

Transcript of Proceedings

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THE HONOURABLE JUSTICE C HOLMES, Commissioner

MR JAMES O'SULLIVAN AC, Deputy Commissioner

MR PHILLIP CUMMINS, Deputy Commissioner

MR P CALLAGHAN SC, Counsel Assisting

MS E WILSON, Counsel Assisting

IN THE MATTER OF THE COMMISSIONS OF INQUIRY ACT 1950

COMMISSIONS OF INQUIRY ORDER (No. 1) 2011

QUEENSLAND FLOODS COMMISSION OF INQUIRY

BRISBANE

..DATE 09/11/2011

..DAY 56

THE COMMISSION RESUMED AT 10.00 A.M.

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COMMISSIONER: Yes, Mr Callaghan.

MR CALLAGHAN: We have at least one new appearance that might be noted, I think.

COMMISSIONER: Looking - oh, Mr Glynn.

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MR GLYNN: Good morning, your Honour. Your Honour, I appear, as I understand, with your Honour's leave for the first - in respect of the first witness for MMG.

COMMISSIONER: All right. Thanks, Mr Glynn.

MR CALLAGHAN: I call Robert Lawrence.

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ROBERT ANTHONY LAWRENCE, SWORN AND EXAMINED:

MR CALLAGHAN: Your full name's Robert Anthony Lawrence?-- Yes.

You are the Regional Manager of Environmental Services in the North Region, Operations and Environmental Regulator of the Department of Environment and Resource Management; is that correct?-- Yes, that's right.

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And you've provided two statements to the Commission?-- Yes.

One relates to the Century Mine, and that's a statement dated the 27th of September of this year. That is already in evidence and is Exhibit 738. The other relates to the Mount Oxide Mine, that too is dated 27 September, and I might show that to you. That's the statement relating to Mount Oxide, along with 31 annexures; is that correct?-- That's correct.

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Yes, I tender that.

COMMISSIONER: Exhibit 942.

ADMITTED AND MARKED "EXHIBIT 942"

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MR CALLAGHAN: I might ask you a couple of questions about that statement first. And you're aware that you have - there's already been some evidence before the Commission on this topic, including from Mr Brier, who gave evidence yesterday?-- Yes.

Just excuse me one moment. In paragraph 17 of your statement you say that DERM officers became aware, I think in March of 2011, that levels of metals and sediment in the Cave Creek, which runs downstream of Mount Oxide, exceeded the recommended levels; is that right?-- In relation to 2011, yes, that's right.

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Yes. And DERM officers became aware of that by sampling the river?-- Yes.

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You have attached a photo, which is RALM006-01. That's the annexure to your statement. A photo with which you are familiar, I think?-- Yes.

I'll just get it up, if we can.

COMMISSIONER: Is it the photo with which we are all familiar?

MR CALLAGHAN: There it is.

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COMMISSIONER: No. No, I don't recall seeing one with a person in it.

MR CALLAGHAN: It's - we've seen similar photos, but this is where the DERM officers were sampling; is that correct?-- Yes.

Can you tell us how far that is from the main pit?-- No, I couldn't tell you where that - how that reflects on the distance from the pit.

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All right. Or even where it might be in relation to areas involving human activity?-- Well, there's generally no human activity in that area, apart from exploration permit work from Perilya and obviously if the landowner's doing any works around that area.

There's grazing that goes on in that vicinity, though, isn't there?-- Yes.

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And do you know when - what time of year that was taken?-- This would have been in March.

March, okay, thank you. All right. Now, can I now take you - thank you for that photograph. Can I now take you to your statement in respect of the Century Mine, and I'll just ask you a bit about some pre-wet season inspections. I think it's paragraph 8 of your statement you refer to the fact that DERM officers conducted a compliance inspection to establish site preparedness prior to the wet season?-- Yes.

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That was done in November, 23-24 November 2010?-- Yes.

And that compliance inspection identified some areas of non-compliance?-- That's right.

And there was correspondence back and forth?-- Yes.

And the areas of non-compliance were finally settled as between MMG and DERM on the 19th of January; is that right?-- Yes.

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Okay. And I'm not so much concerned with the actual areas of non-compliance as with the process and why the issue was finalised so long after the wet season had begun?-- The issues that were in the compliance inspection were not necessarily related to major issues in relation to water management that might be a concern over the wet period but they were areas that - where you had concerns that needed to be resolved. So there wasn't necessarily the urgency to get it done immediately but they needed to be resolved irrespective.

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I suppose it goes back - perhaps I can put my question back a bit. Why was the inspection conducted when it was, which was really after the wet season had begun?-- Well, I suppose - you know, like, in the north region there's probably 40 to 50 of these types of mines and so it's really just like a schedule of how many can get done in the period of time, and we're trying to do them as close as possible to when the wet season is, you know, about to start, which is generally expected to be about - the 1st of November is, you know, official start of the wet season, but whether it starts raining then is another matter.

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So do you not start doing the inspections until about the 1st of November?-- No, no, we do inspections before that but we do try to schedule them in the latter half of the year-----

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Yeah?-- -----so that we're looking at it as the wet season comes in. It would be ultimately nicer to be there earlier than that, maybe, sort of, you know, beginning of November or late October, but from a scheduling point of view we've got, you know, a number of places to get to over that period of time.

I can appreciate that, there would be quite a few to get through, so when does the process start?-- Probably around October.

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All right. Can I ask you more questions about - or referable to MMG. You're aware of the statement of Mr Karl Spaleck of MMG Century and the evidence that he's given before the Commission?-- Yes.

And Mr Spaleck's statement is in evidence. Perhaps I can - I don't need to show you the actual statement as you're familiar with it, I can remind you that he said that informal advice was given by DERM that TEPs and emergency directions would not be granted for the purpose of achieving compliance with environmental authorities in 2010/11 wet season. Do you recall that?-- Yeah, I recall that in his statement.

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Right. And you're aware of his evidence, and this is from page 3731 on 5 October, Mr Spaleck said that Rebecca McAuley gave that advice and that MMG should not try to use a TEP -

should not use a TEP to try to negotiate a non-compliance event in advance?-- Yes.

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Were you aware of that advice being given?-- No.

What do you have to say about that advice generally? Is that a reflection of DERM policy?-- No it isn't and I have spoken to those particular staff and they don't recall that conversation.

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I see. Well that probably deals with my next questions. When you say you've spoken with them, you - did you in fact show them the evidence or the statement-----?-- Yes, yes, I have.

-----in question and they just simply don't have any recollection of it?-- Not of that conversation. They certainly have a recollection of having conversations with the company-----

Yes?-- -----in relation to TEPs for, for example, the pipeline that goes from the mine to Karumba where they had a TEP in place, and there was also a conversation at the same time, this was in 2010, as I understand it, I wasn't at the meeting, about the potential for a TEP if further cleanup was required in Page Creek.

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All right. Look, I understand what you say but the content of the conversation as recorded, and we accept that there's no recollection of it actually occurring, but you'd say that the content doesn't reflect DERM policy; is that right?-- I'd say - say that-----

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The content of what is said to have been said?-- It's hard to answer that question except to say that, as I read the statement from Mr Spaleck, he goes on to say that the staff advised him that he would need to be able to either identify a program of works to - to reduce environmental harm or to transition to a new standard, which is exactly what the Environmental Protection Act states in relation to TEPs.

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Yes. All right. Still on the MMG Century statement, can I take you to paragraph 7. You say there that DERM monitored the Bureau forecasts prior to and during the wet season and maintained contact with MMG Century in relation to weather and rainfall during that period. Again, you're familiar with Mr Spaleck's evidence on this topic?-- Yes.

And I think it's at paragraph 22 of his statement, he indicated that Century was aware of the general advice from the Bureau but did not receive any specific advice about the lower Gulf region, which is where the mine is situated; is that right?-- Yep, that's my understanding.

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With that as background what sort of contact are you referring to in your statement? Was it phone, e-mail?-- Both. The staff were in contact with the site in relation to where they were sitting in relation to rainfall events and how they were managing through the wet season.

And was - how specific did that communication get? Were the specific impacts on Century canvassed?-- No. In terms of - I've seen e-mails where it's indicated, oh, you know, there was 80 millimetres of rain at the site on this day and, you know, we have this amount of - there's a table with this amount of capacity within their sediment dams and so on, so it was quite - quite detailed in that respect.

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All right. Thank you. I have nothing further.

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COMMISSIONER: Mr Duffy, did you have-----

MR DUFFY: No, I have no questions, thank you.

COMMISSIONER: Mr Glynn?

MR GLYNN: No, your Honour, thank you.

MS McLEOD: No questions, thank you

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COMMISSIONER: Mr MacSporran?

MR MacSPORRAN: Just one matter.

Mr Lawrence, you refer to those e-mails and that communication line referred it in paragraph 7 of your Century Mine statement. If that ever became relevant you could produce copies of that material-----?-- Yes.

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-----if desired? Thank you.

COMMISSIONER: Thanks. Mr Callaghan?

MR CALLAGHAN: Nothing further. May Mr Lawrence be excused?

COMMISSIONER: Yes. Thanks, Mr Lawrence, you're excused.

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WITNESS EXCUSED

MR CALLAGHAN: I call Michael Birchley. We're told by Crown Law that Mr Birchley is not actually here. He's only across the road, I understand, but-----

COMMISSIONER: Shall we just adjourn briefly while he's gotten?

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MR CALLAGHAN: I think so.

THE COMMISSION ADJOURNED AT 10.15 A.M.

THE COMMISSION RESUMED AT 10.18 A.M.

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COMMISSIONER: Yes, Mr Callaghan.

MR CALLAGHAN: I call Michael Birchley.

MICHAEL FRANCIS BIRCHLEY, SWORN AND EXAMINED:

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MR CALLAGHAN: Your full name's Michael Francis Birchley?--
Yes.

You are the Assistant Director-General for Regional Service
Delivery at DERM?-- That's correct.

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You've prepared three statements in response to requirements
from the Commission. The first is dated 5 September 2011,
that is Exhibit 747, the second is dated 22 September 2011,
that's a statement directed towards the top of the levee
banks; is that correct?-- That's correct.

Yes. I might show that to you. That's the 22 September
statement?-- That is the statement.

I tender that.

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COMMISSIONER: Exhibit 943.

ADMITTED AND MARKED "EXHIBIT 943"

MR CALLAGHAN: And you have also prepared a supplementary
statement, which is dated 29 September 2011, and I might just
get that one shown to you as well. That's the 29 September
statement?-- That's correct.

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I tender that.

COMMISSIONER: Exhibit 944.

ADMITTED AND MARKED "EXHIBIT 944"

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MR CALLAGHAN: Well, Mr Birchley, there are a range of topics,
or there is a range of topics I want to cover with you. Can I
start with the question of abandoned mines. Does DERM have
any staff who are dedicated to or who have as a dedicated

concern the environmental impact of abandoned mines?-- No staff who are dedicated, however we have our regional service delivery staff involved in mining regulation and they're the staff who deal with abandoned mines.

1

Along with every other mining-----?-- Mining regulation, that's correct.

Okay. Does DERM undertake any monitoring activities with respect to abandoned mines?-- We have abandoned mines throughout the State where we've been involved with DEEDI in respect of particular issues. Mount Oxide is one of those and Mount Morgan near Rockhampton.

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Are there any others?-- Other mines may well be involved in our regulation or our oversight but those are the two most significant mines in recent times.

Right. So - well, is any part of DERM's budget set aside for the abandoned mine issue?-- Not specifically but through the mining regulation elements. So through our north region people, Mr Rob Lawrence, who is our regional manager there, has staff who visit and undertake work in relation to Mount Oxide Mine.

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And is just wrapped up with the regulation of mines generally?-- Generally, that's correct.

Okay, thank you. Moving then to the topic of flood preparedness. The way that the system's currently set up doesn't really allow DERM to direct how onsite water - water on a mine site should be managed; is that so?-- Are you speaking in respect of abandoned mines, just to clarify-----

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No, I'm broadening the inquiry at this stage. Really the power that DERM has is in - relates to the limits of water discharge?-- DERM has and through its environmental authorities places conditions on mine water management generally with respect to mine sites.

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So what can you direct in terms of the way water is managed on site?-- Well, for instance, in the case of dams on site, there are regulations relating to the construction and also the water levels in those dams. For instance, there's a requirement for dams on mine sites to have a certain dry storage allowance at the 1st of November each year as we enter the wet season, and, for instance, that's one element that is a regulation or an example of a regulation relating to onsite water management.

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Okay. We had some evidence from Mr Cordingley yesterday, who talked about the design storage allowance for dams. I think - well, he said that the requirement was for a one in 20 year wet season, I think that was generally, or for a significant hazard dam - sorry, a one in 20 wet season for a significant hazard dam and one in a hundred for a high hazard dam, does that-----?-- Those - I'm not specifically involved in absolute detail of those conditions and specifications for

dams, however those may well be figures that apply.

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All right. What other powers does DERM have in terms of what you can actually direct mines to do with water on site as opposed to if it's regulating it leaving the site?-- The - well, in addition to the regulated dams it would come down to, I suppose, issues associated with the plan of operations required of a site in terms of their management of the site and how water is managed through that. It's not a matter where I personally get involved in the absolute detail, so beyond that general advice and in relation to regulated dams I couldn't offer a lot further advice.

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All right. Well, let's move to the concept of water leaving the site and we've heard a fair bit already about the TEP process. We've heard that DERM received, I think, over a hundred applications for these programs in the last wet season. You say that - in your statement, paragraphs 40 and 42, that TEPs are assessed by DERM in accordance with the Environmental Protection Act, the EPA?-- That's right.

20

And that DERM's role is to assess the draft TEP against the requirements of the EPA. Now, I just wanted to examine that process a little. Can I start with section 330 of the EPA itself, and I understand that you're not a lawyer?-- No, that's correct.

I promise I won't bog down on this but there is one aspect of this section that I did want to flag, at least, for consideration. A TEP must do one of the things listed in either (a), (b) or (c) of section 330?-- Correct.

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Agree with that?-- Yes.

And if it's approved under (a) - if (a) is the basis for the TEP then it must reduce environmental harm caused by the activity?-- Yes.

Well, would it be fair to say that one way you might describe the activity referred to in section 330 is pumping water out of mine pits into a river, however so described, is that - that's the activity?-- Could be, yeah. Reducing the volume of water on site in a mine.

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However described it involves getting water-----?--
Discharge-----

-----from the mine into the river?-- Yes.

But if that's the case the TEP doesn't actually reduce the harm caused by removing the water from the mine into the river, does it?-- It may depending on the provisions under section 330 that apply. So, for instance, in a situation where we may have had a regulated dam with water on site, which is part of the total water storage, and that regulated dam is reaching a very high level and therefore we needed to address that issue, that's a situation where with respect of onsite water management a TEP could be applied.

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Yes, and I can understand that greater environmental harm might occur if you didn't do it-----?-- Yes.

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-----but its - the activity itself wouldn't - of pumping the water into the river wouldn't actually reduce the environmental harm done by the activity?-- And I may not be understanding the nuance of your question here but I - so the actual act of reducing the risk of the water coming out of a regulated dam that could have an impact in a more controlled way-----

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Mmm?-- -----could actually have the effect of mitigating the potential-----

Yeah?-- -----impact on the river.

Yeah. And that's really what it's all about, isn't it, it's reducing the potential for greater environmental harm from something happening if you don't to do the activity-----?-- That's correct, from an uncontrolled type situation.

20

Yeah. Okay, thanks. Now, section 338 of the Act lists the criteria to be taken into account in deciding whether to approve a draft TEP, and it includes relevant regulations and the standard criteria?-- Yes.

And the EPA requires the standard criteria to be considered before making any decision under the Act?-- Yes.

And that includes a decision about a TEP?-- That's correct.

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And the standard criteria you've annexed as MFB-02-06. We have those on the screen now. They're all fairly - obviously relevant but general considerations?-- Yes.

They - there's no guidance given, or is there, as to the extent to which any particular consideration should influence the outcome?-- In terms of weightage on respect of the criteria?

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Yeah?-- No, all matters essentially are relevant to the decision.

I accept that. They're all relevant?-- Mmm.

When I'm interested in, I suppose, is how the balancing process is done. For example, how you would balance the character resilience and values of the receiving environment referred to in (e) against the financial implications in (h). I mean-----?-- Sorry, could I just go back to (e), apologies?

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You could pick any others I suppose, but I just choose those two?-- Yes. Certainly. 1

How does one do that? Is there a process?-- It is a matter for the authorised officer undertaking the decision at the time in terms of balancing up the range of criteria both in the standard criteria in the provisions contained in the regulations. So it falls to the authorised officer with the delegation to make that decision. Obviously there are challenges for any administrative decision-maker in weighing up those respective criteria in reaching that balanced decision, and so they have to apply that in their decision-making process at the time. 10

Well, it would be fair to say, though, those criteria themselves don't provide much in the way of guidance about how that is to be done?-- Not in and of themselves, that's correct.

Okay. The Environmental Protection Regulation also stipulates requirements for decisions, and you have attached the relevant parts of them as MFB-02-07 and I think we have got those there. Section 51 has another list of relevant considerations?-- Yes. 20

A list of things DERM should consider imposing conditions about. If we go down to section 55 that deals with the release of water onto land?-- Yes, and there is another provision, I forget the exact reference, it might be 54, about release of water to watercourses. 30

Okay. Is that the one, 56?-- Release of water - that's right, to surface water.

Okay. Again, though, it would be fair to say, wouldn't it, that the regulation doesn't deal with the process of how a decision should be made. It sets out relevant considerations but there is no process prescribed for balancing them all up?-- That's correct. It falls to the administrative decision-maker or authorised officer in each case. 40

Again, there are also criteria set out in the Environmental Protection Regulation which must be considered by the DERM officer who assesses a TEP, and you have set those out in your statement, I think, didn't you, at paragraph 52?-- That's correct. There is a range of matters that all relevant decisions under Chapter 7 and the parts of the Environmental Protection Act are subject to, and these apply.

Once again, there is no real assistance given by the legislation as to which considerations are important, which ones you should primarily have regard to, or how the balancing act should be completed?-- That's correct, and one of the issues or one of the matters that we take - we provide to staff is training in relevant matters, administrative decision-making, the consideration of those various matters, but the Act and the regulations of itself only set out those matters for consideration. 50

And I was going to then move onto the guidance that you do give to DERM officers. You say there is training. Is that a formalised process?-- There is a training programme and training provided to staff throughout our Department in relation to matters such as administrative decision-making under statute. So training programmes are run out to seek to ensure that people do have the skills developed in those areas.

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Specifically in this context, though, I mean you have helpfully attached a guideline for assessing draft TEPs - I think that is MFB-04-02?-- That's right.

Is that the basis for the training that you give to staff in this particular area?-- It is one of the terms, but again we have had training provided to our regional service delivery staff in my division in terms of, your know, administrative decision-making more broadly, and relevant matters for consideration on how decisions are to be made.

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I may have missed it, Mr Birchley. Is the syllabus or the basis of that sort of training part of any of the materials that we have yet; do you know?-- No, just a general comment now that I would have provided through - in terms of how we undertake those - the skilling of staff.

We would probably be interested to know exactly the sort of training that the DERM staff get and the guideline we understand would be the basis for it, but if there was some other material in the terms of a programme?-- Training programmes.

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A programme that you could supply to us on this topic?-- I would be happy to provide that.

That might be helpful. Because again that guideline again sets out the criteria to be taken into account and the steps to be undertaken, but would you agree there is no overall test to be applied or no direction as to how the balancing exercise is to be undertaken in that guideline?-- Not - it just sets out some general provisions, that's right.

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And it does say that, I think, the officer has to be satisfied that the draft meets the requirements of the Act. As we have seen there are a lot of requirements in the Act?-- Yes.

All right. I might get that guideline back up, if we can. Go to page 6. Do you see (c), "prevention and mineralization of environmental harm"?-- Yes.

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It says there that the draft TEP must state how any environmental harm that may be caused by the activity would be prevented or minimised. I suppose my question is how that can sensibly be addressed - how that can sensibly be addressed without some sort of reference point as to what level of harm is considered acceptable. If you accept there might be some harm, if there is an acceptable level then it is easy enough

to see how that might be balanced, but do you have a comment in response to that proposition?-- Yes. In assessing TEPs one of the key parts of the assessment process by our regional staff is referral of those down through to our science staff who have expertise, and being provided with advice in relation to any potential impact that that may have on instream ecology, for instance. So that is one element of how we would undertake that assessment of environmental harm.

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Can I take you to pages 7 and 8, and I identified these issues with Mr Brier yesterday. The standard criteria also require the officer to consider whether the decision has effectively integrated long and short term economic, environmental, social and equity considerations. I will pose to you the same question in effect that I posed to him, which is how is a DERM officer equipped to assess things like economic considerations? Is there required qualifications or training in economics?-- I will admit it is challenging for an officer to undertake those sort of evaluations. The sort of matters that potentially we may look at are things such as the impact of the situation upon the operation of the particular enterprise. We would also look in terms of matters such as equity probably at impacts downstream for other people dependent on the users of the environment. So we would look at those sorts of matters; would a discharge potentially affect a downstream landholder and the like. So they are the sort of matters, but they are - I agree that they are challenging matters.

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Potentially very complicated involving the need for considerable expertise in a variety of subjects?-- Yes, depending on the circumstances of the particular decision and how it relates to those criteria.

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Yes. Particularly, I would suggest, if you are looking at economic impacts?-- Yes.

If we could go back to section 330. I will just get that up. Would you agree as a general proposition that what was being done by DERM over the wet season just passed in the granting of TEPs, what the officers were trying to do was to ensure that environmental harm was minimised as much as possible whilst allowing the mines to continue production or continue to go about their business as much as that was possible?-- To ensure there was no unacceptable levels of environmental harm.

40

Yes?-- Yes.

Okay. But were they not balancing that against the needs of the mines to do what they were doing?-- Yes, in terms of the previous matters that we discussed about onsite mine water management, the potential issues on site with water and with regulated dams. It is balancing those factors.

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As we have discussed, complicated economic, social issues?-- Included in the range of matters they had to consider, that's correct.

Yes. There is no real reference to those sorts of matters in section 330 though, is there?-- The matters involved in making decisions on transitional environmental programmes or any other matters under Chapter 7 are subject to those other matters in regulation, however nothing specifically in this section.

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It would be desirable, would you agree, for some perhaps greater assistance to be given by the legislation on this area, for the balancing act to be addressed specifically?-- I am probably, you know, not in a position to provide informed comment on that issue. Certainly there are - I would say there are a number of relevant matters for consideration that are contained in the regulation rather than in the statute, if that is the matter you are referring to, and that - so there may be a case that some of the matters contained in regulation could be reflected in the legislation rather than in the regulation.

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Okay. We will move to the topic of environmental authorities. The Fitzroy model conditions have been amended through the course of 2011; is that correct?-- That's correct.

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And the revised model conditions are in annexure MFB06-24(b); is that correct? Well, they are in your statement, anyway. Do you accept that?-- Yes. Yes.

And within that annexure if you go to page 7 and look at table 4, which I suggest is the crux of the thing. You are familiar with this?-- I am not familiar with the detail of the model conditions in absolute detail.

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Familiar with the concept, though?-- The concept of model conditions.

How it is proposed to work?-- In general terms.

In general terms? That is all I am asking you about. In general terms is there going to be an ongoing requirement for companies to provide data to justify the use of the table by proving releases in accordance with it won't adversely affect the environment?-- There will be a monitoring requirement on a company still to provide information and data back to the Department as per the environmental authority conditions.

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What is going to be the situation for more recently established companies which might not have sufficient data to establish that there is no adverse impact?-- Probably not in a knowledge of the detail of the mechanism of the operation of that matter. That would be something more for Mr Brier, who I think appeared yesterday, would be familiar with.

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Okay. Can I take you to MFB06-22? We might have trouble opening that. We might be able to get a copy of it. It's all right. I will take you to a different topic, and that is relating to emergency directions. You are aware of the emergency direction powers under 467 and 468 of the EPA?-- Yes.

Have you had drawn to your attention a statement by Mr Michael Roche, the Chief Executive of the Queensland Resources Council?-- Yes, though I haven't had the opportunity to review the statement in full.

Alright. Are you aware that he says that - it might be better if we show it to you actually, so that you can see the context. Can I take you to paragraph 33 of Mr Roche's statement. Have you had a chance to have a look at that?-- No, I will just read through it. Yes, I have had a chance.

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Okay. You can see from the context there we are concerned with things happening on 19 January and Mr Roche is recorded as saying that he thought DERM was about to reach the limit of its experience and comfort and had reached the point where it would need Ministerial or political support to move into a new territory. I suppose I just invite any response from you on that?-- I can only note the comments by Mr Roche, and DERM determined that it would continue to apply the TEP process which it saw as appropriate and effective in trying - seeking to address the issue.

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Okay. Can I take you to paragraph 40 of that statement. Mr Roche records that the Directors-General of DEEDI, DERM and the Department of Premier & Cabinet oppose the use of emergency directions to deal with flooding situations at mines. Are you aware of any such statement being made by Mr Bradley?-- In terms of a public statement or?

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Well, no, a statement being made at a meeting of this kind?-- I was party to conversations during January 2011 in relation to the issues raised by Mr Roche internally in the Department as Acting Assistant Director-General and his view that the government should - the Department should apply section 468 to allow a more general release.

Yes?-- Yes, so I am aware of those matters.

Was there any internal direction not to use the emergency direction power to deal with flooding at mine sites?-- No, there was internal discussion about the issue and the matters raised by Mr Roche, but the view and consensus around that was that in terms of the application of section 468, even in considering the elements there of necessary and reasonable and no alternative, we determined that the TEP process was an appropriate process still. We determined - our view was that should there - if there had been a view that it was an emergency, and just making that assumption for the moment, we still would have needed to apply an assessment process pretty much the same as what we were applying with the TEP process in terms of authorising discharges, and so we didn't believe that the application of section 468 was relevant in the case. However, in any event we believed that the type of assessment process and release arrangements that we were sanctioning through the TEPs would be similar to that which would apply in any case should section 468 be applied.

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That's a short summary of the consensus opinion at DERM during that period; is that fair?-- Yes, that's correct.

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What scope then does that leave for the emergency direction power? In what sort of circumstances would it be used?-- Probably in situations where we were faced with a very difficult tradeoff with a very short timeframe, a limited timeframe. So, for instance, in relation to a mine site if we had a dam, a regulated dam containing a contaminant and we were faced with advice from the company that there was an imminent risk of failure of that dam because of the level, then we may authorise and sanction the use of - through the use of the emergency powers, a release of a contaminant from that dam, to avoid a catastrophic failure situation where it is the better of two evils, the tradeoff between the two.

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We will move then to the topic of monitoring the effects of releases of water from dams and you have addressed that in your statement I think in paragraphs 112 to 122. What I am interested in here is this general proposition, that as you pointed out environmental authorities require holders to monitor water quality upstream and downstream of their operations?-- Yes.

20

What I am interested in is whether anyone monitors the monitoring, if you know what I mean, or is it entirely a self-assessment regime where you rely on the good faith of the companies?-- My understanding is that we require the monitoring results at least in respect to some data to be - ensure it is provided by accredited laboratories. So there is an accreditation of the information that is being provided that underpins the certainty around that.

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That might vouch for the quality of the information that you do get, but how do you ensure that you are getting all the information?-- Okay. So the - in the environmental authorities there is a monitoring requirement and for provision of monitoring information by companies in respect of certain parameters in the environmental authorities.

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Yes?-- So the companies have to provide that monitoring information back to the Department.

And how do you make sure that they are doing it? I accept that they are meant to?-- That's a role for our regional officers to be following up and ensuring that appropriate information and data, monitoring data is provided back.

Is there some what I would call audit process, random testing or anything like that?-- It is essentially part of the ongoing operational role of the regional officers to be monitoring the return of information from companies and reviewing it.

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So that is just left to the discretion, if you like, of individual officers at different locations?-- The operational processes that we have in the region, yes.

Okay. Is the monitoring that we are talking about done by as a rule automatic gauges or manual tests, or both?-- A combination of those. We have a number of monitoring stations that provide information from DERM. In addition to that there is some other monitoring undertaken by departmental officers, but also monitoring by the companies in providing that information back to the Department.

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There has been a requirement for - some environmental authorities have required some companies to install gauging stations; is that correct?-- That could be the case, yes.

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And do they report automatically, or do they-----?-- I couldn't tell you that.

Alright. Paragraph 132, you say there that drinking water quality is measured against drinking water values in the Environmental Protection (Water) Policy 2009. Does DERM monitor compliance with those values?-- Sorry, could you repeat the question, please?

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You say there at 132 that drinking water quality is measured against drinking water values?-- Yes.

Who monitors compliance with those values?-- So they would be through a combination of the monitoring programme I discussed before that the Department operates, but also taking into account information provided by the companies.

Okay. Can I take you then to paragraph 146 and we are concerned now with the effects of discharges from mines in the last wet season. You say there that there is an increased contribution of groundwater to watercourses in the Fitzroy Basin that has caused some high salinity. What is the basis for that proposition? What are the studies, if you like, that have been completed which lead you to say that?-- I would only outline the basis for that in general terms based on my conversation with our respective regional managers in the central west region, but it has been that the very extensive rainfall this year has significantly recharged the groundwater, and that it is essentially that groundwater that is now providing the base flows into the river system rather than flows due to rainfall. So that's the basis for that, as well as the fact that in the main and throughout the year discharges from mines of saline water have been reducing and have ceased, and so the water that is coming into the river is essentially that groundwater contribution to base flow in the rivers and streams.

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So it is a matter of inference?-- No, there is officers in the regions who actually - there's groundwater people and experts and regional managers with expertise in that area who have formed those conclusions based on their knowledge.

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Okay. That's as regards the first part, and the second part being that the discharges have ceased but the salinity hasn't?-- That's correct.

That's it?-- That's correct.

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Okay. In 147 you say that DERM does not believe that discharges from mine sites have contributed significantly to the current elevated electrical conductivity in the Fitzroy River system. Again, what is the basis for that belief? Is that specific study or is that consensus amongst those who know these things, or what?-- The advice for instance from my regional officers is that one of the tributaries where there's a very high salinity reading in the river, there is no significant mining operation at all that would lead to that or above that site, so it is a sound indication that it is the actual base flow from the groundwater that is causing that salinity rise.

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All right. In terms of the salinity rise, in paragraph 148, you note that salinity in some areas has caused a difference in the taste of drinking water; is that correct?-- That's correct. 1

Is there action taken by DERM in this regard? Is there any plan to deal with it, or is anyone else dealing with it?-- There are matters of concern that have been raised and have been reported in the media with - through Rockhampton Water, and DERM has discussions and is involved in discussions with the relevant municipal authorities together with Queensland Health, and - but the - essentially the salinity as indicated previously is a natural occurring phenomenon at the present time, because mines aren't discharging, but there is certainly discussions that are held with those other parties. 10

Okay. And 149 you say there is no evidence to suggest that any plant or animal species has been adversely impacted by the increased salinity in waterways across the Fitzroy River system, and similarly in 152 you note that there's no evidence of mine water discharges having any adverse impact on the environment. Can you just outline for us the nature of the investigations undertaken which can determine or which have determined that there has been no adverse impact?-- It would be the advice based on the advice of our relevant officers involved in terms of their - their operations, our people across the department who have some involvement in those - those matters. I'd have to refer to those officers in terms of the detailed advice that underpins that particular matter. 20

Okay. Would that be the subject of memos and reports and-----?-- Yeah, I'd have to, as I say, yeah, obtain that more detailed information on that from those officers. 30

We might be interested to see that if that's-----?-- Certainly.

If that's okay. Just going back to paragraph 57, you say there - this is talking about the program undertaken in 2009, I think - is that right - to assess the effect of salinity on fish spawning and so on?-- Yes, I think that's the case. 40

But the sample volumes were too small to form a view about the effects of higher salinity. Do you know whether similar sorts of - or a similar paucity of evidence has been relevant to any of the conclusions that have been drawn about the effects of the last wet season?-- No, I'd have to seek advice similar to my previous comment there.

Okay. And is salinity the only issue that we're concerned about environmentally? I mean, we have heard some evidence that underground coal mines, for example, might - water which has been affected by underground coal mines might be affected by different sorts of considerations other than just salinity. Are any of those mines in the area that we're talking about that might have contributed other contaminants to the water system?-- There can be other trace elements and the like associated with that, but the main one that - of concern and 50

the main matter that's been raised with me as the matter of concern by my officers has been the issue of salinity.

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And we've seen in Mr Roche's statement he's made some observations about conversations that he had with the Minister about salinity, but is the problem with salinity just on fish in the river and on drinking water from the river, or does it extend beyond the estuary? For example, are there concerns about excessive salinity affecting sea grass, dugong, that sort of thing?-- Not to the best of my knowledge, but it's not a matter that I'm an expert on in terms of impacts of salinity on sea grass.

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Okay?-- I'd probably have to defer to another more expert officer in relation to that, but certainly the issue of salinity in stream in the environments of the Fitzroy here and reaching levels where it can have toxicity or impacts on fish and macroinvertebrates and other, you know, ecological values-----

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Yes?-- -----has been the main concern.

Yes. Just excuse me for a moment. Yes, I'd better tender the statement of Mr Roche.

COMMISSIONER: Exhibit 945.

ADMITTED AND MARKED "EXHIBIT 945"

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COMMISSIONER: Have you got a division that looks after the biological consequences of release of mine water?-- Madam Commissioner, what we have is a sciences division, and the sciences division is the one that provides us with that technical advice as we make decisions and on these issues such as what is, you know, an acceptable level of - of salinity that can be released into the environment.

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How big is it?-- It's got several hundred people. My last recollection, in the order of three to four hundred people.

And within there is there a subset of biologists or-----?-- Yes, there are, and aquatic toxicologists and people of that expertise. So in the case of these TEP decisions, I think nearly all of them would have been referred down to our senior scientist, Dr Ian Ramsey, and his group for advice as part of the decision-making process.

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Thank you. Did I give that exhibit a number? I am not sure. 945 anyway.

MR CALLAGHAN: I understand we can go back to MFB06-22. And on the first page there, next to the heading "Model Conditions and Extraordinary Events" - just down a bit, I think - yes, in the margin you have got "Model Conditions and Extraordinary

Events". It says DERM advised that it had determined that model conditions were not an appropriate document to deal with extraordinary events. What's the basis for that advice?-- As I indicated earlier, I am not, you know, across the absolute detail of this-----

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Sure?-- -----but my understanding is that that may relate to a situation where model conditions are model conditions. By their nature they are a level that can be applied to environmental authority. For instance, throughout the Fitzroy, as a default, there may be situations and particular events whereby they would need authorisation through other statutory instruments, or, if they were going to be included, provision for those would need specific conditioning in the environmental authority rather than a transitional authority.

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Do you know whether there's ever been a consideration, for example, of allowing certain amounts of a certain quality of water to be released depending upon rainfall in a certain gauge upstream of a mine?-- Rainfall upstream of?

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Yes, of the mine?-- Of the mine?

Yes?-- The - the consideration - my understanding is the consideration of the water received from gauging upstream, it's an indication of what the prevailing condition of water will be at the point of discharge that the mine has, and that that provides an indication of what opportunity there might be for discharging, for instance, saline water without there being an adverse impact environmentally.

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All right. We might just finish this off by going to MFB06-24a, which is a briefing note given to the General Manager of Strategic Implementation, Coal and Coal Seam Gas, and there's a heading "Resource/Implementation Implications". You can see the second dot point there suggests that it's estimated that just under half of the mines seeking to discharge during the wet season might seek similar approval in the future, during a wet season of similar magnitude. Does that suggest that there are clearly issues still to be resolved?-- There is significant water on a number of mine sites still, and should we be - you know, should we experience a similar type of wet season to that which we experienced last year and earlier this year, that that may give rise to the need for further TEPs.

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All right. Is there any sort of long-term strategy or long-term aim about how many TEPs or whether TEPs should ever issue except in extreme cases, or is there a goal?-- The - it probably relates to the model conditions work that's been done this year which - and I've spoken with some companies myself in relation to that, just to discuss how that's been proceeding, and the like, and a number of companies have made application for amendment to their environmental authorities to reflect the model conditions, and the advice I've received from them is that that will provide a significant benefit in terms of their ability to deal with events in the future. The issue, once again, with model conditions is that you will

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still have those events where it may be necessary, as alluded to here, in significant, you know, wet seasons still to look at the option of a TEP in some cases.

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Now, look, there is a whole topic that I haven't actually addressed yet and that is the question of levees. So can we go to your second statement dated 22 September? And in that, at paragraph 10, you've highlighted DERM's limited capacity and expertise in the field of flood mitigation levees. On the other hand, at paragraph 35, you refer to the example of Goondiwindi where DERM assesses the application of - assesses applications for such levees on a case by case basis; is that right?-- Where they're referred to us, yes, when they're referred to us.

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I suppose the question comes down to whether DERM does have the expertise to assess the appropriateness of allowing a flood mitigation levee to be built?-- That's correct, yeah.

What investigations might need to be undertaken for such things which can't be undertaken?-- Some of the key issues with flood levees and, you know, based on my limited but some knowledge is the fact to establish a decision-making framework around it you have to, first of all, undertake an investigation, you have to develop a decision-making - the decision-making tools, in particular, fairly complex floodplain models that reflect what occurs, and simulate what occurs in flooding type situations, including when infrastructure is placed on the floodplain, or new infrastructure is placed on the floodplain, and essentially levees in many of these cases. That requires a fairly significant modelling, an assessment capability, and it's that - one of the elements I allude to in my comment about DERM's capacity is, for instance, floodplain modelling. It's not a matter that we have a lot of expertise in.

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And that's something that wouldn't trouble you, perhaps, as much when you were discharging responsibility for water supply related levees?-- That's - that's correct. In terms of the Water Act, the main issue we look at there is the extent to which a structure will increase the take of water in a catchment, so under a water resource planning situation, as opposed to interference with water, for instance, on the floodplain.

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You have mentioned in your statement the concept of river improvement trusts. Would a body like that be more suitable for the regulation of levee banks, or are they more about creating levees than regulating them?-- They are about, yeah, creating levees and providing flooding protection through their works or, yeah, mitigating flood impacts through their works programs.

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But to come back to my question, could such a body also be suitable for the proper regulation of levee banks, do you think?-- I'm not sure that the way they're - they're actually formed is - does fit in terms of the regulation of levee banks. I think it's - certainly they play a role, but I'm not

sure that they as institutions or authorities lend themselves to that purpose. One comment I'd make in relation to that is I suppose the nexus between the planning process and decision-making in relation to levees and structures in floodplains.

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Yes. Well, that's them. What about local councils? I mean, you have referred in your statement to Goondiwindi and the Shire of Waggamba as an example of cross border levee regulation. Do councils, in your opinion, experience, have capacity to properly engage in cross border issues?-- I probably can't - in cross border issues, the - there are arrangements in place in - and some communication in - between Queensland and New South Wales that - at that council level, but I am probably not well placed to comment in detail on that.

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All right. You're aware of the Ensham Mine levees near Emerald?-- Yes.

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And you're aware that a one in 1,000 year levee was approved by the Coordinator General and DEEDI following flooding in 2008?-- I've been advised of that, yes.

Well, was DERM involved in any way in that application or-----?-- I don't know the detail of that application, but DERM is certainly involved in assessment of levee banks, and my understanding DERM would have had some involvement through the Environmental Protection Act assessment process.

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Are you able to assist us at all as to the nature of that involvement or-----?-- Essentially the - if I could talk about that in the context more broadly of levee banks associated with mining developments.

Yes?-- The - DERM does have a role in - in assessment of those matters pursuant to the Environmental Protection Act, in terms of any environmental impact of such structures, and in - and therefore in what is being proposed by a mining company, in the proposal it is putting forward. So we do have an assessment role, and are involved through the EP Act and the environmental authority process.

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So you have clearly got some staff with some relevant expertise, relevant understanding of the issues?-- Of those sorts of - of the standards that apply, that should apply in those sorts of situations, yeah.

You're aware of the Nogoia River Floodplain Board, you're aware that it voted to dissolve itself?-- I have read of that.

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Yes. And it was a catchment wide board which dealt with development applications on that river, or relating to that floodplain, and it cited an inability to assess levees adequately as the reason for its dissolution. Were you aware of the reasons?-- I wasn't aware of all the detail and the background.

No. Okay. Well, perhaps take it from me that the board indicated that they supported a transfer of responsibilities to a State agency, and the question for you is whether DERM is best placed, given what you've told us, amongst State agencies, to regulate levees, and there will be an if not, why not followup if you don't agree?-- All right. I think there were situations where, as I - you know, we just discussed with respect to the mine related matters, and looking at the issues and risks around regulation of those, that DERM does play a role, and I think that role is appropriate. There's a range of other situations across the State where what people might call levee banks are at various levels of impact and risk. It could run anywhere from someone looking to place a gravel road on a floodplain, you know, in a private capacity right through to, you know, levee banks put in place by river improvement trusts or in mine sites. I think the issue falls very much to one of risk and therefore that the regulatory framework needs to be framed around that. My observation is, for instance, in terms of the Goondiwindi area, albeit that I appreciate it is an example of local government as one where local government has expressed concern about the resources and the skills required to do it, it has been quite successful in terms of regulating the floodplain and structures on the floodplain would be my observation. So I don't have a view that DERM or necessarily the State should be the default institution or level of government that should regulate these matters.

Accepting that, let's assume that it was to be, is DERM then the best agency to deal with it, or someone else, and if someone else, why are you dobbling them in?-- Okay. I probably - and based on my statement and my comments about DERM's capacity and ability, I can't - I can't say that I think DERM is well placed necessarily to take on that role. If we were requested to do that it would involve a very significant ramp-up and allocation of skills, the modelling skills, decision-making skills, and resources around that and capacity. So we don't have that readily sitting - sitting in DERM. Another - another institution - I must admit, I can't come up and nominate another department who I'd say it falls there. Certainly it has a link to planning processes, because levees can have impact, you know, on other land uses, and so there is a nexus of kind there with the planning framework for the State.

So would it be fair to say no-one at the moment, to your knowledge, is equipped to just sort of pick it up and take it over?-- Holus-bolus and say we'd make decisions on every levee bank proposal, no.

If someone was to be - if a State agency was to be charged with such a responsibility, whoever it is would require an increase in resources to deal with the specific issues?-- Yes, it'd be a very significant undertaking.

Yes. All right. Thank you.

COMMISSIONER: Mr Duffy?

MR DUFFY: No questions, thank you.

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COMMISSIONER: Ms McLeod?

MS McLEOD: No questions, thank you.

COMMISSIONER: Mr MacSporran.

MR MacSPORRAN: I have nothing, thank you.

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MR CALLAGHAN: Mr Birchley excused?

COMMISSIONER: Yes, thanks, Mr Birchley?-- Madam
Commissioner-----

Yes?-- -----may I just apologise for my delay in being able to
attend before? I apologise.

That's all right. The first witness went very
quickly, so I assume that took everybody by surprise. That's
not a problem at all. Thanks, Mr Birchley.

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WITNESS EXCUSED

COMMISSIONER: We will take the morning break and come back at
25 to by that clock.

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THE COMMISSION ADJOURNED AT 11.21 A.M.

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THE COMMISSIONER RESUMED AT 11.34 A.M.

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MR CALLAGHAN: I call Julie McLellan.

JULIE ANNE McLELLAN, SWORN AND EXAMINED:

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MR CALLAGHAN: Your full name's Julie Anne McLellan?--
Correct.

You are the manager of the Water Resources Branch, Brisbane
City Council?-- Yes.

You've prepared a statement dated 4 November 2011 and there
are some 33 annexures to that statement; is that correct?--
That's correct.

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I'll show you a copy of the statement. That's the statement
itself and the annexures are on the disk?-- I believe so,
yes.

Yes. I tender that?-- Thank you.

COMMISSIONER: Exhibit 946.

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ADMITTED AND MARKED "EXHIBIT 946"

MR CALLAGHAN: The Water Resources Branch is a policy division
within Council; is that correct?-- That's correct

And does one responsibility of the Water Resources Branch
relate to planning lines? Specifically, planning lines based
on flood?-- They rest with the City Planning, we inform it.

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Yeah. Well, you make recommendations as to changes, do you,
that should be made to-----?-- Correct. We don't make the
changes.

I beg your pardon?-- We don't make the changes-----

No, you make-----?-- -----we make recommendations, yes.

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Yeah. And those recommendations with respect to planning
lines based on flood are likely to spring from a flood
study?-- That's correct.

I might take you to your statement, which was prepared in
response to a requirement from the Commission, and, in
particular, to the question of the Council's current approach

to obtaining and assessing flood studies. I think if we go to paragraph 187, where it starts. And, in particular, can I take you to paragraph 196 of your statement, which relates to data and information provided to internal and external consultants. One nine six is where we are at now. Does - can I ask you this: does Council source data and information from other sources such as DERM, Seqwater and so on?-- Yes, we do.

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Are you aware of the activity that took place in the Commission when there was a panel of hydrologists convened and they signed up to a joint statement with various recommendations?-- I am aware they were here.

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And - well, could I just say that one of the suggestions they made was that there should be a single repository of flood-related data and information in Queensland. Is that the type of thing that would be of assistance to Council?-- Yeah, I believe so.

All right. Can I take you to paragraph 199. You say there that the scope of work would be developed as part of the project mandate. Can I ask you this: who would be involved in the development of the scope of work?-- Relating to flood studies?

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Yes?-- Yeah. Brisbane City Council and various areas of the Brisbane City Council, DERM, Seqwater, potentially other areas of State Government, and sometimes the Bureau and certainly if we're using a consultant the consultant themselves.

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We're particularly interested in what we might learn that might be of assistance to other councils. Of course, Brisbane is going to be different because it's so much larger than so many other councils and so on, but when you say "Brisbane City Council" in context of this question as to who would be involved in the development of the scope of work, specifically within Council?-- City Planning, Water Resources and the City Design Team, which is now City Projects Office.

Okay. City Planning and City Design?-- Yeah it's City Projects Office now, Flood and Planning Team.

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All right. Can you just - for the benefit of all of us, just tell us what they are and what they mean, what they do?-- Each area? Sure. City Planning, because we want to understand what sort of information they'd require to potentially set new planning regulations, so for non-structural measures-----

COURT REPORTER: I'm sorry, I'm having trouble hearing you.

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WITNESS: Sorry. City Planning because they would set up non-structural measures so they would make the amendments to any of the codes required in City Plan. Water Resources, which is what I'm responsible for, because we would then look at any potential policy recommendations as well as any recommendations that would come out of communication. The City Projects Office because they're actually the hydraulic

engineers and flood specialists. So they would say, "This is the sort of information that we need and that we'd be looking at." They run the models. And they also liaise with Seqwater and BOM. And, actually, the other one I forgot was Corporate Disaster Recovery Office. So for the Disaster Management Team and they would also be seeking different information. So we all require slightly different information.

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MR CALLAGHAN: All right. Well, who would finally approve the scope of the work? Would it be you or some committee or the Council or the Mayor? Who would actually finally sign off on that?-- Depending on the size of the study. If you were looking at Brisbane River probably our executive, Executive Management Team-----

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So does that mean ultimately the CEO?-- The CEO, yeah.

Okay. You included in that answer the proposition that it would depend on the size of the flood study and I suspect that might apply to a lot of questions which I'm going to ask you. But in paragraph 201 you say there that the time frame for a flood study would be set by Council's business needs, budget and resource availability. It might be - this whole area might be sort of a chicken and egg thing, but it would make sense to investigate how long the work was going to be before the budget was set or does the budget get set and then the scope of work determined? As I say, it may well be a chicken and egg thing but we are interested to learn the process?-- Yeah. Well, we'd look at - no, we'd put forward a proposal. I'd do a project proposal and then if we deemed that the project was necessary I'd go up for budget, and then once you've got the budget then you start to implement.

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Okay?-- Yes.

In terms of deciding what's going to be done, how does Council decide what sort of study will be commissioned? I mean, as we understand it, a flood study could be done in three months or a figure like that or it could take much longer, depending on how detailed it is. How is the decision as to which type of flood study might be obtained taken?-- Okay. So, new information. So the Brisbane River, we now have new information. For local flood studies, potentially their age, the development in the area, so the growth-----

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So can I just stop you on age. Does that mean if something's a bit old is there some sort of review process or-----?-- We have just undertaken a review process, that's correct, as to which - which flood studies, and these are local flood studies.

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Yes?-- -----need to be done. So some are '94, so they're now due to be looked at.

That review process is something that might be of interest. Is that something that's written down somewhere or does that just rely on the-----?-- I've tabled that in my - as evidence. There's a process there that we've - that I've

tabled, yeah.

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Okay. Can you say off the top of your head whereabouts that is? No, it's all right. There's a lot of material attached to your statement?-- Yeah.

But it's all right, we will find that?-- I can find it. It's probably tagged here. It's called "Flood Projects Model".

Okay, thank you. Can I take you to paragraph 203, where we're on the topic of assumptions. And, of course, you'd accept that, depending upon the assumptions that you might make, you might get what could be called a conservative estimate of something like a Q100 or a mid-ranging estimate or an underestimate, depending on the assumptions, would you agree with that?-- Yes.

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And how do you go about determining what sort of estimate you get or at least how do you go about determining what assumptions will be made?-- That's not - I don't.

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How does Council?-- We'd rely on experts and the hydrologists and the hydraulic engineers.

Someone must make a decision, though?-- Yeah, the likes of the hydraulic engineers would make a decision, say, "This is our best estimate," as to information or the assumptions that we'd use, and we would work with, in the instance of the example I used, Seqwater, around FSL.

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Okay?-- Yeah. I don't make those decisions.

Are they - what do you ask for, though? Do you just ask for the best estimates to be used? How is "best" determined?-- I'd rely on that - an expert panel. You know, they know what the best estimates are now. I'd rely on - if it was me I'd rely on their judgment.

Yeah, but I think you agreed with me that depending on the assumptions made you'd get a different sort of estimate?-- Council would be more conservative.

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And why is that?-- We generally are more conservative-----

But is that a policy or is that-----?-- No.

-----just your sense of the way things have been done or?-- Why are we? I think we take a more conservative approach because there's a lot more things at play. It's not - there's a whole city that we have to consider, so we err on the side of caution.

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And, again, I can understand that might be a reason why you'd do it, but is that as the result of a considered decision, that Council will be more conservative or again is that just your sense of the way things have been done?-- It would be the way things have been done as to whether it's - it's not written anywhere, no.

No. Right. I think in paragraph 203 you say that - sorry, I've just lost the sentence I was looking for. "would have been determined by many stakeholders eg DERM, BOM, Seqwater, BCC, other professional experts," and so on. Was there - when you say it would have been determined in that way, was there an actual process which brought those stakeholders together or who coordinates this? Who actually brings it all together?-- I wasn't there at the time.

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I understand-----?-- Yeah.

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-----and you can only do the best with what you know for how long you've been there. And I suppose you have to approach your answers to some extent on the basis of how it would happen now?-- Generally just by way of conversation. So we would get together and the experts would discuss the information. It would work up into a project brief, as I've mentioned. That's how - it's quite interactive-----

Yes?-- -----no-one's - yeah, it is interactive.

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You're describing - I'm sorry. You're describing an informal interactive process rather than a formalise committee situation?-- Often workshops. They're not really formalised but that's another way we elicit information from a broad range of stakeholders. It will be formalised, yes, but while you're working through it probably not as formal as in a project mandate.

So how will it be formalised specifically, by what process?-- It would end up in the project scope. That's a formal project management methodology. So it will end up in the project scope. It would be in the project brief. It will be in project management plans. So that's how we end up formalising what we've decided to do.

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All right. Well, if we can just scroll down to 206, which is your response to item 2(c) of the requirement, and you point out, perhaps logically enough, that no single council officer will unilaterally make decisions of the kind that we're - described in the requirement, and it might depend on the nature of the flood study-----?-- Correct.

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-----as you suggested earlier. But can we take, for example, a comprehensive flood study of the kind which was contemplated by the joint expert panel which convened in this Commission, a flood study which will be conducted over a number of years, giving estimates of flow and height of floods over a range from 50 per cent to the PMF. Can you tell us who, and perhaps helpfully by way of category, that is to say, policy, technical, elective representative, committee or whatever, would make the decisions listed in 2(c), and we might just scroll back there. So who would make the decisions about what is done with the study when it's completed, a study of that nature?-- Various areas. So Water Resources, City Planning and probably CDRO, Corporate Disaster Recovery Office, depending on which component we all need to enact. The ultimate decision rests with the administration, when there is

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a policy change, and that includes planning, major planning decision.

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Well, that might - we might get to that sort of issue a bit down the list. Who's in - who'd make the decisions about who's informed about the results of the study?-- The managers and the division manager.

And whether or when a study should be considered by the CEO, the councillor, the Civic Cabinet or the Mayor?-- If you're alluding to a study - a large study-----

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Yeah?-- Yeah, so we're still on - okay. That would be Civic Cabinet that we were going to do such a large study.

All right?-- Must be considered. Based on information provided by us, by managers and the branches.

Okay. Who'd make the decision about whether further studies should be undertaken?-- Again if it's a significant study it would be Civic Cabinet based on our recommendations.

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And "our recommendations" being?-- Sorry, the - yeah, the heads of Water Resources and City Planning and probably CDRO.

So not just yours but-----?-- No, not just mine.

-----the other areas as well?-- Yeah. Because it informs their areas.

30

Okay. Well, perhaps we can move down to (vi) and (vii). Whether the changes or whether the flood study should be reflected in changes to planning control lines is a decision for?-- City Planning.

And what about for emergency management procedures?-- CDRO, Corporate Disaster Recovery Office.

Thank you. All right. Can I take you to paragraph 211, and you might have alluded to this already, but once a study is finalised you say it's "ultimately a decision for Council administration to adopt any recommendations". What is "Council administration" for the purposes of that paragraph?-- Full Council.

40

Full Council, okay. And would that be the case even if it was the opinion of the managers of the respective divisions that the recommendations in flood studies or changes evidenced in flood studies should not be implemented? Would it still go to full Council?-- No.

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Okay. Can I ask you then about the Council's approach to the flood plain management studies to be completed under the - what's called the WSDOS, the Wivenhoe-Somerset Dams Optimisation Study. Can you tell us how comprehensive those floodplain management studies will be?-- I hope very comprehensive. We're working up the scope of those documents now. By "we" I mean the technical working groups under the

steering committee of WSDOS.

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How long do you expect that to take?-- Sorry, the scoping or the study?

I think in paragraph 204 you say the scope of the work's still being developed?-- They're actually at varying levels but by January I'm pretty confident they'll have most of them scoped out.

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I missed the last part of what you said?-- Sorry. So far away. Sorry. By the end of January I'm pretty sure they will have most of those scoped out.

Is there any draft for discussion or anything like that?-- Yes, yes, there are drafts.

Are they available to the Commission?-- I believe so. I think I've made some of them available.

20

All right-----?-- They're sitting with the steering committee, with Seqwater, yeah.

Okay. At paragraph 161 you outline what Council understands WSDOS will include. Can I ask you what your basis is for that understanding?-- Based on the interim Commission's report back in - or in August it was actually set out in, I think it's was 2.10 to 2.14. It was actually clearly set out what that study would include.

30

And that's the extent of your - the basis for your understanding? There's nothing else, in other words?-- No, that's - that's what it's delivering-----

COMMISSIONER: I'm impressed that you remember the recommendation numbers, I must say, Miss McLellan, I don't think anybody else would manage it?-- Okay.

MR CALLAGHAN: Can I take you back now to the requirement which is JAM-01 in your statement, and to your answer to item one, where you were asked to provide us with some information relating to a number of flood study reports which were itemised in 1(a) to (g) and then in 1(h) to (n), for November, specific information was required. Can we start with the 1998 report, and I think specifically paragraphs 29 to 46 inclusive of your statement, and if I could take you to paragraphs 30, 31, 32. You set out your response to the requirement 1(h)(iii), (iv), (v) and (vii) in those paragraphs; is that correct?-- That's correct.

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And specifically you say what was provided in terms of instructions, scope of work and data, but the answers in your statement do not identify who provided the data or made the decisions about the scope of work or the instructions. You'd agree with that?-- That's correct.

50

Are you able to say who made these decisions or even what position they occupy?-- No.

And is that because the information is not available on Council files?-- The information I had I couldn't identify except for where stated who made decisions.

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All right. Did you specifically address your mind to that part of the requirement which requested that information? Look at the files and find that you were unable to answer that part of the requirement?-- I did, as did the legal - my legal support, yes.

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The requirement went a bit further, and as you can see at page 5 of the requirement there are some dot points at the bottom of the page that required you to provide the name, position and qualifications of persons who made decisions or had been involved in activities. Now, you did in exhibit JAM-06 set out a list of people who may have been involved in decisions, and their titles and their time of service with the Council; is that correct?-- That's correct.

1

But again at no point did you set out the qualifications of those people or specify the different decisions that they made or the activities they undertook; is that right?-- Correct, I didn't.

10

And, again, is that just because the Council records have been examined and you are not able to - you weren't able to comply with that part of your requirement.

MR DUNNING: I object to the form of that question because it assumes that that is the only explanation. Another explanation fairly open is that some of these questions were frankly incapable of being answered.

20

COMMISSIONER: Mr Dunning, I don't agree with you about the form of the question. It is just "Is that because", and a proposition is offered. The witness can say "no" or "yes" and if she is not asked to elaborate no doubt you can ask her to elaborate later, but I can't see any problem with the form of that question.

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MR DUNNING: Thank you, Commissioner.

MR CALLAGHAN: If there is any suggestion I am trying to foreclose your response, Ms McLellan, I will rephrase it. Why is it that you have apparently not been able to comply with that aspect of the requirement?-- Around their qualifications?

Yes?-- Sorry, I lost a bit of the thread of the question.

40

Sure?-- I don't know what all of their qualifications are. They were not available on the records that I reviewed, and what was the other part of the question, sorry?

Well, it was-----?-- The decision they would make?

The name, the position and the qualifications for any of the people in your statement, you have not been able to provide those?-- I just provided a list of people who I thought were around at the time.

50

Okay.

COMMISSIONER: I am taking it that the Council records just don't provide sufficient documentation of who did what; is that right?-- That's right, Commissioner, and I didn't look into exactly what their titles was at that time, with the exception of the manager, Barry Ball, because I knew he was

the manager.

1

MR CALLAGHAN: Did you understand the Commission did ask you to do that?-- Sorry?

The requirement did ask you to look into that?-- I missed it, sorry?

You had some assistance as you have already indicated I think from your legal team in the preparation of this statement; is that correct?-- That's correct.

10

And look I won't labour the point, but for example in paragraphs 33 and 34 of your statement in relation to the timeframe you are not able to tell us who decided the timeframe, or perhaps more importantly the position they were occupying and their qualifications?-- No.

No? All right. And it is not that you could retrieve this by reference to any of the records that you have seen?-- I didn't see it other than the 50 weeks.

20

Okay. Can I take you to paragraph 42 where you set out the briefings given to elected representatives, and this paragraph and paragraph 43 respond to items 1J and K of the requirement. In paragraph 43 you say you are unsure whether the presentations found in the bundle are those referred to in one of the e-mails; is that right?-- That's right.

Specifically - can we just scroll back up, thank you. Do you see in 42B there you talk, or you refer to an e-mail which suggests that Barry Ball will be presenting to Council mid next week?-- Yes.

30

Are you able to, or did you try to find out in the context of that e-mail who "Council" was? That is to say, to whom it was intended Mr Ball would be making a presentation?-- It would be E&C.

It would be?-- E&C - sorry, Establishment and Coordination Committee, so the Civic Cabinet.

40

Would there not be a record of such a presentation if it was made to Civic Cabinet?-- We looked.

You looked and there wasn't?-- My understanding is they didn't keep records at E&C back then for strategy presentations.

Do they now? It doesn't matter. If you don't know, you don't know?-- I think so.

50

Okay. In paragraph 44 you record that no decisions were made regarding the planning control lines in response to the 1998 SKM report. Would it be the case that someone would have made the decision that nothing be done in response to such a report?-- Yes. Yes.

But, again, you are not able to enlighten us as to who would have made that decision or what their position or qualifications were?-- I can't. I couldn't identify it through reviewing the documents, no. 1

I won't go through the balance of the reports to which your attention was drawn. You would agree that the same problems afflict your response to the requirement in respect of all the other reports listed, in terms of who was doing things, what their positions were, what their qualifications were?-- Where I could identify it I have put it in there. Where I couldn't, it would be just an assumption and I don't know who they were. 10

But you have specifically addressed each of those and if there is no information in your statement it is because you have looked and the information isn't there?-- Correct.

All right. Can I take you to paragraph 232. You say there again as far as you are aware Council considered the expert panel's estimate of Q100 to be the best estimate. Again, what is meant there by "Council"?-- When I wrote that it would have meant full Council, when it was eventually adopted by full Council, yes. 20

That's what you are referring to?-- That's what I would have referred to in that point, yes.

Following on from that, paragraphs 233 to 240, this is your answer to item 16 of the requirement. You say there that the Council has adopted the 2003 expert panel estimate of Q100, and you make some observations about it. I understand that, but item 16, did ask you why it was adopted in preference to the SKM numbers. Now, the observations that you have included may well be things which might justify the decision, but I suppose what we are interested in is the process as to why and how Council chose that number?-- I wasn't around at the time. 30

No, but by reference to the records are you able to-----?-- By reference to the records it looked like they had decided that it was more conservative than the ones that were proposed; that they didn't really want to have to change all the planning lines, so they left it as it was. 40

Which records are you talking about there?-- It was actually in the E&C document itself, and it was referred to in one of the last - the peer review reports, and I think there was a briefing note. I can't recall who wrote it to whom. It will be in bundle but there was a briefing note saying best estimates - that this sits within our current parameters. They are not quote unquote, by the way. 50

Right. Do the documents suggest that the process involved the full Council having the opportunity to consider the three numbers?-- Well, it was in the document, but they accepted the recommendation.

Yes, but did the process involve the full Council?-- I can't answer that.

No. Okay. Thank you. That's all I have, your Honour.

COMMISSIONER: Mr MacSporran?

MR MacSPORRAN: I have nothing, thank you, Commissioner.

COMMISSIONER: Ms McLeod?

MS McLEOD: I have no questions, thank you.

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COMMISSIONER: Mr Dunning?

MR DUNNING: Thank you. Ms McLellan, our learned friend Mr Callaghan asked you some questions about the review of flood studies that had been done in the past and as those studies age, as it were. You said you thought there was reference to that in your statement. Can I ask you, please, to go to paragraph 153? Is that a part of the statement to which you are referring?-- Yes, the flood models project.

20

Okay. Thanks very much for that. Now, Ms McLellan, you have set out, haven't you, in your statement when you first became aware of the Commission's interest in this matter. Perhaps I can take you to paragraphs 6 through to 20?-- Yes.

I don't need you to reread them, but you are familiar with what is set out in those?-- Yes, I am.

30

In addition to what is set out there can you try and give the Commission some idea of the amount of time you personally have spent in responding to this request for information?-- A lot. From when I got the request I sort of asked a lot of officers to give me some support. I personally have reviewed everything that I have provided to yourself. I went through everything. I probably - from the time it started most of my working days have been involved in preparing this statement, yes.

40

Okay. By "working days", what do you mean by that?-- Eight to six, and weekends.

All right. So you are not just talking about Monday to Friday?-- No, I have put a considerable amount of effort into this.

Yes. Now, can I ask you about something else. You have had some involvement in the Floodwise Property Reports?-- Yes, I have.

50

All right. Can you explain to the Commission, please, the process which you have had some involvement in in relation to the introduction and development of those Floodwise Property Reports?-- Sure. The Floodwise Property Report was part of a recommendation from the Lord Mayor's Task Force as in not a Floodwise Property Report, to make that information available

to the community. We set about doing that. We have revised it now three times based on I guess our own knowledge but also community feedback about making it a little bit more user friendly. We have recently done some more research into the matter based on is it really telling the people and the community what they need. That research has been - we are word-processing it now. To be honest I've only just sort of received most of it. We will reflect that in another version of the Floodwise Property Report so as people get, I guess, the most up-to-date and useful information that they need or want.

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The decision to seek community consultation, was that one made before or after the January 11 event?-- It was actually made before but was initiated after because of timing.

Thank you. Ms McLellan, I just want to get you to - I just want to confirm something with you. Commissioner, may Ms McLellan please see folder 14 of 17, which is part of exhibit JAM5. I don't know whether it's conveniently brought up on the screen or not.

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COMMISSIONER: Is the physical document easily accessible or-----

MR DUNNING: I can pass mine up. I have got an unmarked copy of it that can be extracted now. For those following it in the record, it is page 4812. If you could turn, please, to page 4812, for me?-- That's where I am.

30

Thank you. You will recollect our learned friend Mr Callaghan asked you some questions about the information that was provided to Civic Cabinet and you talked about a memo that went to Civic Cabinet. Is this the document you were referring to?-- This is the E&C I talked about.

Okay. Thanks very much. That's all I have for that document. Can I ask you then about some matters related to it. As you explained to us in your statement, in response to the Commission's request you have had occasion to review the attention that the Brisbane City Council gave to matters of flood generally in that period from the mid 1990s to the mid 2000s; correct?-- Correct.

40

You weren't personally acquainted with nearly all, or if not all of that, correct?-- Correct.

Thank you. Can I ask you though, please, with the benefit of that recent review of it and not having been personally involved in it, what is your assessment of the attention that the Brisbane City Council did give to the topic of flood over that period?-- In my opinion they gave significant attention to it. They - I guess they commissioned a report. They got the results. They had it peer-reviewed. There was some issues that needed to be addressed. They did it again. Then they had that expert peer-reviewed, so I think a lot of attention - based on the documents I have read a lot of attention was given to it to make that final decision.

50

All right. Thank you. If you were doing it - sorry, if it was being done again today do you think the process would be in any way markedly different?-- I think the process would be very similar. If I may, I would like to see it a little bit more collaborative so as we are working together in a regional capacity, so we are not waiting for information, I guess. But the process itself would be to develop the report and then have it peer-reviewed.

10

Alright. Now, when you talk about operating in a regional capacity what is the significance of the region in terms of giving attention to flooding in Brisbane?-- Just this. It is a huge catchment, so when I talk region it is the whole catchment itself. So it is the other local governments that are within the catchment. It's obviously the dam operators because they have a significant impact on the river as well, and of course it is Brisbane.

All right.

20

COMMISSIONER: When you are talking about process, coming to the more micro aspects, would you document who was doing what?-- Yes, Commissioner I would.

MR DUNNING: Just on the point the Commissioner has just raised with you, how amenable - to put it another way, when it comes to the making of these decisions are they going to be a decision in the macro sense that is made by just one person, or are they likely to be the product of collective discussion, contribution and conclusion?-- It would have to be the latter, product of collective decision. It wouldn't be one person.

30

Thank you. Do you think that that was a matter that in any way inhibited you being able to answer some of the questions posed to you by the Commission in terms of identifying a single person?-- I am not sure I understood the question.

Certainly. You will recollect our learned friend Mr Callaghan, and you will recollect from the questions you were asked, you were often asked to identify the person who made that decision. Do you think the fact that a lot of these decisions really require the input of a number of people to arrive at the conclusion among them was a reason for your difficulty in answering some of those questions?-- That's right, yes.

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COMMISSIONER: What sort of numbers are we talking about? Were there dozens of people involved, or-----?-- Certainly over different levels. At a study perspective there would be a significant number of people. So you've got, you know, the consultants and officers within Council.

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I am talking more about the decision-making?-- From the decision-making, it would be - well, from looking through the records it's the manager of Water Resources and they are talking to the CEO and then briefing other councillors that

had different jurisdictions at the time. Then they would brief Civic Cabinet and then eventually a recommendation is made through Civic Cabinet to full Council, so there is significant I guess steps that are gone through, and different processes, yes, Commissioner.

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MR DUNNING: Commissioner, that's the cross-examination.

COMMISSIONER: Thank you. Mr Callaghan?

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MR CALLAGHAN: I just want to pick up on what you were talking about in terms of regional cooperation because of the context of the question you were answering. You were being asked to look back and you said "If I could do something differently, if something could be done", as I understood you you would say you would like to have seen a bit more regional cooperation over the period; is that right?-- It appears there was cooperation. I think the timing - there just seemed to be an issue with timing.

20

Okay. Was that a communication thing or-----?-- I don't know.

I guess what I am interested in is just this. On the basis of what you have read and after turning your mind to the question which you have been asked about assessing how it could be done and whether there were any lessons that might be carried forward and specifically on this issue of regional cooperation?-- Information sharing.

30

Yes?-- That's the lesson, I think.

Between whom?-- Between all the entities that are involved in working on this study.

So does that come back to the question I asked you about the benefits that might be enjoyed if there was one repository of relevant information?-- Yes, it does.

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Okay. I have nothing further. May Ms McLellan be excused.

COMMISSIONER: Thank you, Ms McLellan, for your time. You are excused.

WITNESS EXCUSED.

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COMMISSIONER: Yes, Ms Wilson?

MS WILSON: Thank you, Madam Commissioner. I call Gavin Blakey.

GAVIN ROSS BLAKEY, ON AFFIRMATION, EXAMINED:

MS WILSON: Is your full name Gavin Ross Blakey?-- It is.

And you are a principal engineer in the Stormwater Infrastructure area for the Brisbane City Council?-- I am.

10

And you provided a statement to the Queensland Floods Commission of Inquiry?-- I did.

Can you have a look at this document, please. That is your statement?-- That is my statement.

And attached to that statement are various exhibits?-- There are.

Madam Commissioner, I tender Mr Blakey's statement with exhibits.

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COMMISSIONER: Exhibit 947.

ADMITTED AND MARKED "EXHIBIT 947"

MS WILSON: You have a got copy of your statement in front of you?-- I do.

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If I can just get some background. In terms of - we will start with your role. From April 1999 until 2005 you were the principal engineer responsible for managing water resource process concerning the various flood studies and related steps?-- Yes, I was.

You carried out this role under the supervision and direction of Mr Barry Ball?-- Yes, I did.

40

You describe your role in paragraph 11 best as - it can be best described as a policy manager?-- Yes.

Now, you weren't responsible for making the policy; is that the case?-- No. For making recommendations in policy and then policy would usually be adopted or agreed by the decision-makers, for example, elected representatives.

50

Okay. So you worked in making recommendations about policy?-- Yes.

And then that went up the chain, did it?-- Yes.

And who would - who did you work with in making recommendations about policy, say in relation to flood studies?-- It would be Barry Ball would be an example, as my

manager, and then of course being able to present that to E&C which is the Establishment Coordination Committee, the senior Councillors or Civic Cabinet and in some cases then as you would have seen in the statement that became adopted by Council, full Council.

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What was Mr Barry Ball's role in relation to policy and making policy?-- He was the policy manager. I guess he was my manager or my supervisor. So any work that I did would go through Barry and then Barry was the key connection with the, for example, the Establishment Coordination Committee. In some instances I would present to them. In other instances he would.

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In your statement you describe that you were responsible for implementing the policy?-- That's part of it as well, yes.

So you assisted in framing recommendations to go up the chain?-- Yes.

20

When it came back down you implemented that policy?-- Yes.

Is that the case?-- Myself and others, of course.

In your statement you set out the division of responsibility between City Design and Water Resources?-- Yes.

City Design was responsible for technical work?-- Yes.

That is, in respect of water issues generally, and also flood modelling in particular?-- Yes.

30

And Water Resources would commission particular work from City Design?-- Correct.

And consult with City Design on technical issues?-- That's right.

So did Water Resources have any technical expertise or did you rely on the expertise of City Design?-- I would say it was yes and yes.

40

Okay?-- Because both Barry and I were civil engineers and I had other senior civil engineers working with me, some of whom were - actually had extensive experience in modelling, and others who had reviewed models but who not necessarily had extensive experience, so yes I would say that we had a sharing of expertise; that City Design were then the specialist flood modellers.

50

When was it determined that to call - to commission City Design to do work then?-- If, for example, there was a flood study to be undertaken, then that would be undertaken by them. As you see in the statement, there was basically a purchaser and provider or, if you like, the group who were looking at what work is required to be done-----

1

Which is Water Resources?-- -----which is Water Resources-----

Yes?-- -----and then City Design had expertise in a particular area, then they would be the ones who would undertake a flood study, for example.

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Let's go to paragraph 20 of your statement where you refer to that process?-- Mmm-hmm.

And the decision whether and to what extent to commission work from City Design-----?-- Yeah.

-----or external consultants-----?-- Yeah.

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-----was decided on a case by case basis?-- Yes.

What factors came into play in making that decision on a case by case basis?-- Expertise was one of those factors. So, for example, they were engaged to undertake the technical modelling, or if they didn't either have the expertise or sufficient resources inhouse, they would engage someone like SKM to be able to undertake the study, whereas if you compare that to - I mean, in 2004, from memory, we engaged Dr Chris Joy to provide some advice to us on flood risk management. He was one of the authors of the Flood Risk Management in Australia document, and that was some expertise that City Design did not specifically have.

30

So did you bring in external consultants when it was beyond the expertise of City Design?-- Yeah, that would be - yeah, that would be a reasonable statement.

And whose decision was it to decide to commission external consultants?-- It would be ultimately Barry or myself.

40

And did that decision go up the line, as we've talked about before?-- It depends on really the scale of it. Generally, no, because it was really based on - I mean, he was the manager of Waterways and then Water Resources, so he had a delegation to be able to engage and a responsibility to provide advice. So unless there was - it was over the specified amount in terms of dollars, or there was something very special, then he was able to approve it.

50

So Mr Barry Ball could make decisions up to a certain limit?-- Up to his level of delegation.

Monetary limit?-- Yes.

And then if it exceeded that monetary limit then it would go up the line?-- There would be a process you need to go

through, yes.

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And would that go through to a council decision?-- It depends on the scale, once again, because the divisional manager, Mr Michael Kerry, had a higher delegation, and then after that it's - probably the next level would be E & C or one of the boards of council.

And was the dollars involved - was it the monetary limit that was the factor to decide who made that decision, or were there other factors involved in that?-- Well, the primary one is the money.

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Now, you talked about the relationship between City Design and Water Resources, customer/purchaser. I think you just referred to that in your evidence just before. Was there a strict demarcation between these two departments? Was there - could ideas and information be easily shared, or was it really on a case by case basis?-- Ideas were shared, yes, absolutely, because we're all working for the one organisation. We have a very good working relationship. We were at one stage working in the same department, and then with the reorganisation working different departments. So we had a very - had and have a very good working relationship with our colleagues.

20

But for ideas and information to be shared, could that be done on an ad hoc basis, or did that have to be done through a commissioning process?-- It can just be done an ad hoc basis for sure, yes.

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Now, if I can take you through briefly just some of the chronology in terms of the work that was commissioned. At paragraph 21 you refer to the June 1990 City Design report?-- Mmm-hmm.

Now, that report was commissioned before your time; is that the case?-- It was.

So you were not involved in setting the terms of reference-----?-- No.

40

-----in relation to that report. However, you were involved in the reviewing of that report?-- Yes, I was.

And paragraph 24 of your statement-----?-- Mmm-hmm.

-----sets out your involvement in that review?-- Mmm-hmm.

In July 2009 your view and others was that more work needed to be done?-- Absolutely.

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So an action plan was prepared by you?-- Yes.

And a decision to retain City Design to do more work on specific issues?-- Yes.

So when you're talking about that decision, who makes that

decision?-- To - whether to engage them?

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To retain City Design to do more work on specific issues?-- That would be based on a discussion between Barry Ball and myself and some of the senior engineers in our branch, and then we would come to a conclusion, and then - ultimately Barry is the sign off, because he was the manager of the area.

And an action plan was prepared by you?-- It was.

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And did you set a timeframe for this type of work, for the work to be done?-- I don't remember specifically on this particular one, but if you have a look at some of those tables, you will see I generally did have timeframes on there. That's one of the columns in there, by when.

You received then the extra work?-- Yes.

And that was the December '99 City Design report?-- Yeah.

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That report was considered by Water Resources?-- Yes, it was.

And there was - the view was that this December '99 City Design report had not fully addressed some of Professor Mein's earlier concerns-----?-- That's right.

-----which set the - set this ball rolling, so to speak?-- Mmm-hmm.

Now, the decision was made not to get City Design to do further flood modelling?-- Mmm-hmm.

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Why was that? Did you think that their expertise had been exhausted at this point in time?-- The issue was around not doing further flood modelling, not around not engaging City Design. So, in other words, we felt at that point in time there were some other activities that needed to be undertaken, for example, going and talking to DNR, going and talking to the Southeast Queensland Water Corporation and figuring out what specific activities they were undertaking at that time.

40

And that culminated in the October 2000 technical workshop?-- That's correct.

So you've got your December 1999-----?-- Yes.

-----City Plan report. You feel that you need to have consultation with external agencies?-- More consultation. There was some consultation going on previously, but it's now a point in time when more is required.

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And why at this point in time is more required?-- My recollection is that we had become aware of work that others were doing. For example, DNR were undertaking some work in conjunction with the CRC, Cooperative Research Centre, and they were looking at reviewing the dam operating rules for Southeast Queensland Water, and that that - both those activities, one because of rainfall, and the other one because

of release, would have an impact on the determination of the hundred year flood flow.

1

Well, you received the December 1999 report in December 1999?-- Yes.

Ten months later you've then had this workshop-----?-- Yes.

-----on the 6th of October-----?-- Yes.

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-----2000. In that 10 month time you describe doing a substantial amount of preparatory work?-- Yes.

Engaging directly with agencies like the Bureau of Meteorology, Ipswich City Council, and SEQ Water?-- Yes.

A workshop is held on the 6th of October?-- Yes.

And it's a one day workshop; is that right?-- Yes.

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And it appears at this workshop some important information was revealed?-- Mmm-hmm.

Is that the case?-- There was.

And that was by a John Ruffini?-- It was.

And leading up to this workshop you didn't have that information that John Ruffini revealed at the workshop?-- We had an earlier indication that this work was going on, but it was at that workshop where we had all the people around the table that it was explained in more detail. Prior to that we were aware it was going on, back in - my recollection is 1999, late 1999. There's a note that I've written there saying that they're working on the rainfall, they as in DNR, but, yes, at that workshop it became quite explicit that this was definitely relevant to our work.

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And John Ruffini from DNR, that was effectively told - he effectively said, "Listen, we're doing our own study. It will be available in about two months."; is that the case?-- Yes, that's right, he said by December or Christmas.

40

And did you at this point in time on the 6th of October ascertain where this study was up to?-- Yes, we tried to determine where they were up to. The information that John provided to us was that they're almost complete, it will be - a draft will be ready very soon, and so that was of value to us to hear that.

50

And at that workshop he was giving you numbers as well about where he expected the Q100 to fall; is that the case?-- No, he didn't give us numbers. He gave us an indication though, yes.

At paragraph 37 of your statement you set out, in effect, the contact that you had with Mr Ruffini on that day?-- Yes.

We can see that you recall that he said words to the effect that the DNR study was suggesting Q100 flows?-- Mmm, yes.

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And he set - and he sets out what he expects those flows to be?-- Mmm-hmm.

So while you say that he did not give you any numbers about what Q100 would be, it was what the flows would be for a Q100; is that the case?-- Yes, because what I'm saying is that he made the statement that it's going to be closer to the - I think he might have said the 1984 - yeah, 1984 report, and then I've put it in brackets in my statement.

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Okay. So there were no numbers mentioned, but there were reference points that you could establish what those numbers were?-- That's my recollection.

Now, the view was the best - the view was at the time that the best course was to await the completion of the study?-- Absolutely.

20

Because you gained the impression that it was only two months away?-- Yes.

Two months didn't - two months - nothing happened in two months?-- We didn't see the report after two months.

Nor the next year?-- No.

Nor the following year?-- No.

30

And you refer in your statement to the matter finally being resolved in June 2003?-- Yes.

Now, and you set out that you had extensive communication with DNR-----?-- Yes.

-----during this time-----?-- Yes.

-----trying to get this-----?-- Yes.

40

-----report. So is it the case that all flood studies were put on hold waiting for this report from DNR?-- Effectively.

From the BCC?-- Yeah. I wouldn't say it was all put on hold. I'd certainly say the determination of that - the flows, yes.

And when you say the matter was finally resolved in June 2003, you didn't get the report then, did you?-- No, we got some information that we needed to be able to put into our flood model.

50

And how much information did you need to be able to put into your flood model to again be able to start work?-- Two pieces of critical information. The first one was rainfall, and that's where these real reduction factors come into play, and the second one was the operation model of the dam. Both of those were very important.

And was it made clear to DNR that they were the real - the really important pieces of information that BCC required during this time?-- I expect that would be the case, because there was lots of conversations and certainly an understanding by both parties of what we were looking for.

Looking back at that time, those two and a half years-----?--
Mmm.

10

-----it was an important time where you were waiting for important information?-- Yeah.

Can you give us any suggestions for the future how that can be handled better between a council and a government agency waiting for the information?-- I suppose it would be interesting to understand the reasons for the delay. It might be - and I really don't know the reasons. It could be to do with funding, or it could be to do with them waiting on some information. So, mmm. We were certainly in contact regularly, but whether or not there needed to be a higher level of collaboration maybe.

20

Well, that's the next question. Was this matter elevated to any greater managerial level or council level?-- During that period?

Yes?-- It certainly would have gone to at least the divisional manager, maybe the CEO. But as you can see from all of the - my notes there, basically each time we contacted them they were saying, well, it will only be a short time, like a week or a month, and so, yeah, it seemed like it was just around the corner each time.

30

The information that you received in 2003-----?-- Yeah.

-----and when you describe it as the issue - the matter was being resolved, at paragraph 46 of your statement you refer to preliminary advice?-- Mmm.

40

Is that the advice that you received?-- That 6,000 to 7,000, my recollection is that that number was proffered on or about the time I picked up that - the CD with the information, so, in other words, June 2003.

And when you received that advice, did you change tack, "We are not waiting for the report. Can you just give us these two pieces of information?"?-- No, it was a consistent approach that we were looking for there information to put into our report. That's a piece of useful information, but in fact what was most useful for us is the rainfall and the dam operating model.

50

And when you got that, was that the answer to the question? Did you ask DNR, "Listen, we are just wanting two pieces of information. Can you give us those two pieces of information?"?-- I don't recall specifically that, but certainly that was the sense of it.

So I am just wondering when you talk about how it resolved, how did it actually resolve? Was it - did they say, "Actually we have now got these two pieces of information.", or was it a request by the council, a more focused request by council asking for specific information?-- I think - seem to recall there might have even been some letters went to either SEQ Water or - yeah, I definitely read a letter to SEQ Water which was asking for the release of certain information by DNR, because DNR were working for SEQ Water. So, yeah, the two key pieces of information were then made available to us in June.

10

And do you know how long DNR had those two key pieces of information?-- My sense is - the answer is no, but my sense is that they were given to us as soon as they had it.

Now, can we now turn to the independent expert review panel and the SKM reports 2003?-- Yes.

And it's convenient to sort of package them up as a one, is it?-- Whatever suits you.

20

Well, which report - what report was commissioned first? Was it the SKM report 2003, and then the review of that, or was - did you get your panel together and then get SKM - commission SKM?-- We already had the SKM on board from back in 1996 right the way through, and we were doing some work, now that we had the information from DNR, and so they were utilising that information in their modelling. Then the independent panel was brought on board to make sure we had the most eminent experts, and they - we said to them that, "SKM are here to help you. You let them know what you need."

30

Okay. And if we can go to paragraph 40 of your statement where you refer to the independent review panel report being of particular significance to council?-- Mmm-hmm.

And then you go on to set out two reasons?-- Mmm.

Is that - it is not only to deal with the important question of the Q100 flow-----?-- Mmm.

40

-----and level, but you recall at that time there was acute public interest in those matters by reason of The Courier-Mail?-- Correct.

Now, was there media pressure at this point in time to progress these reports quickly?-- Yes.

And was that the reason that you got the independent review panel report - independent review panel together?-- It would be part of the reason, yes.

50

What do you mean "part of the reason"?-- Well, it may be that you - we would have gone ahead and done that anyway, but certainly at that point in time, as you know, The Courier-Mail was asking many questions, and my recollection is that by having a panel like this, they would be independent and

therefore there could be no inference that we were directing in some way a result.

1

And who decided to get the independent expert review panel on board?-- I don't recall the specific detail, but certainly it would have been somewhere in the discussion between Barry Ball and - you know, certainly I was involved in those discussions with Barry, but I don't recall whether or not Barry had some discussions with some of the elected representatives, I don't recall that, but it may be in the notes somewhere.

10

And you drafted the terms of reference for the independent expert review panel?-- I did.

Is that a technical document, drafting those terms of reference?-- Depends how you describe - the short answer is no.

And you say that you did so based on discussions with Barry Ball-----?-- Yes.

20

-----Peter Barnes, and Doug Yuille-----?-- Yes.

-----of the Lord Mayor's office?-- Yes, yep.

Mr Yuille was the Lord Mayor's policy advisor upon, amongst other things, flood management. Why is it necessary to discuss such a document with a policy advisor? Do they have important input into such a document?-- In this case, there was - it was important for them to have some input to it because, as I said, part of the reason that we had engaged and looked at engaging an independent panel was because of what was happening in the media, and so obviously there was an interest from the Lord Mayor's office about that, absolutely.

30

Is that usual, that policy advisors have input into drafting terms of reference?-- On some occasions like this one, yes.

Well, on other occasions, not like this one?-- Okay. So certainly I can speak personally on this one. I know - I cannot speak for the most recent ones, because I haven't been involved with that, but I certainly know that was the case here.

40

From the time of commissioning the independent expert review panel until requiring their completed document, what was that timeframe?-- It would have been in the order of two months, from memory.

And who set that timeframe?-- I don't recall who set it, but certainly I would have been involved with some discussions on that, but I don't recall who set it.

50

Was there a degree of urgency in getting this independent expert review panel document?-- Yes, there was.

And that was due to the media pressure?-- That was one contributing factor. I mean, the thing is this had been going

on for a number of years and we really wanted to get it resolved because there were different numbers along the way, and so it was very important for us to get it resolved.

1

Sinclair Knight Merz, SKM, they were also engaged to do their work?-- Mmm.

Was the process as such that the work that they did ran as a concurrent process with the independent review panel, that as they finished a piece of work, they gave it to the independent review panel?-- Those pieces of information that the panel were interested in, absolutely, yes.

10

So it wasn't the case that SKM do their report and then they give their report to the independent review panel?-- The panel actually were given the opportunity and took the opportunity to guide SKM, were really saying those people on the panel are eminent experts, they know what's needed, they need to ask the questions of SKM, and that's why we engaged SKM, to be able to respond to them.

20

So in determining the scope of work by SKM, was that determined by - within council, or was that determined by the independent review panel?-- That part of the work, by the independent review panel.

When you talk about that part of the work-----?-- Yes.

-----what are you referring to?-- Because previous to that, yes, we were directing what needed to be done. The council were saying to SKM, "We need you to do a flood study. Here is what we need you to put into it." When the independent review panel came on board, then that was - they were directing SKM. There were some other parts that would be going on anyway, like the key questions - one of the key questions, for example, that the independent review panel were asked was about the hundred year level. There were other parts of the flood study which are ancillary to that which go on anyway.

30

Was it a council decision to decide whether the Department of Natural Resources and Mines' modelling would be critically reviewed, or whether it would be used without further analysis?-- The information provided to us-----

40

Yes?-- -----in June?

Yes?-- We were accepting that that was the appropriate information, that they had done all their checks and balances, and that we would be relying on that information.

50

And in terms of the timeframe for SKM, the work required by SKM, who set that?-- To?

To compete their work?-- To do the independent review panel work or-----

Yes?-- It's most likely that was part of the development of the terms of reference, so once the terms of reference had

been set, but you also notice there that there was - initially the panel were asked to report maybe in August, they end up reporting in September, because they needed some more time, and that was completely legitimate.

1

Can we now go to the recommendations made by the independent review panel?-- Mmm-hmm.

The expert review panel, and you quote these recommendations in paragraph 60 of your statement. And if we can go to that, please. And if we can go to page 15 of your statement, paragraph 60, it goes over the page, to the first paragraph, the last line of that first paragraph. "The panel strongly recommends that such a study be done as council moves towards a risk based approach to flood management"?-- Mmm-hmm.

10

And they were referring to - the panel was referring to the Monte Carlo methodology when it was referring to that?-- Mmm-hmm.

20

Do you see that?-- Mmm-hmm, yes.

At the time - what did you understand as a risk based approach to flood management?-- Well, risk based approach to flood management was not just considering the hundred year level, it needs to take into account hazard, which is associated with flood risk, it needs to have mapping, nonstructural solutions rather than structural solutions.

At the time was the Brisbane City Council, that is 2003, using a risk based approach to flood management?-- We had - some parts of it, yes, and we also were in the process of expanding our approach based on the draft 1999 Australian Floodplain Management Guideline, and ultimately on the 2000 version of that document.

30

And what about now, do you have any view on whether Brisbane City Council is using a risk based flood management strategy now?-- It is.

40

If we can go to paragraph 79 of your statement?-- Mmm-hmm.

And this paragraph sets out the primary reason why a Monte Carlo analysis was not carried out; do you see that?-- Mmm.

And you set out there that the issue of a Monte - carrying out a Monte Carlo analysis was considered by you-----?-- Mmm.

-----Mr Ball and Mr Barnes?-- Mmm.

50

This consideration - let's just look at the consideration as a whole - is that a matter that requires technical consideration, that is a matter for City Design, or is that something that is in - with Water Resources' capacity, that is, namely, yourself, Mr Ball and Mr Barnes?-- If City Design has the expertise, yes. Now, they have not done Monte Carlo technique.

Well, can you tell me, who do you understand made the decision not to carry out a Monte Carlo analysis at this point in time?-- Barry Ball, myself and - I suppose the decision itself would have ultimately been Barry's, but certainly I concurred with that and support that decision.

1

Do you recall actually sitting down with Mr Ball and working through these issues?-- Definitely.

Was that a formal meeting or was that an ad hoc process? Can you tell me about the circumstances-----?-- Yeah.

10

-----of you coming to that decision?-- Yep. So there's a few things we took into it. Would be we had a look at the information available to us. So there was an attachment to the independent review panel's work of some - a paper undertaken under the auspices of the CRC for catchment hydrology, and you'll notice in there that it talks about they've tested the methodology on four catchments. Those catchments, the largest one was 270 - 290 square kilometres. The smallest one was 78 square kilometres. The Brisbane River is 13,570 square kilometres. That's three rivers, two dams. So we were looking at a piece of information like that, and determining that based on what was available at that time, the Monte Carlo technique was not ready to be applied.

20

And that was your conclusion. Was this a decision though that had to be made further up the line?-- Effectively one of the recommendations - when we presented to the E & C we were making recommendations about what to do or not to do, and E & C then have the ability to either adopt, not adopt, or modify those recommendations, and they supported those recommendations.

30

Did you discuss with Dr Rory Nathan of SKM the issue of whether a Monte Carlo approach could be done, Monte Carlo methodology could be done? Did you discuss with him?-- I don't recall. It's quite likely, and I also note that in one of the SKM reports it basically says - my recollection is it's the 12th - it's the 18th of December 2003 report. In the conclusions there he talks about it is an accepted method, but not a standard method.

40

You refer in your statement to conversations with Professor Russell Mein?-- Yes.

And if we can go to paragraph 64 of your statement, you set out a note there.

COMMISSIONER: Is this still on the Monte Carlo topic, or is it moving on?

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MS WILSON: It is still on the Monte Carlo. And this note was made on the 5th of September 2003?-- Yes.

And we can see what the note says. "Current DCL about right. Would need to do Monte Carlo."?-- Mmm-hmm.

Do you have any independent recollection of this conversation?-- Yes.

1

So is it the case on the 5th of September 2003 Professor Mein is still considering that a Monte Carlo approach would be appropriate?-- In their report they were talking about it is appropriate to do. The question really becomes when is it appropriate to do.

And then you also - if we can go to paragraph 88 - 81, you refer to some discussions with panel members, and there was a press conference with The Courier-Mail and others on the 7th of September 2003 which you provided notes for?-- Yes.

10

And from these conversations it appears that is a factor to come to your conclusion that the Monte Carlo approach was not appropriate at this point in time; is that the case?-- That was - yeah, that also contributed to that decision.

Perhaps if we can just go to that - to that document, which is pages 4508 to 4510 of volume 13 of the bundle. That's in front of you. Is this your handwriting?-- It is.

20

If we can go to page 2. And this is a file note of a press conference; is that the case?-- On a Sunday.

Sorry?-- On a Sunday.

On a Sunday. Now, from what - from my reading of - reading of the note, it appears that what you're referring to is at the bottom of the page?-- Yes.

30

But just to make sure that we put it in context, if you could just read that note to us?-- Read the whole note, the whole page, do you mean?

Yes, just to make sure that our understanding is-----?-- Yes, yes.

-----your understanding of your handwriting?-- Yes, because of the writing. "Hedley asked about work recommended by panel. RM" - was Russell Mein - "reinforced that dam only controls half the catchment. Hedley Thomas: Asked about uncertainty or variability in interpretation. (6,000, 5,000 - 7,000) equals best current estimate." "TQ" is Tim Quinn, is Lord Mayor. "Very happy with outcome. Panel's outcome is best practice. Recommendations go beyond that.

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50

News editor: asked if 1999," in fact that says, "June 1999 report was best estimate at that time. RM," that's Russell Mein, "said he had inside information at ARFs," and I've stopped that sentence there.

1

What's "ARFs"?-- Aerial reduction factors.

Okay?-- "Barry said that we've been waiting on DNRM for their report so can calculate best estimate of flow for Brisbane River catchment. Tim Quinn said that report was discussed at Cabinet meeting twice. Came as a presentation - not in minutes because no recommendations for change. No minutes of Cabinet meeting. Current CEO records" - "currently CEO reports couple of lines on what was presented. RM," is Russell Mein, "Monte Carlo emerging beyond best practice. Unproven in practice".

10

So is that, that last comment, that was what you were referring to in your statement, that this - these conversations that you had with Professor Mein has - influencing your decision not to undertake a Monte Carlo analysis at the moment - at that point in time?-- Yes.

20

Did you discuss that with any other of the members of the expert panel?-- Certainly Colin Apelt would have been in on those discussions. I don't recall a specific discussion but all of the recommendations we - we met with the panel a couple of times and there may even have been some conversations over the phone. I recall speaking to Russell over the phone, to Colin, to maybe Erwin or John, but the answers - I don't recall a specific instance but it's likely.

30

And, I mean, this was an important part of the report that obviously had attracted some media scrutiny?-- Yes.

Did you get any advice from the panel about when would be an appropriate time to undertake a Monte Carlo analysis?-- No.

Did you seek that information - did you think about seeking that information from the panel?-- I don't recall specifically.

40

So it was just left that the Monte Carlo approach was recommended in the expert report-----?-- Mmm-hmm.

-----but that won't occur for some time, is that what's-----?-- Won't occur right now.

And you didn't think of asking for an addendum from the panel stating - setting that out?-- No, seemed like there was sufficient information they had provided to us.

50

And when would the threshold be met that it would be an appropriate time to undertake a Monte Carlo analysis?-- Well, it certainly wasn't at that time, and I notice in the comments from Mr Brewster to this commission on the 26th of October that he was saying that he's not aware that a - even today that a modelling using Monte Carlo of the complexity of the

Brisbane River has been done to date, so it's possible it might even be able to be done now but certainly my sense says that even up until now.

1

But did you get any guidance about when you would know that it could be done?-- I don't recall asking that specific question.

Because if we look at paragraph 79-----

COMMISSIONER: Is there much more on this line of questioning?

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MR DUNNING: Five more minutes of this line of questioning, Madam Commissioner.

COMMISSIONER: Look, I think we will leave it until 2.30.

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

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THE COMMISSION RESUMED AT 2.28 P.M.

COMMISSIONER: Yes, Ms Wilson.

MS WILSON: Thank you, Madam Commissioner.

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GAVIN ROSS BLAKEY, CONTINUING:

EXAMINATION-IN-CHIEF:

MS WILSON: Before the lunch break we were - I referred you to paragraph 79 and that is where you state that, "while we thought," and when you're referring to "we", who is that?-- That would probably - that would be primarily Barry Ball, myself, some other senior engineers.

40

"so while we thought that it would be an appropriate step to take in future it was not one which was at the time likely to provide substantially improved information to Council," and it goes on?-- Mmm-hmm.

50

When - did you have any idea when you would know it would be an appropriate step - when it would be an appropriate step to take?-- There's two parts to that. The first part would be about the time is dependent on when the technology caught up, I suppose, was ready for a complex catchment like this, and I noticed in Dr Weinmann's evidence to this Court on the 26th, he was also talking about how that even today - back then it

certainly was a research tool and even today that it's still evolving so-----

1

I'm not looking actually - I'm not asking you to reconstruct it-----?-- Yes.

-----I'm actually asking you at that time-----?-- Yes.

-----what did you accept - what did you - what information did you have of when you knew it would be an appropriate time?-- It wasn't clear as to when the appropriate time was, but it was clear to us was that that wasn't the appropriate time.

10

And so what steps did you take to find out when it would be an appropriate time? Were you monitoring the science at all?-- Just through journals, through reading, through talking to people.

And was it - did you envisage to have a workshop at any point in time that you could substantiate, well, the science is now up to what you would regard as an appropriate time?-- That would be necessary and is certainly one of them.

20

No, no, at the time?-- Yes.

I'm just wanting to know - because it seems like you've been given a recommendation-----?-- Yes.

-----and - but you didn't follow that recommendation because of conversations that you had that it was not an appropriate time?-- So the-----

30

That's a fair summary?-- Well, the recommendation actually was that it be implemented. Didn't actually say it needed to be implemented now, and the IRP, so the Independent Review Panel actually said there was enough information to make a decision at that time.

Okay. So you've got a recommendation?-- Yes.

40

You've got a choice of just to never do it?-- Yeah.

Or do it in the future?-- Yes.

Now, your call was it wasn't the case that you were never going to do it?-- That's correct.

It was you were going to do it in the future?-- Yes.

So how were you going to implement that, that it was going to be done in the future?-- That would be - as we were looking at the flood risk management, that would be part of that work.

50

Well, what did you do?-- What did we do?

Yes?-- We started implementing flood risk management.

So in terms of implementing - following through on the recommendation what steps did you do?-- On the Monte Carlo?

1

Yes?-- Well, we implemented the flood risk management and it wasn't timely at that time to do the Monte Carlo.

And so is that - did it really stop at that point in time, 2003?-- The Monte Carlo component of it, yes, the rest of it, no, that continued.

10

And any the discussions about Monte Carlo methodology, did that really stop in 2003?-- It certainly slowed down a lot.

Were there other discussions after 2003 about when - about the Monte Carlo methodology?-- More just along the lines of conversations about that methodology. Not specifically on, "Okay, we'll implement that in two months," or, "one year".

And conversations, and who were those conversations with?-- Just conversations between our senior engineers. So that was more along the lines of what's happening with current research. That's about what it amounted to. It certainly wasn't when precisely we were going to implement that.

20

If we can now to paragraph 84 of your statement?-- Mmm-hmm.

Are you saying in paragraph 84 that your view was that work recommended on the hydrologic model should be done in conjunction with a Monte Carlo analysis when that was appropriate?-- Could you just ask me that again, please?

30

Are you saying in paragraph 84-----?-- Yes.

-----that it was your view that work recommended on a hydraulic (sic) model should be done in conjunction with a Monte Carlo analysis?-- Really saying that when the Monte Carlo analysis is undertaken then certainly hydrologic work would be undertaken.

So any steps taken by Council to progress any hydrological model prior to you leaving the Water Resources?-- Not the hydrologic, certainly a hydraulic. Actually, there was some work. There was - the flood frequency analysis, there was some more work done by SKM on that subsequent to this - the IRP report but that was before I left that area in Water Resources.

40

And just before we leave the Monte Carlo methodology?-- Mmm-hmm.

50

In terms of followup-----?-- Yes.

-----did you do any followup with SKM and Rory Nathan about any progress in the Monte Carlo methodology subsequent to 2003?-- It was in those - in the file somewhere about discussion - either discussion or comment but I don't recall that specifically so I'd have to say I don't recall that occurring.

So I just want to understand it. The discussions about any followup of the - implementing the Monte Carlo methodology was really just an internal discussions-----?-- Yes.

1

-----in the Brisbane City Council?-- That's right.

That would have been with City Design?-- There was a discussion, as I have subsequently found out, between Ken Morris and Barry Ball, and that's included in my statement.

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Okay, and that's a - included in your statement. You weren't a part of that discussion?-- No. I was party to Ken told me about that, about a week ago, and it may have been he told me prior to that but I don't recall that.

And just so that we are talking - you know that we're talking about the same things I'll refer you to that paragraph in your statement. Is that paragraph 85 of your statement?-- Mmm-hmm.

20

Is that what you're referring to?-- That's correct.

And, finally, Mr Blakey, if I can take you to paragraph 91. In paragraph 91 you refer to the Independent Review Panel?-- Mmm.

And it was the Independent Review Panel, not SKM, to whom Council looked for authoritative guidance as to the figure to adopt for the Q100 flood?-- Yes, that was the role of the IRP.

30

And can you just explain why the panel was considered authoritative rather than SKM?-- Oh, well, they'd been appointed specifically to do determine what that value was, what - the range and the value, and they eminent experts in their area, so we had engaged them to make that determination based on information provided to them including that by SKM.

Thank you, Mr Blakey, I have no further questions?-- Thank you.

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COMMISSIONER: Mr MacSporran.

MR MacSPORRAN: Thank you, Commissioner.

Mr Blakey, my name's MacSporran, I appear for DERM?-- Thank you.

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I want to ask you some questions briefly about the issue of delay in receiving the data from what was then DNR?-- Mmm-hmm.

You've said things about that in your statement?-- Yes.

It's the case, is it not, that the Council had not commissioned a report from DNR?-- That's right.

And, in fact, you didn't learn until that workshop of the 6th of October 2000 that DNR may have had information that was relevant to the exercise you had commissioned through SKM and others?-- My understanding is we had some earlier information. When I was reading through the notes I identified that either in late 1999 or early 2000 we had an indication that that work was going on.

1

The work was going on in DNR independently of the Council?-- Yes, they were two different studies.

10

Yes, exactly. And did you ever find out exactly what the studies that were being done by DNR encompassed or the purpose of them?-- I understand parts of that. There may be more than one understanding, but, yes, I understand in part what they were about.

But it was not directed to the topic the Council had in fact commissioned a report in relation to, was it?-- It was commissioned by others-----

20

Yes?-- -----to DERM. To DNR.

Now, at the same time as this work was being commissioned by the Council did you know that DERM was involved in a number of major projects?-- Yes.

One of which was a major revision of the Australian Rainfall Runoff 2000?-- That was part of the work they were doing.

30

That's a massive project?-- Yeah.

A very complex project. You understood that?-- Oh, yes.

They were also involved in the Cooperative Research Centre Water Catchment Hydrology, a major revision of that methodology?-- That's why we specifically wanted some information that they were developing.

Again that was a very complex piece of work?-- Mmm-hmm.

40

And then finally a national project, which I think is the Generalised Tropical Storm Methodology Review, which in part involved a dam safety issue involving Wivenhoe-----?-- Yes.

-----are you aware of that?-- I am. I'm not aware of the detail but I'm aware of that they were doing that work.

All of that work in that last project involved a - so far as DERM's focus was concerned, a major spillway upgrade for Wivenhoe?-- That's right.

50

Gate operation procedures and such?-- Yes. Which is another reason we were interested in that information.

And, indeed, some of the work that came out of those projects you understood may have been relevant to what the Council had commissioned by way of its report?-- Oh, absolutely, that's

why we were asking for the information.

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Now, you can understand, I imagine, with that background and the number of projects that DERM were involved in how there might have been some legitimate delay in providing you with the data; is that so?-- Sure.

You accept that, I take it, do you?-- Yes. Well, I guess what I was basing it on was the feedback that I was getting from DERM at the time about when the information would be available.

10

And one of the reasons that you were keen to get it and to wait until you had it was that you wanted their most up-to-date information to inform your report?-- Yes.

There's no point rushing through with the old data, produce some report that might be in three to six months totally invalid?-- Correct.

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And that's the view Council had?-- Mmm-hmm.

And you waited the time that it took, unfortunately it took some considerable time, to produce the best estimate with those up-to-date figures?-- Yes.

And, no doubt, you'd commend DERM's work in providing that information to you?-- Oh, we were pleased to get it.

Yeah. Thank you. Thank you, Commissioner.

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COMMISSIONER: Miss McLeod?

MS McLEOD: No questions, thank you.

COMMISSIONER: Mr Dunning.

MR DUNNING: Thank you, Commissioner.

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Mr Blakey, can I just pick up on that topic that our learned friend Mr MacSporran left off on. When you attended the workshop in late 2000 the intimation that Mr Feeney gave was one that indicated that the finding was likely to be consistent with or less than the levels that Council had already set; is that correct?-- The indication we had at that time it was going to be less than the earlier, like the DNR report that had been produced and it was going to be closer to the current flow that's associated with the Q100 at that time.

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All right. So at least at that stage your expectation was it was going to be confirmatory of Council's current position?-- That's correct.

All right. You had regular contact with DERM between then and when you received the information?-- I did.

Right. And in any of that contact was there ever any indication to the contrary of what had been indicated to you in late 2000?-- No. Our expectation during that period was that the flow would be closer to the 6,800 than it would be to other previous - or other reports.

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Right. Was that expectation one that was informed by those discussions you were having along the way?-- It's likely we had some specific conversation. I have a clear impression that it was our understanding that the conversation we had back in October 2000 at that workshop, it was still the case throughout.

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All right. Thank you. Now, you were asked some questions by our learned friend Ms Wilson regarding the decisions that were taken concerning the recommendation of the Independent Panel-----?-- Yes.

-----regarding the Monte Carlo analysis. First of all, can I ask you, please, to go to paragraph 59 of your statement?-- Yes.

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And the passage I want to direct your attention to appears at the foot of that page that starts, "There is an inevitable degree of uncertainty". Now, that's, as I take it you appreciated it, an extract from the - it's actually an excerpted passage from the report?-- Yes.

Just read that to yourself?-- Yes.

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Over to the next page, the first three lines?-- Mmm-hmm. Yes.

Was that a matter relevant in the attitude you took to when a Monte Carlo analysis should be undertaken?-- Yeah. It's an important point because the plausible range that was identified by the Independent Review Panel was 5,000 to 8,000 CUMECS and at the time we had our flow, which was equivalent to a flow of 6,800 CUMECS, which is right towards the top of that range.

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Sorry, what range was that again?-- So in the - the panel had said that the hundred year, the plausible range for the hundred year flow would be 5,000 to 8,000 cubic metres per second. The equivalent for the hundred year level that we had was based on 6,800 CUMECS, which, as you can appreciate, is almost at the top of that range.

Certainly. Are you sure that the - perhaps you might go back and just reread the passage?-- Yeah.

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You're saying "8,000", is that what you're intending to say?-- Oh, did I say "8,000"-----

You did-----?-- -----I meant 7-----

Yes?-- -----it was 6,800 for the flow associated with the Q100 so certainly the plausible range was 5,000 to 7,000.

All right. Thank you. And is that the rationale then, in part at least, what you say at paragraph 77 of your statement?-- Are we still in paragraph 77 there at the moment? Is that the same paragraph?

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You will see it come up in just a moment?-- Thank you. Yeah, that's an important point raised in paragraph 77 because what the IRP had said was that they believed that we had enough information on which for Council to base its decision on what the hundred year would be based on what they had provided to us. They're also saying that further work that they recommended, the Monte Carlo analysis, would enable the collapsing or maybe the reducing of that plausible range. So what we understood that they were saying was that the likely Q100 is within that 5 to 7. Monte Carlo will enable that to be narrowed down because of better research and better information.

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Right. Thank you. Now, can I then direct your attention to another matter you were asked by our learned friend Ms Wilson, that's really in regards to how you keep yourself current in terms of technical advances in your particular area, and you can assume for our purposes here, areas related to flood. Can you explain generally how you and how you have observed other Council officers to remain current technically?-- Well, as an example of myself, I'm a registered professional engineer in Queensland and I'm also a chartered professional engineer with Engineers Australia. One of the requirements for that is that we demonstrate a minimum of a hundred and 50 hours of relevant training, education every three years. So we have to keep a record of that within our area of expertise. So I and others would do that. It might be through conferences, reading papers. We also discuss with our colleagues. So occasionally we were getting together with other colleagues from other organisations, and an example there might be on - meetings with Ipswich City Council and their officers about the work that they were doing. So keeping current with what other organisations were doing as well as ourselves.

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Right. And during the period of time that you occupied the roles that relate to the evidence you're giving, did you endeavour to remain up-to-date with advancements in flood modelling techniques?-- Yes. While I'm not the person who is going down and doing the modelling, certainly I kept up-to-date with what was happening. A lot of it's through City Design, because they were our experts in that area, and so discussions with them, reading the Engineers Australia magazine, et cetera.

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Right. And you have given some evidence about why you thought that Monte Carlo was not apt to be performed around 2003/2004 and perhaps it's appropriate now and about now. Can you explain to the Commission what in your opinion has changed?-- During that time. Well, during that time one of the big changes has been the power of computing. What the Monte Carlo methodology does is it looks at a whole range of scenarios, varying some of the parameters, to be able to determine what's the most likely outcome. To do that requires thousands, tens

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of thousands, maybe even hundreds of thousands of iterations. So one of the big changes has been the power of the computing during that time.

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Thank you. Now, can I then ask you, please, you gave some reference in answer to a question from Ms Wilson regarding a technical paper. Can I ask you, please, to have a look at this document. Madam Associate, it's 4439. Is that the paper you were referring to?-- Yes, that is the paper I was referring to.

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All right. Thank you. Can you identify the authors for us, please?-- Yes. It has down there Erwin Weinmann as the first person there. He is - you would be familiar with him from this Commission. He was also on the Independent Review Panel for Council and he was the leader for the CRC on large and extreme flood events. Mr Rahman is a modeller in that area. Has considerable expertise in flood modeling. Mr-----

Does Mr Rahman have any particular association with Queensland?-- He actually - yes. He was a lecturer of the Queensland University of Technology. There is actually two Mr Rahmans. Mr Rahman that was in my team is Mr Konka Rahman-----

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Yes?-- -----and this gentleman, Mr Rahman, was actually one of the senior engineers down at QUT for a little while so I met him and knew him through that. I don't know T M T Hoang or E M Laurenson, but R J Nathan is Dr Rory Nathan from SKM and he was - as the Commission would know, presented evidence here and he also was one of the lead authors for Council on the SKM reports.

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Thank you. And are there particular passages that you can take us to in this paper that inform the view that you earlier expressed?-- Well, one of them would be about - right towards the end of the paper there's one about the size of the catchments and I may have even - somewhere amongst my notes, if I can just refer to those.

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Yes, certainly. I had a copy attached to the Independent Review Panel's report, and if you would go to section 5, "Research Outcomes", it says, "The new Monte Carlo simulation methodology was applied to four catchments"-----

Perhaps you might just wait until we follow it on the screen as well?-- Sure.

Yes. Okay, proceed. So you're at the heading five, "Research Outcomes"?-- Yes. "The new Monte Carlo simulation methodology was applied to four catchments in Victoria as part of the CRC for catchment hydrology research on flood hydrology program. These catchments range in size from 78 to 290 square kilometres". And then towards the end of that section - actually, on the same page but just above table one, it reinforces that where it says, "Application of the Monte Carlo simulation technique to four small catchments in Victoria and comparison of these results with the existing method". So I

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guess one of conclusions we drew was that it had been - was a research tool, that's one conclusion. The second one was that it was - had been applied to small catchments, basically subcatchments of creeks, and certainly hadn't been applied to a large catchment like - large and complex catchment like the Brisbane River. And then towards the end, under section seven, "Conclusions", just above "Acknowledgments", it says in the last couple of sentences, "The results of the initial applications of the proposed Monte Carlo simulation approach are promising. Further testing and development of the approach into a practical design tool are underway".

Thanks for that, Mr Blakey. Then finally may I ask you this, please: you had some involvement in the initial preparation of the FloodWise Property Reports?-- Yes, I did, that was one of my responsibilities.

Very good. Can you explain to the Commissioners, please, the process that - when you were involved in it, you went about to implement that program?-- Yes. At the time of all these reports the process was that if someone wanted to know what the likely hundred year flood level on their property was they needed to go into Council and find out what that level was. So go into our Planned Custodian. Alternatively they could phone up and then they would be sent a letter. One of the improvements that we identified to that was being able to automate it. So what we called "flood cells". So all the way up the river have flood cells and that way if someone rang up, someone came into our centre, instead of someone having to go to a piece of paper and look at the level, they would automatically be able to determine that information. We had a vision that we would be able to have that on the Internet and accessible for anybody to be able to go in and put their property address in and gain that information immediately. At the time we were - right back in 2003 we were charging for that service and while I'm not sure of the number, my recollection is \$15.61. I don't know where that number came from but it was probably just the CPI each year. But that was cheaper than most other councils. Other councils we examined at the time were in the order of \$30 for a service like that. The administration made a decision to make that a free service, recognising the importance of providing flood information, and also supported the idea of being able to automate this process so that anybody could download a report off the Internet at their time and leisure and get the immediate response rather than having to go into Council or wait for a letter to arrive. So, yeah, we were very proud of that, and, in fact, our research has indicated it's world class. We haven't actually come across anything the same as it anywhere else.

Well, can I ask you this: when it came to working out the form in which you would present it to persons who might interrogate the Council computer system, what steps did you take to identify what comparative information was provided to rate payers or interested persons?-- Yeah. A couple of things we did. One was to, obviously, talk to our internal engineering experts to say, well, what is the appropriate

information to provide, and I use the word "appropriate" as in 1
 for this context. It is clearly these - the 2003 reports are
 very technical information, and while that's available to the
 public online now it - some of that information is not
 necessary to provide at a lot scale. We also spoke to some of
 our community-based people, so people who are dealing with
 people in the community regularly, to find out what is the
 language and what's the type of information that people in the
 community would require. And so you will notice that over 10
 time, if you've been following the FloodWise Property Report,
 it has changed and has been enhanced over time. One, to make
 sure that the latest technical information is provided, and,
 secondly, so that the language in there and the content is
 starting to satisfy - "starting to", even more satisfies the
 people in the community who are wanting to use that
 information.

And what inquiries did you make of what other like authorities
 were doing?-- My recollection is that we contacted about 30 20
 other local authorities in Australia. We definitely did an
 Internet search at the time and I don't recall exactly how -
 why that was but it would likely have been to at least the UK,
 the US, Australia, New Zealand, so the countries that have
 English as their primary language and are likely to be
 advanced in that area, so we certainly did the research
 because we were interested in finding out what others were
 doing so that we could learn from that. I clearly recall us
 getting information from Gold Coast City Council and from
 Ipswich, where they provided to us examples of what they 30
 provide to their community, and that way we were starting to
 gather the best available information and build on that.

And how did what you were conceiving at this stage compare to
 what you found available either within Australia or abroad?--
 We found nothing similar. There were some parts that were
 similar, like the Gold Coast and Ipswich were providing flood
 levels. At the time we started producing this report it was
 six pages long. Now, it's been condensed down a little bit
 since then but at the time we thought we needed to provide all 40
 this information to be quite clear and explicit. So some of
 those other reports were much less shorter than ours, and
 their requirements were substantially the same but expressed
 in a slightly different way. For example, they might ask -
 they might provide the hundred year level. We were starting
 to provide the 20, the 50, the source of the flooding, whether
 it was creek, river flooding, storm surge because that was
 important to provide to the community.

All right. And I'll finally ask you this: you've told us 50
 about the size and complexity of the Brisbane catchment. Can
 you just explain, please, to the Commission what you - when
 we're talking size, what size of mean and complexity, what are
 the issues of complexity to which aver?-- It is a very
 complex catchment. It's 13,570 square kilometres. So in
 round numbers 14,000 squares kilometres. It's really got
 three rivers. One is the Stanley, the Brisbane and the Bremer
 River. Plus it's got some major creeks, like Lockyer Creek up
 in the Lockyer Valley. Now, half of the catchment has a dam -

basically the dams manage half of the catchment. So from Wivenhoe up is about 7,000 square kilometres, so that's half of the catchment. And above Wivenhoe is Somerset Dam. There's actually not one but two dams. So they're actually operating two dams within the catchment, three rivers, the lower parts of which, including the Bremer, Lockyer Creek are not regulated by the dams. So being able to model a complex catchment like that, I'm not aware of any other catchment of that scale in Australia of that complexity on which a major city resides. So that's why we really recognise this was a very complex modelling and interpretation exercise.

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That's the cross-examination, thank you, Commissioner.

COMMISSIONER: Thank you. Ms Wilson?

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

COMMISSIONER: Yes. Thanks, Mr Blakey-----?-- Thank you.
-----you're excused.

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WITNESS EXCUSED

MS WILSON: They are all the witnesses today, Madam Commissioner. May we adjourn to 10 a.m. tomorrow?

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COMMISSIONER: 10 o'clock tomorrow.

THE COMMISSION ADJOURNED AT 3.00 P.M. TILL 10.00 A.M. THE FOLLOWING DAY

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