clear exactly what happened when. Sorry, what are you looking at?-- I'm looking at the document that's on the screen here. 50

You have a copy of the transcript with you?-- Yes, I do.

At the bottom of page 378, over the page?-- That's what I said at the time.

Do you no longer agree with it?-- I think it would make it

easier for other people, yes.

1

Yes?-- But not necessarily for the flood engineers.

And that's because - well, sorry, why would it not be easier if it was written down by the flood engineers at the time?-- Because, as I said, we intuitively know that the dam is above a certain level-----

Right?-- -----and we have that data in front of us. We're looking at it continuously.

10

I see.

COMMISSIONER: What could possibly be intuitive about that, Mr Malone?-- Well, it's -----

Are you sure you've got the right word there?-- Well - well, you know, for example-----

20

Intuition and knowledge are two different things?-- Okay, well-----

Which is it?-- It's knowledge then.

Thank you.

MR CALLAGHAN: Is it the case that for perhaps the reasons you're advancing that as a matter of practice the terms themselves are not used frequently during a flood event?-- You mean the strategy terms, W1?

30

Yes, yes, I do?-- That's true. They are not used often within the operations centre.

When they are used on the limited occasions, are they used carefully?-- Certainly with regard to strategies W1 and W4. W2 and W3 are a little bit more difficult to define.

So does that degree of difficulty mean that they're not used carefully?-- They are used very carefully.

40

Right. Can we look at the way in which these strategies may have been engaged during the January event. You've previously given evidence on this topic, of course, and previously given statements about it. You came on shift at 7 a.m. on the 9th of January; is that correct?-- That's correct.

Was there any conversation - sorry, you were taking over from Mr Ayre, is that right? Sorry, who were you taking over from?-- I would have to check but I think, to recall, that would have been Mr Ruffini.

50

I think that's right. Or was it Tibaldi? I'm sorry, it wasn't Mr Ayre anyway because he was-----?-- On Saturday.

-----7 to 7 on the Saturday?-- Yes.

And then you took over -----?-- From Mr Tibaldi.

1

On the Sunday from Mr Tibaldi, I'm sorry. Was there any conversation with Mr Tibaldi, do you recall, about the strategy which was in place at that time?-- I don't recall any specific conversation about the strategy. We would have been talking about levels and flows and volumes.

You're aware by now, I'm sure, of a situation report which had been prepared at 5.53 p.m. on the Saturday the 8th?-- I am aware of that one.

10

You've no doubt been taken to that document in recent times. It's all right, you don't have to get it for the moment. You have a copy there, do you?-- I have a copy.

All right. When do you first recall seeing that document?-- When do I - I must have received it. I certainly did receive it because I'm on the address list, so in all probability I read it when I received it, but other than that, I didn't recall this document until recently.

20

So you have no independent recollection of seeing it in January of last year?-- Certainly not.

Have you discussed that document with Mr Ayre in recent times?-- No.

Do you recall when you first looked at that document in recent times how you interpreted the words on the document which suggested that there might have been a need to move to W2?-- Sorry, the question again?

30

Under the bold "Forecast Scenario Based on Mid-Range Rainfall Forecasts", you see there is a paragraph, "Assessments have been undertaken."?-- Correct.

I'm sure you've been taken to that paragraph in recent times, have you not?-- I have.

40

And the first time you were taken to it when you read the words, "Will require the application of Wivenhoe Dam flood operation strategy W2.", I'm asking you to tell me how you interpreted - what you interpreted that paragraph to have meant?-- It's a little bit ambiguous in that it could be taken a number of ways in that we are certainly above W2 - sorry, W1. We could be in W3 or we could be moving back to W2.

Do you say you can transition from W3 to W2?-- Depending on the flows of the river, yes.

50

And W2 is a specific transitional strategy, is it not?-- Correct.

A strategy which transitions from the minimisation of impact to downstream rural life to the protection of urban areas from inundation?-- Yes.

So you say you can transfer from 3 where the primary consideration is protecting urban areas from inundation to a transition where you transition back to that strategy?-- If the circumstances are appropriate, yes. If the forecast rainfall is in a different depth or a different location, yes, it's quite possible.

So you would calculate a transfer of strategy, a change in strategy based on forecast rainfall, is that right?-- Well, you'd certainly be considering it, yes.

10

Considering it as a basis upon which to change strategy, is that right?-- Using forecast rainfall?

Yes?-- It's always a basis for considering what strategy you might get to.

Is there any other interpretation you - that occurred to you when you first saw that document in recent times?-- None that spring to mind.

20

It didn't occur to you that it could have been a suggestion that it was a move from W1 to W2?-- I don't know what Rob was thinking at the time.

No, I'm asking you how you interpreted it?-- I interpreted it? Well, I already knew we were in W2 or W3 - W2 at that stage anyway.

30

I see, so you knew you were in 2 or 3 at that stage; is that right?-- Well, we were certainly above 1.

So you knew you were in 2 or 3?-- Yeah.

Okay?-- And both of those have the same primary consideration.

All right. You were on duty on the 9th of January-----?-- Yes.

40

-----as we've said from 7 till 7. I'm sure you're aware of the interest that's been shown in the record of a teleconference at 3.30 p.m. on the 9th?-- Yes

50

And if we can go to that entry, which is Exhibit 23, "Duty engineer conference held at the Flood Operation Centre", you're, I'm sure, familiar with that entry; is that correct?-- Yes.

1

And I'm sure you're familiar with our interest in the part of the entry which says, "At this stage operating at the top end of W1 and bottom end of W2."?-- Yep.

Do you recall that being spoken about during this conference?-- I do not recall that specifically-----

10

I see?-- -----but I can quite understand why it was stated.

Well, let's stick with your recollection. You don't recall anyone saying that?-- I don't recall anyone saying that.

It would follow that you don't recall anyone dissenting from it if it was said?-- No, I don't recall that, either, but the statement is correct.

20

Hm-mmm?-- It doesn't say we are not operating under strategy 3. It says we are operating at a particular point.

You'd just better explain that for us?-- At this stage, we are operating at the top end of W1 and the bottom end of W2. It says we are operating at a particular point. It doesn't say we are operating under strategy W1 or W2.

So, that should be read to interpret, "Even though we are in three, we are at one and end of two," is that the way we should read it?-- If you look at the levels-----

30

Yes?-- -----and the releases at that particular point, that was the condition - those conditions might also satisfy the top end of W1 or the bottom end of W2.

Well, quite, they might, but-----?-- But it doesn't say that you're operating under strategy W2.

40

Well, under, okay?-- It says "at".

It's all in the prepositions, is it?-- Well, if we're being very precise, yes.

All right. Why would W2 be mentioned at all at 3.30 p.m. on Sunday, the 9th of January?

MR O'DONNELL: Well, that's asking him to speculate. He has already said he can't recall W2 being mentioned.

50

COMMISSIONER: Well, he can give us a view on, if it were mentioned, is there any reason that he can think of for it being mentioned.

MR O'DONNELL: He can give a review on something he does not recall being mentioned as to why it might have been mentioned?

COMMISSIONER: Yes, because he may know something about the conference that explains it perfectly, Mr O'Donnell.

1

Mr Malone?-- I can't recall because I didn't write the entry.

MR CALLAGHAN: Is there anything else about the conference which you can recall which could conceivably explain any reference to W2, and particularly to the bottom end of W2, at that time?-- The only thing I can suggest - and I'm prophesising here - that at that time, we'd only just started to get the heavy rainfall, the onset, and we were looking at the volume in the dam and the volumes we were modelling were only going to take up a very small percentage of the volume available for temporary flood storage.

10

And that could explain a reference to W2 and to the bottom end of W2 how?-- It could.

I'm just not making the connection. Can you do that for me?-- In terms of the way we manage the dam, it's all about managing the volumes of inflow and outflow. Now, to manage the strategy within W1, we have available to us a volume of about 170,000 megalitres. This represents about 15 per cent of the total temporary flood storage. So, we still had at this particular point in time about 85 per cent of a temporary flood storage available for minimising the impact of urban flooding.

20

You're going to bring this back to W2 at some stage, right?-- Yeah.

30

Yep, okay?-- I'm just saying that at that stage both W2 and W3 talk about the primary consideration being the minimisation of urban flooding. At this stage, we had still most of the temporary flood storage available to us to manage that. So, we could very well have been in the bottom of both W2 and W3.

I see?-- We were in both in terms of the flood storage available.

40

All right. Now, can we go down to 4.26 p.m.. You can see there is an entry there. It has your initials: "Called Ken Morris," is that correct?-- Yes.

And the entry below records a telephone conversation with Mr Morris. Can you remember that phone call?-- Not specifically, no.

All right. Do you dispute anything recorded in the log about that phone call?-- Well, that was my - that would have been my understanding at that point in time and that was what I conveyed to Ken.

50

All right. What do you say to the suggestion that the thrust of the conversation - I'm sorry, that you reported that conversation to a flood officer in order for it to be recorded in the Flood Event Log, and that as you reported it, the thrust of it was that the Brisbane City Council was making

strong representations to try to maintain a flow to keep the flood-vulnerable bridges open as long as possible?-- No, I disagree with that.

1

You reject that?-- I reject that entirely because for starters, the Brisbane City Council don't have any authority over those two particular crossings.

Right. Any other reason why you reject that? I understand that one. Is there any other-----?-- That's the primary reason and it's not in keeping with the way we'd operate the dam. We aren't influenced by external people.

10

Well, I hadn't yet gone that next step to suggest that you were. I was just asking you about the conversation. Well, can we move forward to the 15th of January and if we still have that Flood Event Log there for the 15th of January, there is an entry at 11.30 a.m. which says that Mr Drury requested a summary of the operations manual for Wivenhoe; that's the effect of the entry?-- Yes.

20

You're familiar with the topic, I take it?-- I am familiar with the topic.

You were at the Flood Operation Centre at the time?-- I was the duty officer - yeah, duty engineer.

It seems that you were chosen to prepare the summary or-----?-- I think-----

30

-----you took it upon yourself to at least?-- No, no, it would have been upon request from Rob. He would have - Rob Drury would have rung the Flood Operation Centre and he might not have known who was on duty. He would have been just talking to the duty flood engineer.

All right. So, you would have agreed to provide it after checking with the others; is that right? Is that what that entry indicates?-- Sorry, where is it again?

40

11.30 a.m.?-- Yes.

"Agreed - Terry to provide after checking with all duty engineers," is that what happened?-- I put together a summary that was my understanding of the way we operated the dam at that particular point in time. Because I hadn't been on duty for some of those periods, I thought it was appropriate for the other duty engineers to have a review of my document.

A review of your what, sorry?-- My document.

50

Your document, yes. And did that occur?-- I sent it out with a comment, that has since become infamous, I understand.

This is: "JT, bring out the red pen."?-- Yeah.

Yep. You were inviting feedback; that's all that meant?-- Oh, yes.

Yeah?-- Yeah.

1

And did you receive some?-- No, not that I recall.

Did that concern you at all?-- Not really because I was still in operational mode.

All right. But you wanted feedback on the document?-- I - yeah. Well, that was - as you say, I was inviting feedback and-----

10

Yes?-- But it was going to be taken out of my hands, as I - is the way things worked.

What do you mean?-- John Tibaldi would have taken the document and then moulded it-----

Right?-- -----as is his want to do.

20

Right. And you would have expected him to do that?-- Yes.

As you say, though, you weren't there for the whole period? Not one of you was there for the whole period. So, you would have expected feedback from the others as well; would you not?-- I wasn't - you'll also see in that email: "Do you have any comments before Rob Drury forwards it on?" So, I would expected the comments have gone back to Rob Drury, because he was going to then forward it on.

30

Oh, he wasn't going to forward it on with Mr Tibaldi's red pen on, though, was he?-- Well, it wouldn't surprise me.

What, that it wouldn't have come back to you at all?-- Yeah, it wouldn't surprise me at all.

So, Mr Drury's role in this might have been to take that and take on board the suggestions made by Mr Tibaldi, or anyone else - or either of the other two-----?-- And collate the responses.

40

I see. And was that discussed with Mr Drury, that that was going to be the procedure?-- No, I can't recall specifically that was the intention, but I think my - that was the intent of my email.

The intent of your email saying, "Any comments before Rob passes it on"?-- Yeah.

I see. So, you had sent a copy to Mr Drury? Did that email go to Mr Drury as well? I haven't got it in front of me, that's all?-- I haven't got it in front of me, either.

50

Perhaps we can get it up? Exhibit 1,050? Yes, it's cc'd to Mr Drury?-- Yes.

Okay. How did you get the information which went into the document?-- Much of it was cut out of the existing documents. I think you'll find the information about the dam, the manual, the strategies was cut out of an existing manual. 1

Hm-mmm?-- I might get the document itself, if I might, so I can refer to it?

We can open the document up on the screen. All right. So, the background, the manual's-----?-- Some of that information is actually in the manual. 10

Yes. That's just-----?-- Some of it was cut and pasted.

Yep, I understand?-- Scroll down the page. The objectives, the description of the dam, that in italics is something-----

Can you just go back up a bit, please, yep, and down a bit further. Thank you?-- That in italics I wrote in and I incorrectly put the day - the day - the date is correct, but obviously I put the day wrong. 20

No, it's - just scroll down a little further?-- Yeah. The four operating strategies, I mean, I don't know whether that is a cut and paste directly from the manual. Certainly W1, W2, W3, W4 seem to be, but I might have changed some of the words there, I'm not sure.

Just hold it there for a moment?-- Yeah. The parts in italics I put in and I was inviting comment because I wasn't there on the Saturday. 30

Right?-- But that was my understanding at that particular point in time, that we exceeded W1 at 8 o'clock on Saturday.

Yes?-- We exceeded W2 at 6 p.m. on Saturday.

Hm-mmm?-- And we exceeded W3 at 9 a.m. on Tuesday.

And what was the basis for that understanding?-- Well, firstly, I looked at the levels and that was quite clear about when we'd exceeded W1. 40

Yes?-- And then I had looked at - perhaps I'd looked at Rob's Sit Rep. I can't recall looking at the flows particularly, but it was - it was approximate to it, as it said there. So, again, that was an indication to me that I was inviting comment, "Is this correct?", but it's quite clear that W3 was exceeded at 9 a.m. - approximately 9 a.m. on Tuesday. 50

Well, you were there then, weren't you?-- Yes.

Yes. And as for the exceeding of W2, you've suggested, I think, Mr Ayre's Situation Report, the 5.58 p.m. one, as a possible source for that; is that right?-- A Possible source of that, yeah.

Any other possible source?-- Only that W2 is described as a transition from W1 to W3. So, at that stage, I hadn't decided - or I don't think anyone had decided that we'd clearly skipped W2, but that was my interpretation of what the information I had in hand at a very - I mean, I produced this in a very short space of time.

1

Yeah. But you had no understanding from anyone else that - at that time that no-one had actually worked out that you'd skipped W2?-- No.

10

That was only worked out later on?-- Well, that was my understanding, yeah.

Do you know who else Mr Drury - and we can ask him - but do you know who else might have been destined to receive a copy of this document? Mr Allen, for example?-- Not that I was aware of because Mr Drury, in his telephone conversation with me, had only indicated that Peter Borrowes had requested it.

20

Do you know when it was sent to Mr Borrowes?-- No.

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40

50

No discussion with him about it?-- That was the last I had anything to do with that document.

1

Okay. There was then a - go back to the Flood Event Log. There was a teleconference on the 15th of January at 2 p.m. were you on shift seven till seven on the 15th?-- I think so, yep.

And there was a teleconference which is noted there, a phone hookup at 2 p.m., to discuss a report for the Minister by close of business Sunday; is that right?-- That's correct.

10

Was there some discussion as to by whom this report was going to be written?-- I don't have any recollection of that afternoon.

None whatsoever?-- Well, no, not really. I was still a duty engineer and at that stage my primary focus would have been on the operations, and you can see there shortly afterwards I had to write a directive for gate movements and there were sufficient experts in that particular meeting for me to take a back seat.

20

Nonetheless, you knew that a report was being prepared for the Minister?-- Yes.

At this stage were you aware that there was going to be an inquiry into the operation of the dam?-- I couldn't say;

Let's turn then to a document again with which I'm sure you've been acquainted in recent times. It's a document which has been described as a Strategy Summary, Exhibit 1051. Are you familiar with this document?-- I have seen the document.

30

In recent times?-- In recent times.

Okay. What have you got to say about this? Do you know anything about how this came into existence?-- Not specifically, but I've been asked to give my thoughts on it.

40

Yes. And what are they?-- At that particular time, and I noted in the log, that Rob Drury came into the Operation Centre at 5 p.m. and he was on - he was sitting at one of the machines and he - I think he was putting this document together. That could be the only explanation I would have as to the source of the document. It seems very much unlike something Robert Ayre would do, and you can see the e-mail and that's the confusing part of the e-mail, it's just signed "Rob". Now, Rob Ayre wouldn't do that. He would be signing his name and his position and it only went to John Tibaldi. Now, again, Rob Ayre would probably send it to all of us. So I can only surmise that document was produced by Rob Drury.

50

The document was not seen by you at or around this time at all?-- Well, it wasn't sent to me.

At any stage, in any form?-- Not that I can recall. Well, in any form. Well, that - that - in any form, I mean, look at

the Event Report itself-----

1

I'm not talking about the Event Report without the annotations that are contained in this document which I'm sure you've had your attention drawn to. This document contains a column "Category" with annotations relating to strategies; you're aware of that?-- Yeah. Can I have another look at it, please?

Yes. If we scroll, please?-- Yes.

10

Do you see the "Category" column?-- Yes.

And you're aware - I'm sure you've seen a copy of that, with that column containing information about W1-----?-- Whatever.

-----and so on. It also has some bright yellow lines on it indicating a transition between strategies. You did not see any such document at any stage?-- Not that I recall.

20

No. And you believe that Mr Drury may have been the author of that document; is that right?-- I would suggest that that's the case, yes.

Your basis for that being that he came in at 5 p.m. and he was sitting at a computer apparently putting a document together?-- Yes.

All right. Well, would you have understood this to have been part of the preparation of a report for the Minister, an act-----?-- If I didn't know what he was doing, how would I know what he was going to do with it?

30

Well, now that you know what it was, would it seem to you to have been something done in furtherance of the preparation of the report to the Minister?-- I wasn't aware that there was being a Ministerial briefing going up until 2 p.m. that afternoon.

Yes?-- But then I wasn't involved in its preparation.

40

You saw a copy of it, though, did you not, of the draft report to the Minister?-- No, not at the time. Not that I recall at the time, no.

Exhibit 1053 is an e-mail from John Tibaldi to a number of people, including yourself, attaching the draft for your comments, followed by the observation that he would see you at 7 tomorrow for another dose of the same. Do you say you did not recall receiving this e-mail?-- Not specifically. I don't recall receiving it. Obviously I did, but then I might not have opened it or read that document.

50

You might not have? It's a draft attached for your comments?-- Yes.

Prepared by a colleague-----?-- Yep.

-----for the purposes of a report to the Minister?-- And at times I never responded to those e-mails.

1

It didn't concern you that the Minister was being briefed with information that you might know something about?-- Yes, and there were two or three other people who were going to - who possibly would have provided comment to John for inclusion, so I didn't feel as though I had anything to add.

Well, you were certainly present at a critical moment in the event. I appreciate Mr Tibaldi was there, too, but you were there at the move to W4, were you not?-- I was.

10

All right. Well, is it your evidence on oath that at no stage did you read any draft of any report to the Minister or the report itself prior to its being sent to the Minister, or prior to the 17th of January; is that your evidence?-- My evidence is that I cannot recall reading that particular document.

20

Another "cannot recall". Okay?-- I take exception to that.

All right. You can do that. Can we move to the preparation of the March report. What was your role in that?-- I compiled a lot of the technical documents - the analysis, the numbers for other people; in particular John Tibaldi.

You were working alongside Mr Tibaldi at this point, weren't you?-- Yes.

30

You knew how he was going about the report? You knew what his methodology was, to go back and look at all the data and make sure that strategies, changes of strategies were entered at the times when the data suggested that they should have been? You knew that was his methodology?-- He was going through the logs and everything, like trying to make sure it was all - he gleaned that was - that's what happened.

Well, it's what should have happened, isn't it?-- No.

40

He was going back and making sure that the log read the way it should have happened?-- No. No, the log wasn't changed.

No. Well, he was writing the report to indicate that strategies were changed at a time when the manual suggested they should have been changed?-- No, I don't see it that way.

You don't see it that way?-- I see it as that's the times they were implemented.

50

That's the times that they should have been implemented?-- No, that's the times they were implemented.

Okay. Didn't you just tell me a little while ago that you weren't even sure at the time, no-one was really sure about when W2 or W3 was in play?-- That's true.

There's absolutely no doubt in the March report, is there, that W2 was bypassed?-- That's what it says.

1

Yes. That's what the March report records very clearly, but that's not the state of mind of anyone at the time, was it?-- Not directly, no.

No. And can you see the problem that people might have with this technique, Mr Malone? I mean, you'd love, wouldn't you, even at this time on a Saturday afternoon to be able to go across to the TAB, look at the result of a race, fill out a ticket that backed the winner, put it in the machine and have the operator give it back to you and say, "That's a valid ticket."?-- I don't bet.

10

It's a nice thought, though, isn't it, that you could have the knowledge of the result and fill it all out and get it approved knowing how it was all going to end?-- No.

And then if someone challenged the validity of the ticket, you could say, "No, no, I knew I'd win. You see, I've got the ticket." It's the same logic, isn't it?-- No, it's not.

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No? If it is open to write a report this way, why would it be important at all to record the strategies, changes, at the time?-- Why would it be?

Why would it be important to record the strategies at the time they were chosen if it's just a question of putting it back altogether after the event? Why is there any need to record it at the time?-- To satisfy inquiries like this.

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Is that the only reason?-- It appears to be to me.

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I see. What time are we adjourning today, Madam Commissioner?

COMMISSIONER: 4 o'clock, Mr Callaghan. You're close on it. Is that a convenient time?

MR CALLAGHAN: It is a convenient time.

MR POMERENKE: Your Honour, before the Commission rises, can I mention one matter about a requirement that was issued to Mr Borrows at 7.54 p.m. last night? Our client and our solicitors have been working very hard in an endeavour to meet that requirement which calls for a response by 10 a.m. tomorrow morning.

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My instructions are that we expect a partial response to be able to be provided early tomorrow morning, but we can't be satisfied that a complete response can be provided by 10 a.m. tomorrow morning, and we would seek an extension of the time in which to comply with the requirement to 6 p.m. on Monday.

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COMMISSIONER: That sounds a bit too long but it's probably better if you communicate with the Commission. I'm not in a position on the spot to tell you when you can have an extension, or if at all, but we'll look at it.

Thank you. We'll adjourn till 10 a.m. tomorrow.

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THE COMMISSION ADJOURNED AT 4 .01 P.M. TILL 10.00 A.M. ON SUNDAY, 5 FEBRUARY 2012

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