

# 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 20/09/2011

..DAY 33

THE COMMISSION RESUMED AT 10.00 A.M.

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BRENDAN JOHN NELSON, CONTINUING:

HER HONOUR: Yes, Mr Callaghan?

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MR CALLAGHAN: Your Honour, Mr Nelson, I just want to recap on a few of the propositions we were dealing with yesterday and begin by showing you another couple of maps that have been produced. Can I show you, first, the map of Dalby? Again, we see the yellow shaded area, and a blue and yellow shaded area, which represents the area that was affected by the most recent floods; is that correct?-- That's correct.

Again, it would seem that for the most part it covers the entire town of Dalby; you'd agree with that?-- For the most part it would.

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Yes, all right. I will tender that one.

COMMISSIONER: Exhibit 542.

ADMITTED AND MARKED "EXHIBIT 542"

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MR CALLAGHAN: I will show you another one of a town which has been of interest to the Commission, that is of Chinchilla, and this one demonstrates that there is an area which is just blue and that is an area which represents land that was flooded this last summer, but is not contained within the yellow area which represents somewhere which has been flooded at some stage; is that correct?-- Yes, it does, and we're in the process of rectifying that at the moment. This was one example of a township where we had completed the overlay just prior to the full capture of the data from the 2010/11 events, so that's through the Department of Environment and Resource Management, they are going through and relooking at this particular area of the overlay at present.

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Or does it represent, then, that - obviously we now know that the blue area is an area which has had water over it?-- Yes, it does.

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But on the science that was applied to determine the boundaries of the yellow area, that did not originally capture that area; is that correct?-- No, it didn't, but we do need to consider the full context, including stream order, to make sure that those areas are appropriately reflected, and that's what the Department of Environment and Resource Management are doing at present.

Sure, I understand you're rectifying it, but the point is that the science which captured the yellow area did not originally capture that area which was flooded in 2010/11?-- One of the data sets that we have relied upon across the State wasn't available. It is now available and it's been available only for about the last 10 days, and we are going through and looking at that particular area at present.

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Does answer that my question?-- I believe so.

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So, the science has changed?-- No, no, the data set that we relied upon wasn't available when we completed this part of the State. It is now available and we are undertaking the review.

Which data set, though? What are you talking about?-- The data set of the 2010/11 event.

Right. But my question - and I can understand, as you say, that now that area should be blue and yellow?-- Yes, that's correct.

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But when the yellow area was - the science which has been applied to the yellow area - I will start that again. Does the science which has been applied to determine the yellow area necessarily capture every piece of land which would now be pictured in a blue area?-- It is envisaged that it would, yes.

COMMISSIONER: I haven't got the map so I don't have much idea what's being talked about, but did bits of Chinchilla flood that didn't show up as ever having flooded before; is that where it ends up?-- Yes, Commissioner. The - there's a small portion which wasn't originally captured in the interim overlay, simply because the flooding data from 10/11 wasn't available when we completed that particular line. It is an interim line. We have said that we will take on aboard feedback and we will review that line with - based on information available from both the councils and when we get better and further information, and that's exactly what we're doing at this point in time.

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Thank you.

MR CALLAGHAN: All right. So, the maps as published are not necessarily to be taken at face value, is that right, they're a work in progress?-- The maps are published are an interim line and they will be subject to verification by local councils, and also feedback from members of the community.

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I suppose what I am getting at, though, is is that area, which is now depicted in blue for Chinchilla, would the soil science upon which reliance has been placed for the purpose of producing the yellow area, would that have picked that up prior to 2010/2011?-- I haven't seen the specific soil science for this particular map, but in this particular instance - I can't comment until I see that, that information. That was an interpretation provided by profession

cartographers who have used a series of information that was available to them and on face value that is where they believe the overlay area would be. Based on this further and better information, they have agreed and they are currently undertaking a review.

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You see my point, though, don't you, that for the yellow area, which has been determined perhaps by other means but certainly by reference to soil science - you agree with that?-- In the large part, yes, soil science has formed a very important component of the assessment.

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Yes. If it didn't capture, if the yellow area doesn't capture an area and the science which has gone into the yellow area doesn't capture an area which did flood in 2010/2011, it demonstrates that the yellow area can't necessarily be relied upon to demonstrate areas which are susceptible to flooding?-- I don't agree with that. What I think it demonstrates is that the soils for that part may not have demonstrated previous flooding events but we know that not all floods are exactly the same.

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That's right?-- And so the 10/11 flood event once - now that we have that data available, it is proving very helpful in reviewing that line.

Sure. All right. Well, we will come back to this in a moment. I did just want to recap on a few propositions. The yellow area is not the probable maximum flood, it's a completely different concept?-- Yes, that's correct.

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The QRA does not know the AEP or ARI of the yellow shaded areas?-- It was never intended to-----

No?-- -----do that.

I understand. The maps show nothing about the probable chance of inundation?-- No. Again, it was never intended.

I understand. And the QRA did not check the maps against any currently existing maps or models held by local councils; is that right?-- Well, the intention was to provide this information to councils who will undertake the local validation.

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That's right. You haven't done that?-- No, we haven't, because we are doing it for the entire State.

Okay. And there's no issue with the proposition that it's a big job. It is possible, though, is it not, that the yellow area on these maps may actually be smaller than, say, a Q100 or 1 per cent AEP flood, you just don't know?-- That - we can't draw that parallel.

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All right. But your point is, as I apprehend it, that these are just a starting point?-- They are a starting point to be read in partnership with the model Code that is also being produced in the guideline.

Well, even before you get to the model Code, you'd suggest, wouldn't you, that councils need to use their local knowledge about what land has flooded in the past?-- Absolutely.

Previous flood studies, flood maps and so on?-- Absolutely. That's a commonly accepted practice for documenting flood lines.

Sure. And you would expect that it's only after such a review that a local council would incorporate the map or an amended form of it into their planning scheme; that's right?-- That's precisely why it's voluntary at this point.

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All right. But would you agree that if a council does those things, looks at local knowledge of previous flooding, considers old flood studies and flood maps, that the map itself doesn't actually have use?-- I wouldn't agree with that. I believe that the map is of use and I believe that with the local knowledge applied to it it would then go from being interim assessment area to a final assessment area. At this point, there is a very clear reason why it's interim.

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Well, what use - after a council, say the local authority in Goondiwindi, after they had looked at knowledge of previous flooding and considered any flood studies or flood maps that might have existed, what use would the QRA map be to them after they have done that process when it shows nothing more than a whole page of yellow?-- I think it would be use from the perspective that if they incorporated the full tool kit into their planning scheme, they would set an interim level for habitable floor levels so that - such that in the event of a failure of the levy, like the flooding that occurred in 1956 where there were three significant events that led to the construction of the levy in 1957, that you would, in fact, find that the houses that are constructed there are to a higher level of resilience, which is the full purpose of this document. In fact-----

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Sorry to interrupt but how does the map of Goondiwindi produced by the QRA help in that regard?-- Well, the map in partnership with the provisions proposed as part of the model Code-----

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All right?-- -----would trigger the council through the assessment of any development applications to be able to set a floor level.

That's the point, it is just a trigger?-- That's correct, it's-----

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As a map, as a map which you look at to work things out, it doesn't have any use for them after it's triggered other things?-- It's part of a tool kit that is-----

It is part - its only function is as a trigger, isn't it?-- It is part of a tool kit to raise awareness of the potential for flooding in that area.

All right. Well, in other words, you could do that by saying there's potential for flooding in Goondiwindi, couldn't you?-- Yes, absolutely. We know that from historical facts.

Okay. Now, the council does say - sorry, the guideline does say that councils can choose to adopt the maps in their current form?-- Yes.

It's described in the guideline as a workable product?-- Yes. 10

So, we might examine how this product does, in fact, work and move on to what you were saying about the model Code and so on, and can we take as examples any local authority, such as Emerald, Dalby, Goondiwindi where the maps for the most part show a yellow area covering the whole of town?-- Yes.

And these are the sorts of places, aren't they, which were intended or for which the guideline was intended to be of particular assistance?-- Very much. 20

So, if they adopted the interim flood plain area as their hazard management area for flood in their planning scheme-----?-- Yes.

And if they then also incorporated the Model Interim Flood Plain Assessment Code, that's schedule 1 to the guideline?-- Yes.

And the guideline does say that the model Code may be adopted without amendment?-- It does. 30

Yep. And, again, there's particularly - it says "particularly", so for those towns - low growth areas which don't have flood mapping already?-- Yes.

The Code would apply then to any development application to any property in the interim flood plain area; is that correct?-- Yes, anything that's already assessable development would be - this would be an additional consideration. 40

All right. So, that's the whole town?-- Well, only if it's triggered for assessable development. There are many examples through most of the western towns where development is self-assessable, which doesn't trigger development and would not consider - would not trigger consideration under this model Code.

But there would be some - there's still plenty of assessable development; is that right?-- I wouldn't say plenty, I would say that there is - in each council is very different. I would - you would have to look at the individual councils to see the level of development applications within their local government area. 50

All right. Well, let's assume that someone wanted to start a new building in Goondiwindi which was assessable development.

If you look at the model Code provisions in schedule 1, there's Performance Outcome 1 and then Acceptable Solution 1. I think we're on page 19, "Acceptable Outcomes", but the point I'm suggesting to you is this, is does that mean that if this model Code was adopted without amendment every new building assessable development should have a clear and direct pedestrian and vehicle evacuation route off the site?-- No. An acceptable solution is one way of demonstrating compliance with a performance outcome. A commonly accepted practice through planning schemes in Queensland that acceptable solutions are not the only way of demonstrating compliance, there may be other forms, and it would be almost impossible to contemplate an acceptable solution - or acceptable outcome which would cover every scenario. That is why they are contextualised along the lines of what's in the State Planning Policy 1/03 in terms of the performance outcomes and the acceptable outcomes are simply one way of achieving those.

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All right. Well, in the case of evacuation in somewhere like Goondiwindi, that would be an impossible outcome, wouldn't it?-- Well, it - we have not suggested in this guideline that people should act any differently in the event of a flood. This is about building resilience in the built form and acknowledging that a lot of the towns and cities that we've got throughout Queensland have been historically built on flood plains. Goondiwindi, for example, was settled in 1838, long before there was any flood studies and long before there was ever a town planning scheme. In fact, the first planning scheme was only brought in 1970, 13 years after the first levee bank.

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All right. Again, though, if - I will take you to Performance Outcome 2 and Acceptable Solution 2.1. As read or taken at face value, that would suggest that every new assessable development in Goondiwindi should not be built as a single storey slab on the ground; is that right?-- It will depend on the height level in Goondiwindi. The model that we would propose would be that the council would look at setting a floor level and they can do that based on information that they would have available through existing studies or based on the model that we have outlined in the guideline, which would be to look at the highest recorded flood level and then allow the freeboard on top of that as an interim until such time as they have completed a review. That would then tell them what level that - that building should be set. In some locations in town, that will mean that a house should be located on stumps. In other places, it may be acceptable for them to be a slab on the ground, but you will need to consider the actual height of the ground - of the land upon which the application is being proposed.

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And who's going to do that? Does that require the council to do a flood study?-- No, it doesn't, because you - most councils will have information regarding levels within their town. The levels are certainly information that's available publically at the moment in terms of the highest recorded flood levels for each of the gauging stations throughout the

State.

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Again, it's going to require significant input from the council to get that sort of information, isn't it?-- No, I wouldn't have thought so.

Sorry, I withdraw that. If the model Code, if the interim flood level is adopted and the model Code's applying, you are going to have to go a lot further and there's a lot more detail than you have already suggested than would be gleaned from reading the Code at face value?-- No, I think it would be a relatively straightforward process for any competent planner to sit down in partnership with the shire - shire engineer. It is something which I wouldn't expect to be an overly onerous task and, in fact, would lead to a much greater level of resilience for these western communities.

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Isn't it the case that if you don't meet the acceptable outcome, the onus is on the developer to demonstrate compliance?-- That is one form, but the council is at liberty to determine the form in which that then takes.

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Well, they may be, but you agree with my proposition that puts the onus on the developer?-- Well, the Code as currently drafted, given it's a model Code and given that we have also said it allows for some local variation-----

Yes?-- -----says that it obviously must be considered together with respect to the planning scheme Codes that are applicable, but it also says that compliance with the acceptable outcomes should not be regarded as satisfying the elements of performance outcomes. So we have accepted here that this is just one way of demonstrating compliance. A local council may, in fact, have other ways that are relevant to their local government area, which we would have no problem whatsoever with them including as an acceptable outcome.

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Yes. But, anyway, as written - well, it could be, couldn't it, that the onus could be on a developer in that situation, even if the relevant site was above Q100 or Q200 or whatever?-- I wouldn't expect that to be an overly onerous expectation. If a developer is already lodging a development application, a competent application should consider those things in any event.

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And so we come back, I suppose, to the question as to the value added by the map itself as a map to that sort of situation?-- If I was a local government planner, which I have been for more than a decade, I would be using that map to the best of my ability to make sure that when we considered the application, we would be making sure that the building in the event of a flood was - at least the habitable areas were largely unaffected.

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And you say that can be done in the case of Goondiwindi by looking at the map?-- Well, the mapping obviously in Goondiwindi's example reflects what has happened in the past. We know prior to the levy being constructed in 1957 that

previous flooding events which were quite significant in Goondiwindi did show extensive flooding like that shown on the map. Now, the event of a breach of the levy - we have seen that happen internationally, I know in Cyclone Katrina in the US, New Orleans, the breach there meant that there was wholesale flooding in that particular community.

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Yes?-- So, obviously as part of any constraint considerations it's important to understand and certainly some of the images that we have produced in the guideline show some classic examples throughout Queensland of homes which have been built to a higher level of resilience. I know on page 14 of my guideline that's part of my exhibit, it shows some classic examples of houses that are built on stumps.

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I am not really talking about that, though, I am talking about the maps, and I can understand the value, I suppose, of knowing that at some stage the whole of the Goondiwindi at some stage in all of time might have had water over it, it probably comes down to the manner in which this is being presented, because after the Premier's announcement these flood plain maps were made public, weren't they?-- They were.

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And the Premier advertised the website in her announcement and it was said that this is a great level of information being available to all?-- She has, and our experience with publically or showing members of the public the flood lines posted 10/11 flooding events was so valuable because it gave us the opportunity to make sure that we were able to accurately reflect that line. We-----

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Well, again, I can understand - sorry, I can understand that in respect of the 10/11 event?-- Yes.

But as we have seen, these maps go much wider than that, don't they?-- They do, and in 1956 Goondiwindi was flooded and there will probably be residents in Goondiwindi who could validate the existence of the flooding in those locations in 1956.

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Sure. I understand there's a You Tube video published by the QRA as to how the public can use the maps?-- Yes, there is.

Was there any other public education which accompanied the launch of these maps?-- Not at this point, but we are planning a tour across the State to meet with each council. As I outlined yesterday, I believe, we have been to 16 councils and shown them what we've been working on, we are mailing copies of hard - the hard copies to each council at each of the subbasins, we are going to be running training sessions, and we're in a consultation period at the moment until the 11th of November.

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That's education of the councils. I was specifically asking about public education because this was announced as being information available to all. The video, the You Tube video doesn't actually show or include any information as to what the yellow area on these maps actually means, does it?-- It

is - it is a guide and a tool.

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I think you can answer that question yes or no?-- I think at this point it is simply there to show people how to use the tool. It is not to explain the tool.

So, that would be a no; is that right?-- Well, it's not there to explain the tool, that's correct.

Okay. I will take that as a no. Is there anywhere on the website at all that explains what the yellow area is?-- Well, it's in the guideline, which is part of the website, it's part of overall tool kit.

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All right. Can you understand that there might be a risk that people whose houses are depicted in a yellow area might think that they're at risk of flooding, a genuine risk of flooding when they could be, for all we know, above the Q200 line?-- There could be that possibility, yes.

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And, conversely, others might assume themselves to be safe because their houses are outside of the yellow area, but that's just not so, is it?-- Well-----

They're not necessarily safe if they're outside the yellow area?-- It depends on the local - local considerations and local flooding.

Well-----?-- A blocked-----

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It might depend on whether they get flooded or not, that's right?-- A blocked drain can cause flooding.

Beg your pardon?-- A blocked drain can cause flooding.

You know what I'm talking about, though. I mean, we go back to that situation in Chinchilla, if the yellow map was done before 2010, it might well be the case that the blue area would not have been shown up on it; is that right?-- That's possible.

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Right. So, the yellow map does not demonstrate that people are not at risk from flooding?-- It is an interim area-----

All right?-- -----subject to local validation.

I tender that map of Chinchilla.

COMMISSIONER: Exhibit 543.

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ADMITTED AND MARKED "EXHIBIT 543"

MR CALLAGHAN: Just finally, has there been any communication with insurance companies about these maps of any kind?-- I

have had two or three discussions with the Insurance Council of Australia.

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Is it the case that since these maps say absolutely nothing really meaningful about the concept of the risk, they should not have any impact on insurance premiums or anything like that?-- We would expect that - it's not my area of expertise - but we would expect them to be acknowledged for what they are.

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Right. Thank you.

COMMISSIONER: Mr MacSporran?

MR MacSPORRAN: Madam Commissioner, Mr Nelson is my witness, but I would like to raise a matter if I could?

COMMISSIONER: Yes.

MR MacSPORRAN: I have spoken to Mr Callaghan this morning. Partly at his suggestion Mr Nelson did some extra work overnight to try and give some concrete examples as to how this - the work done by the QRA can be implemented and what it means. What's become apparent to us this morning is that to do that he needs to refer to some other documents, including large maps and examples of the work he's done. It's not really possible to do that conveniently today because none of the parties have the material, including Mr Callaghan. What I'm proposing, with Mr Callaghan's agreement - we have spoken about this and no other party objects - is to stand Mr Nelson down to come back with an addendum statement, which will be distributed-----

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COMMISSIONER: All right. So everybody else will question him afterwards?

MR MacSPORRAN: Exactly.

COMMISSIONER: There's no point going ahead?

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MR MacSPORRAN: No, that's so.

COMMISSIONER: Well, everybody else seems happy with that idea, Mr Nelson, I am not sure if you are, but that's what we will do. We will stand you down and ask you to come back at a day convenient to everyone. Thank you.

WITNESS STOOD DOWN

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MR CALLAGHAN: I call Martin Reason.

MARTIN JAMES REASON, SWORN AND EXAMINED:

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MR CALLAGHAN: Could you tell the Commission your full name and occupation, please?-- My name is Martin James Reason, and I'm a qualified town planner.

Are you still the acting manager of City Planning and Economic Development for the Brisbane City Council?-- I am, yes.

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Mr Reason, I think you have prepared two statements for the Commission; is that correct?-- That's correct.

I will have that shown to you. They are your statements and exhibits?-- That's correct.

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Yes. I tender that.

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COMMISSIONER: Exhibit 544.

ADMITTED AND MARKED "EXHIBIT 542"

MR CALLAGHAN: Now, Mr Reason, at paragraph 3 of your first statement - and you have copies, I take it, if you need them?-- That's right.

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You indicate that you joined the Brisbane City Council in January 2010; is that right?-- That's correct.

But you'd previously worked for Council in different positions between 1998 and 2006?-- That's right.

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But the situation is that the Commission required information from the Council, you were nominated as the convenient person to provide it; is that correct?-- That's right.

But at any stage have you had overall control for the policy direction of the Brisbane City Plan?-- No.

And, likewise, you haven't had overall control of the determination of Q100 or defined flood levels or anything like that?-- No, I have not.

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But you have relied on documents, and perhaps what you have been told, for the preparation of your statements; is that correct?-- That's correct.

All right. Now, I'll take you through a few things. Can I get you to turn to paragraph 66 of your first statement, please? In there you note that the Brisbane City Council does not specifically require that development in areas at high risk of flooding have early warning systems or evacuation routes; is that right?-- That's correct.

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However, can I get you to look at MR17? Does that document contain a list of conditions imposed on a development approval?-- It does, yes.

And one of those conditions requires that an early warning system be put in place for a premises at high risk of flooding?-- That's right.

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Are you aware of the actual development to which this condition attached?-- Not in great detail, no.

I probably don't need great detail, I'm just interested to know what it was about this development which required that such a condition be imposed?-- I probably don't know the development in specific - in - really in more than general terms.-----

Okay, well-----?-- -----As I understand it - if it helps, as I understand it it was an industrial development-----

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Mmm-hmm?-- -----and, as I understand it, it may have had some relationship between the development site and areas that have been identified that might be susceptible to flooding by the Council.

All right. I'll probably cast it wider and ask you by way of general comment what kinds of circumstances do warrant this kind of condition being imposed?-- The Subdivision and Development Guidelines which are referred to in City Plan, and called up for most development assessment, make provision for some specific uses, primarily non-residential uses, that consideration can be made for a risk management approach. In those cases, in that narrowly-defined set of cases, conditions can be imposed on the development to ensure that the risk management approach is applied.

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So it's only in a narrowly-defined set of cases?-- Yes.

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All right. Okay. In the hearings of this Commission we've heard about the difficulties faced by some communities, even within Brisbane, which were isolated or for whom evacuation was difficult. Is it open or feasible or appropriate to include the need for some kind of consideration of evacuation routes when considering other development applications?-- Yeah-----

In a wider - a more widely defined category?-- Yes, I think so. I think - well, I know that the - the requirements of the Subdivision and Development Guidelines also includes the requirement to provide flood-free access to sites on top of the provisions for the site, the development itself being protected from flooding. So for residential developments it requires that road access be provided with an ARI 100 flood immunity and for non-residential or primarily industrial and commercial developments that an ARI 50 flood immunity be provided.

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Right. And in this context, when we're talking about evacuation routes, does Council hold all the necessary information that it needs to undertake this sort of evaluation?-- Council regularly updates its flood mapping on a catchment by catchment basis and in other ways but if there is a - if there is a suspicion or an indication during the assessment of an application that flood-free access might not be achievable then the applicant will be asked to provide more up-to-date and possibly more thorough modelling that's relevant to the application at hand.

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All right. Can I take you to paragraphs 72 to 77 of your first statement where you discuss how the Council manages the assessment of environmentally-relevant activities, ERAs, that have been devolved to the Council, and you list some of the activities that the Council assesses. Things like motor vehicle workshops, chemical storage within certain limits, boilermaking and so on. Is it the case that applications for

these types of activities are not actually assessed against the City Plan but against the criteria in the Environmental Protection Act?-- That is correct, although there is a difference. Some applications are assessed primarily against the Environmental Protection Act that are not assessable against the planning scheme-----

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Right?-- -----and other development that might include those activities could also be assessable against the planning scheme.

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Okay. Well, I think you acknowledge, though, that the Environmental Protection Act's criteria do not include criteria which called for a consideration of whether chemicals or hazardous materials will be located on land at risk from flooding; is that right?-- That is my understanding.

All right. Are you aware of what criteria do apply to applications for environmentally-relevant activity?-- Not specifically off the top of my head, no.

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All right. Are assessments for environmentally-relevant activities conducted by Council's assessment officers?-- Some environmentally-relevant activities are devolved to Council for assessment by Council.

Which part of Council does that?-- Generally if it's not an assessable development under the planning scheme it will be assessed by our regulatory and compliance area.

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Okay. At paragraph 76 you state that applications for environmentally-relevant activities are sometimes lodged with development applications for a particular land use and you go on to describe how when this occurs Council will assess the appropriateness of this land use against the City Plan; is that right?-- That's correct.

And then in paragraphs 79 to 85 you note that development applications that involve the use of hazardous materials, or chemicals, will often be for industrial land uses, and you go on to describe the process for assessing those applications. And I know you do that in your statement but could you just explain it to me?-- Yep. The process - generally speaking industrial activities are captured - if there is any building work or often a material change of use on industrial land for industrial activities or warehouse activities, which are often similar in impact, they're called for assessment against the - if it's a code-assessment application they will be called for assessment against primarily the codes, the levels-assessment tables within the plan and the codes within the plan and any relevant material that the codes will call up. If it's an impact-assessable application, and in general terms the higher level impact - the activities that will cause a higher level of impact generally become impact-assessable applications which are a higher or more greater level of scrutiny against the plan, they can be assessed against not just the codes but also the desired environmental outcomes of the scheme and other relevant material within the scheme.

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All right. Look, I don't - please don't let me oversimplify anything but would it be fair to say that within all of those arrangements there is a flexible approach to allowing industrial development in flood-prone land?-- There's a flexible approach in that normal activity can occur generally within existing buildings, normal economic activity around existing buildings and existing uses can occur, but in general I would say that the town plan will call for an application if there is an expansion of an activity relating to building works or a change - a material change in the use of the site in relation to an activity for industrial development.

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All right. Well, just to put this in context. I mean, the reason I ask is, as you are aware, the Commission required information from the Council about the clean up of the Oxley Creek catchment, and I just want to show you a couple of documents that were received as part of that request. The first is a memorandum from the Council to the Department of Environment and Resource Management. It's dated 25 January 2011. And the second is a Brisbane City Council internal memorandum dated 27 January 2011. I'll have those shown to you?-- I'm sorry, I missed your question.

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Have you read those?-- I have not seen these before.

Okay. Well, just have a quick look at them. And I suppose, to give you the heads-up, what I'm only seeking to establish is the basis for our concern that they relate substantially to the recovery of materials in the Oxley Creek catchment. That's not of concern to us but they both note that the inundation of industrial and commercial facilities adjacent to Oxley Creek led to the release of large volumes of hazardous materials into the catchment and its tributaries. I'm just identifying that as the basis for this line of questioning. So you glean that from the documents?-- Yes.

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Yes, all right. I'll tender those.

COMMISSIONER: The memorandum dated the 25th of January will be Exhibit 545, the memorandum of the 27th will be Exhibit 546.

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ADMITTED AND MARKED "EXHIBITS 545 TO 546"

MR CALLAGHAN: And, to cut right across it, I suppose, could I ask you to consider whether, in the light of that sort of situation as reflected in the content of those documents, in some circumstances would it be open or, indeed, more prudent for the relevant provisions to be more prescriptive about where dangerous chemicals can be located?-- I think it would be relevant. The question is whether that activity should be captured and assessed under the Brisbane City Council Town Plan and assessed by the local authority-----

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Yes?-- -----or whether the consideration under the Environmental Protection Act should include some sort of consideration of flooding or even the quantum of the activity that occurs should trigger assessment against the Act at a lower - at a lower level, if you like.

1

Well, you're free here to give your own opinion, drawing on your expertise. What is the best way of dealing with the situation to avoid that sort of thing happening again?-- I think I probably couldn't draw a conclusion for you but I could speculate-----

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Make a suggestion?-- My suggestion would be that I think what would need to be considered is to find the balance between businesses/people acting on their site without having to go through often expensive and lengthy and difficult town planning approval processes by way of undertaking those activities as opposed to a specific application that would deal with the activity of the - involving the hazardous material, which is of relevance, I think, to the Environmental Protection Act, so therefore on that basis I would suggest that I think Brisbane City Council should always look at improving its standards in relation to the storage of hazardous materials and industrial activity but I think that the - I think that some of the activities that might have been referred to in those documents may well have been better dealt with through the Environmental Protection Act.

20

All right. Still on Council's - or what Council can do, though, perhaps we can look at attachment MR18, and only again to lead into a more general discussion. It contains a list of conditions attached to a development approval?-- Yes.

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Is that right?-- Yes, that's right.

And, again, broadly speaking, a number of those conditions contain just fairly standard advice. For example, condition 218 requires that a development involving an environmentally-relevant activity requires an application to be submitted to either the BCC or DERM in accordance with the EPA. I probably don't need you to dwell on that other than to accept that's an example of a fairly standard sort of a-----?-- I would agree with that-----

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-----condition?-- -----yes.

And the question is this, is it - should there be some more prescriptive standard conditions imposed on development occurring in a floodplain when that development might involve the use of dangerous chemicals or hazardous goods?-- I think it would help but - to answer your question, yes, but I think something that would need to be considered when setting conditions is the ability to enforce them-----

50

Well, that's an interesting point, would you develop that?-- Council should really - should only set conditions that relate to its - to what it can - it has the authority to manage or regulate-----

Yes?-- -----and so by making a statement that all development involving an environmentally-relevant activity, as defined under the EPR, should be assessed in accordance with the procedures that exist in the Act, it's a statement - it's a statement of fact, effectively, in that this is the normal way that ERAs should be - should be dealt with.

1

Yes, but your point about enforcement?-- So the question then is who is then responsible for enforcement, and I think in the case of devolved ERAs, and other ERAs, Council is responsible for enforcement-----

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COURT REPORTER: I'm sorry, "DRAs"?

WITNESS: I'm sorry. Environmentally-relevant activities. Council is authorised to - is authorised to consider their enforcement and in other cases the State Government.

MR CALLAGHAN: All right. So there's a question of division of responsibilities and, as always, resources to devote to enforcement; is that right?-- I think so.

20

Just on another topic. Can I take you to paragraph 89? You say there's only one purpose-built levee in Brisbane. As a matter of interest, where is that?-- As far as I am informed it is in the ULDA, the Urban Land Development Authority site at Fitzgibbon.

Okay. Do you know when that was built?-- No, I do not.

30

Right. Excuse me. Can I turn to some questions relating to what we call "river architecture", including the assessment and construction of the New Farm Riverwalk. Now, it was built in 2002, and it's the case, is it, that Brisbane City Council was not the assessment manager for the Riverwalk?-- I don't know the answer to that question.

All right. Well, looking forward, is it the case that the Brisbane City Council will be the assessment manager for any replacement of the Riverwalk?-- Yes.

40

That's obviously likely to be a large undertaking involving many millions of dollars. Given that, is it the type of thing that should be reviewed by an independent assessor as well as the Council?-- I wouldn't like to speculate.

You wouldn't even like to offer an opinion as to whether that would be sound practice?-- Because I'm not a qualified engineer-----

50

All right?-- -----I wouldn't like - I wouldn't like to, no.

Okay. You are also aware of the Drift Restaurant which achieved so much prominence during the January floods? That restaurant, we understand, was approved for development in 1988. Whatever the process might have been then would it be done differently today?-- I would imagine it would be.

And how would that - how would the application for such a development be treated today?-- Well, the application, without knowing the specifics of that - of that particular - that particular development, I would suggest that the development within the river - I would ask a question as to whether it would actually be assessed by Brisbane City Council and if it was it would be assessed against the codes and provisions in the City Plan, and I would imagine that because it's not something that the City Plan envisages that all relevant parts of the City Plan will be called into play for the assessment as to whether that development is consistent with our standards and policies.

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All right. Could I have Exhibit 506 on the screen? We don't have hard copies, I understand, but Exhibit 506 is the independent review of the Brisbane City Council's response. Do you see that? Page 55 in front of you. Do you need to see the cover of the document? You know the document I'm talking about?-- I don't know the document. The document I have in front of me is page 69.

20

Okay. There's the cover?-- Oh.

Now do you know what I'm talking about?-- I've been made aware of the document but I don't know the document in detail.

All right. Perhaps I can summarise the effect of it. You're not familiar with that document - with the contents of that document at all?-- No.

30

Okay. Well, look, in short compass, it's suggested in that report that - or it's noted, rather, that the rebuilding or repair of dwelling houses to the "as was" standard and design prior to flood damage requires neither development approval nor building approval, provided the original "as was" use was lawful. You accept that?-- I do.

And it notes, or the report notes that regulating the retrofitting of commercial buildings with flood-proof design measures will be difficult from a council perspective because the planning scheme obviously deals with new development. You'd agree with that?-- I would agree with that statement.

40

Yeah. And as to these points the conclusion is in - or to the effect that changes to Queensland Government legislation and statutory codes would be the primary mechanism to achieve those aims of the regulations of retrofitting with flood-proof designs. You agree with that?-- Yes.

Do you have a view as to the sort of State legislation that might achieve that end?-- Not - I don't think I could offer an opinion.

50

All right. In the same report it's noted that - and this is on page 63 - that a draft code for basements and building services is expected to be completed in May 2011, and that a draft design code for resilient building design is being developed. These seem to be proposed as separate measures,

separate from the Temporary Local Planning Instrument; is that right?-- Reading the document in front of me they do seem to be recommended as separate documents.

1

Are you aware of the status of these proposed codes?-- I'm not aware of any status of particular codes mentioned here but I can say that as far as I understand the Temporary Local Planning Instrument, it does deal with development of services or the regulation of services within residential and commercial buildings.

10

All right. But you've got no further knowledge at the moment about those draft codes?-- No.

Is that something perhaps we could get some further information from Council on?-- Absolutely. I can offer that there is work being done within Council to develop an overall response to disaster management and to the flood and there is a development of, I guess, policy positions which will lead to codes which may well deal with these matters but I'm not aware-----

20

All right-----?-- -----of any codes actually being prepared.

We might follow that up with you later?-- Okay.

Can I take you to paragraph 26 of your first statement, and it is here that we address the topic of the Q100 and the history of the Q100 in Brisbane, and you purport to summarise the history in paragraph 26. Paragraph B, or sub-paragraph (b) you discuss the 1994 study done by the Council; is that right?-- That's right.

30

And then in subpara (c) you discuss the 2003 Expert Panel Review?-- That's correct.

Are you aware, now at least, that numerous flood studies were completed between 1984 and 2003?-- I'm - I've been told that there were but I haven't sighted any.

40

All right. I'm just going to proceed now to tender a series of them. The first is the Brisbane River Flood Study by Sinclair Knight Merz dated June 1998. I tender that.

COMMISSIONER: Exhibit 547.

ADMITTED AND MARKED "EXHIBIT 547"

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MR CALLAGHAN: That study was reviewed by Professor Mein for the Brisbane City Council in December 1998. I tender that.

COMMISSIONER: Five hundred and 48.

ADMITTED AND MARKED "EXHIBIT 548"

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MR CALLAGHAN: In June 1999 the Brisbane River Flood Study Draft Report by Brisbane City Council City Design was released. I tender that.

COMMISSIONER: Five hundred and 49.

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ADMITTED AND MARKED "EXHIBIT 549"

MR CALLAGHAN: Then in December 1999 another internal council report in draft form was prepared. It's the "Further Investigations for the Brisbane River Flood Study". I tender that.

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COMMISSIONER: Five hundred and 50.

ADMITTED AND MARKED "EXHIBIT 550"

MR CALLAGHAN: The next major report was the Independent Review Panel report dated 3 September, which you do mention in your statement. That's annexure MJR15; is that correct?-- That's correct.

30

That review was a review of two draft reports which had been prepared by Sinclair Knight Merz and those draft reports ended up in the form of two final reports in 2004. The first of those is dated 5 February 2004, titled, "City Design Flood Modelling Services". I tender that.

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COMMISSIONER: Five hundred and 51.

ADMITTED AND MARKED "EXHIBIT 551"

MR CALLAGHAN: And the second is dated 6 July 2004, titled "Calculation of Floods of Various Return Periods on the Brisbane River". It dealt with Q10, Q20, Q50 and Q2000 floods. I tender that.

50

COMMISSIONER: Five hundred and 52.

ADMITTED AND MARKED "EXHIBIT 552"

MR CALLAGHAN: Mr Reason, why were none of those flood studies included or even referred to in your statement?-- As I say in my statement, the collection of studies and the availability of studies to me was prepared under my direction by officers. I can't answer to - answer you as to whether or why these documents were not offered by the sections of Council that prepared them.

1

All right. So you asked other people under your supervision to obtain relevant flood reports and you've exhibited the ones you were given; is that right?-- That's correct.

10

And did you - was your statement subject to review by anyone else at the Council prior to its being provided to the Commission?-- No, it wasn't.

You didn't, for example, discuss any of the aspects of - any of these aspects of your statement with Mr Jensen or anyone else?-- No.

20

All right. Are you aware that the Crime and Misconduct Commission conducted an investigation into the concept of the public release of one of those reports, that is the June 1999 City Design Draft Report? You're just aware there was an investigation?-- I was aware there was an investigation but I wasn't aware what it was about.

There was a Mr Barry Ball who was the Council manager for Water Resources who provided a statement at that time. Are you aware of that?-- No.

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All right. I tender the statement of Barry Ball.

COMMISSIONER: Exhibit 553.

ADMITTED AND MARKED EXHIBIT 553"

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MR CALLAGHAN: Excuse me. I draw your attention to paragraph 60 of your statement. Your first statement. You were aware of a study being conducted by Sinclair Knight Merz, to which you refer in that paragraph of your statement, though, obviously?-- Yes. Well, I was aware of the study by the fact that it was referenced in the document that was tendered.

In the document which is exhibited to your statement?-- That's right.

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What were the terms of your instructions to those who were required to provide you with these reports? Did you ask for all relevant flood study reports in this regard?-- I did.

1

MR DUNNING: Well, Commissioner, can I raise an issue I have with this line of cross-examination? It seems to be well off the point of the inquiry that this part of the statement, this part of Mr Reason's statement goes to. There are a raft of other-----

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COMMISSIONER: Sorry, I can't hear you very well.

MR DUNNING: Sorry, Commissioner. The questions that Mr Reason is now being asked about, the non-production of certain of these relatively ancient documents, doesn't seem fair when one looks at the extent of the question he was responding to in this part of his statement. If this is an area of interest for the Commission, we're willing to deal with it. We'd been led to believe it was not, had been discussing the matter with Mr Callaghan and we were working towards it, but it's, with great respect, unfair to Mr Reason to be asking him what instructions he was giving and receiving in relation to the receipt of these specific reports when, if you go to page 4 of his statement, that was the context in which the evidence is now being cross-examined was given on and-----

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COMMISSIONER: Paragraph number, please, Mr Dunning.

MR DUNNING: Sorry. It's really the heading, your Honour, "Response to the Notice". So that's what he was responding to in the paragraph to which he's recently been being cross-examined on - sorry, page 15, your Honour, my apologies. And the response he's given in his statement is a reasonable one in response to the request that had been made. What's now being pursued-----

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COMMISSIONER: Sorry. Just so I can understand this, do you say he wasn't asked to produce documents?

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MR DUNNING: Well, there is a good deal of correspondence, some of which in terms disavows any requirement for us to produce these documents. That notwithstanding, we hadn't taken that point and I had thought we had arrived at an arrangement this morning so that this evidence might be efficiently given and the topic efficiently pursued. What Mr Reason is now being asked to deal with and what he is, in effect, being cross-examined about, is that he didn't produce all of these documents in response to this request. Now, with respect, that's not a fair line of cross-examination in the history of they whole-----

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COMMISSIONER: Well, just to stop you for a moment.

MR DUNNING: Sure.

COMMISSIONER: As I understand it, the context of the questioning is: You produced a number of documents but you

didn't produce these; why not? That doesn't prime facie seem unreasonable. I'm also not entirely satisfied that this part of the statement you've taken me to is by any means a complete account of what he was asked to produce and you say yourself that it isn't. So without going through every bit of the correspondence and the requirements it's a little hard to know whether at any stage he was told "don't worry about that", as you suggest.

1

MR DUNNING: Certainly, and if your Honour can't produce that letter I'm happy to, but I'm not suggesting that's a particularly useful line of inquiry. We're here to assist and we have indicated that we are willing to, but there seems, respectfully, little point in inquiring of this witness on these issues what instructions he gave and received in respect of the documents, the existence of which has never been controversial or remarkable.

10

COMMISSIONER: Well, I'm not sure how you establish that it's unremarkable without asking about it, really. Mr Dunning, I propose to allow the questioning just to establish how it is that some documents are produced and not others. It may turn out that it is, as you say, unremarkable, but it's permissible for the line of questioning to be directed to that end.

20

MR DUNNING: Thank you, Commissioner.

COMMISSIONER: Thank you.

MR CALLAGHAN: And the question was simply: The nature of the instruction that you gave to those who were being asked to provide the documents to you?-- The instruction that I gave was to provide details or documents that would help me to answer the question, how was the defined - the questions that were put to me by the Commission in that form - how the defined flood level - the defined flood event was chosen, the way in which council's defined flood event was calculated, and possibly in relation to my response to question 1 and 2, which was about how we actually deal with, or how that defined flood event or flood level was actually dealt with through the planning scheme, which is my area of expertise.

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40

All right. And I know you don't have familiarity with the contents of the documents that you have produced, that's so?-- Not detailed, no.

You did review them before including the ones that you did produce; is that correct?-- I did, that's right.

And there was nothing in them that suggested to you that there might be others of interest which should be included?-- No.

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All right. Thank you.

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

COMMISSIONER: Mr Dunning, you will go last, will you?

MR DUNNING: Thanks Commissioner.

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MR FLANAGHAN: No questions, Commissioner.

MS McLEOD: No questions, Commissioner.

COMMISSIONER: Back to you, Mr Dunning.

MR DUNNING: I have no re-examination, Commissioner. Might Mr Reason please be excused?

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COMMISSIONER: I take it there's nothing further?

MR DUNNING: No, thank you.

COMMISSIONER: Thank you. Mr Reason you are excused, thank you.

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WITNESS EXCUSED

MR CALLAGHAN: It is a little earlier than usual, but might we have the morning adjournment now, Madam Commissioner?

COMMISSIONER: All right. 25 past.

MR CALLAGHAN: Thank you.

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THE COMMISSION ADJOURNED AT 11.08 A.M.

THE COMMISSION RESUMED AT 11.31 A.M.

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COMMISSIONER: Yes, Ms Wilson.

MS WILSON: Thank you, Madam Commissioner. The next witness is Christopher Beckley and his statement addresses the Riverwalk in Brisbane.

Before we call Mr Beckley I will tender some footage of a portion of the Riverwalk floating down the Brisbane River and then I will ask this footage be played.

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COMMISSIONER: The exhibit will be 554.

ADMITTED AND MARKED "EXHIBIT 554"

EXHIBIT 554 PLAYED

MS WILSON: Thank you, Madam Commissioner.

COMMISSIONER: That was it actually being manoeuvred out of harms way; was it?

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MS WILSON: Yes, that is the case.

COMMISSIONER: Thank you.

MS WILSON: I call Christopher Beckley.

CHRISTOPHER JOHN BECKLEY, ON AFFIRMATION, EXAMINED:

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MS WILSON: Is your full name Christopher John Beckley?-- Yes.

And you're the Acting Principal Engineer Structures at the Asset Management Branch of the Brisbane Infrastructure Division of the Brisbane City Council?-- Yes, I am.

And you've prepared and signed a statement dated the 9th of September 2011?-- Yes, I did.

30

And have you got a copy of that statement in front of you?-- I do.

And, Madam Commissioner, this statement has already been tendered and it is exhibit 535.

Now if I can take you to your statement and take you to paragraph 11 of your statement, and in paragraph 11 you set out some documents?-- Yes.

40

In 11(e) you refer to a document which is attachment CJB 6 which were some drawings?-- Yes.

Now there was some confusion in relation to where these drawings came from; is that the case?-- That's the case.

Can you tell us about that?-- Yes. The as built drawings, the set that we've tendered had a date of 20/10, basically. Normally the as built drawings would be received at practical at or near practical completion, which is the project would be 95 per cent complete.

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And so you couldn't understand why you had these drawings and there was no accompanying documents?-- That's right.

You've done further searches and you've found the accompanying

document. Yes.

1

Can I show you this document, please. This was the existing structure audit and maintenance requirements that accompanied the drawings?-- Yes.

And, Madam Commissioner, I tender that document for completeness.

COMMISSIONER: Exhibit 555.

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ADMITTED AND MARKED "EXHIBIT 555"

MS WILSON: Paragraph 14 of your statement addresses the flood loading and flood load of the Riverwalk and how that is determined?-- Yes.

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Now to determine the ultimate capacity of the structure to withstand a flood, that is the Riverwalk, you refer to a Q100 event and a Q2000 event?-- That's correct.

For clarity, can you tell us was the Riverwalk designed to withstand a Q100 event or a Q2000 event?-- Okay. I haven't, myself, completed a forensic investigation into the available information. I haven't, therefore, seen the calculations by the design engineer. However, as an experienced engineer and knowing the practice at the time, we used the data from a Q100 event to inform the Q2000 loads and levels, flood levels.

30

So there is a relationship between Q100 and Q2000?-- Directly not. The designer simply is designing to survive a Q100 event. In other words, the structure will come out of a Q100 event perhaps damaged but intact and to do that it's simply - it's just a way of perceiving what we're ultimately designing for. In other words, at a Q2000 event theoretically that would be the point there would be no safety factor in design.

40

So is it the case that you can't inform us to what flood load the Riverwalk was designed to?-- No, that's not correct. The design engineer used the Q100 data and then he factors, applies a factor to that to take him to this ultimate design case, which is the terminology that we use that would apply to the Q2000, that's ultimately where it would - designed to fail.

So is it the case that it's somewhere between Q100 and Q2000?-- That's right.

50

And you can't tell me exactly what that number is?-- There's no direct relationship.

When you said that you used the data for Q100, where do you get that data from? How do you know what a Q100 event is to start these calculations?-- Basically one uses a hydraulic

engineer to model the flood event, and so it's the Q100 event that they're able to model with a reasonable level of accuracy verses the Q2000. In other words, they can't easily model a 2000 event, therefore they use the 100 and apply the factor.

1

And the data to determine the Q100 event, did you get that from the Brisbane City Council records?-- From the records, yes, they actually employed a consultant to supply the Q100 event data.

10

So when you say they actually employed someone to supply the Q100, who is "they"?-- Sorry, council employed a consultant engineer.

To determine Q100, or use the council's Q100 event?-- No, as far as I am aware they went to the consultant to model the Q100 event. What they talk about is a higher level model that this consultant supplied. So that's the information from which the designer would have relied.

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So, they go to the consultant asking, "Can you tell us what the Q100 event is?", or they go to the consultant saying, "Here is our figures of the Q100. Now, do your modeling."?-- They say - council supplied information on a lower level modelling. They have what they call one dimensional modelling, two dimensional, three dimensional. As far as I'm aware, council supplied one and two dimensional modelling information, but the consultant then modelled in three dimensions to basically verify or to give a more precise answer.

1

10

So, the council supplied the one dimensional, the two dimensional on the Q100 information that they have?-- As part of the engagement of the consultant, yes.

The reconstruction of the Riverwalk-----?-- Mmm-hmm.

-----is there going to be the same relationship between Q100 and Q2000 or is it going to be modified?-- No, the relationships - it is the responsibility of the design engineer to basically use a statistical analysis to inform the forces that would be applied throughout the whole - the life of this asset. For current standards, the relationship is set at 1.65. However, that's based on the Bridge Code. The actual asset, floating asset, would be designed to the maritime standard, Australian Standard, whereas a fixed structure would be more likely designed to bridge standard.

20

You were in the courtroom when - did you see the footage of the Riverwalk floating down the river?-- Yes.

30

So that obviously is not the outcome that the Brisbane City Council is looking for?-- That's less than desirable, yes.

When you are talking about it being damaged, that is breaking away and floating down?-- No, in terms of the Bridge Code, if I refer to the Bridge Code now, that standard, though, was not published at the time the Riverwalk was designed. However, that would have been - the information contained within that would have been readily available within the engineering fraternity. Basically the structure should survive the event with some damage. Disappearing, floating away, for me that's - that's really not the intent of that standard; in other words, we should be able to with some repairs bring the asset back into service.

40

So that it can continue to be used?-- Continued, yes.

How it was designed - the original Riverwalk, how it was designed and floated away, that can no longer be used, the parts that floated away?-- That's correct, yes.

50

So, is it the case that the number somewhere between Q100 and Q2000, it wasn't enough?-- Can you rephrase that?

The ultimate capacity of the structure to withstand a flood you told me before is somewhere between Q100 and Q2000?-- Yes.

You can't tell me the figure?-- No.

But whatever that figure was, it wasn't enough?-- Well, basically the structure fell in the event that we experienced in twenty one hundred at - if it was a Q100 event, it should have what I called survived; in other words, it should have been still either attached to its moorings or if an anchor system had been installed would have been hanging on that restraint system.

10

In paragraph 15 you refer to that at the time there was statutory requirements relating to the authorisation of the carrying out of works, like Riverwalk, in tidal areas and that time was 2002?-- Mmm-hmm.

What statutory requirements are you referring to?-- As far as I'm aware, prescribed tidal works would have applied to that.

Now, as far as you're aware, there was no statutory or other requirement for the flood resilience standards and associated design adopted for Riverwalk to be assessed by any third party?-- That's correct.

20

Despite the fact that there was no statutory or other requirement, do you think that's a good idea for such a piece of infrastructure to be assessed by a third party?-- It's quite common with major projects to employ an independent verifier which is - would be an independent consultant engineer that would basically either complete their own calculations or undertake whatever work they deem necessary to verify that the original or the consultant engineer was correct in their assumptions and in their design process.

30

And the construction of the Riverwalk in 2002, there was no third party assessment?-- I have seen no evidence of that.

Do you think it would be a good idea for the reconstruction of the Riverwalk to have a third party assessment?-- Personally, yes.

40

Your statement addresses pontoons and landings and that begins at paragraph 22. At the time of the 2010/2011 floods, were you - are you aware now that the Brisbane City Council was the assessment manager for the construction of pontoons and landings?-- I'm not in a position to verify that as such. I have dealt with the standards as design engineer and I'm aware of the need for certification. I'm not aware of who actually manages that permit process as we sit here today. As far as I'm aware, it's actually DERM that's responsible for the prescribed tidal works.

50

So is it the case your expertise is as an engineer and questions in relation to the assessment process is better addressed to person with some planning experience?-- I would suggest, yes.

Just then finally you address that requests have been made to

the Department of Environment and Resources Management, DERM, to review the Code for prescribed tidal works?-- Yes.

1

And you attach a letter that has been sent to the , the former Minister For Environment and Resource Management?-- Yes.

Perhaps if we can put that on the screen, it's CJB 12? Have you got that document? You will see it on the screen or it will be available?-- Yes.

10

You attached this document to your statement. Do you have any understanding of the council's view in relation to amending any codes for the design and construction standards for pontoons and landings?-- At this moment, I'd say from my perspective it's open minded. We're look to enter into a dialogue with industry and with the State to explore the potential for a improvement.

But it is council's view that in light of the significant number of pontoons that were unable to withstand the January floods, that it is now appropriate to review the design and construction - construction standards contained in the IDAS Code?-- Yes, it is appropriate.

20

And to that end, the council is wanting to work with DERM?-- That's correct.

And is it the case that it is the Brisbane City Council's view that DERM, the Department, should carry out a review of the Code?-- Yes, it is.

30

So, that's - it is the council's view that that is DERM's responsibility, but council is wanting to work with DERM?-- Yes.

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

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

MR FLANAGAN: No questions, your Honour.

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COMMISSIONER: Mr Flanagan. Ms McLeod?

MS McLEOD: No questions, thank you.

COMMISSIONER: Mr Dunning - oh, Mr Porter?

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MR PORTER: Just one thing briefly, your Honour. Mr Beckley, Ms Wilson asked you about the modelling that was specifically undertaken for Riverwalk?-- Yes.

1

The hydraulic modelling. Can I ask you to turn to Exhibit CJB 7? You told my learned friend that the council had retained some independent modelling. Is that the report that you were referring to?-- Yes, it is.

Now, when one is designing and constructing a structure like the Riverwalk, is it correct that it's necessary to analyse on a more micro level the forces, hydraulic and hydrological, that impact on that particular structure?-- Yes, it is.

10

And is that kind of more specific focus the focus of this further modelling?-- Yes, this essentially was to refine the understanding of the flood regime.

Yes, because when you are building something like this in a particular spot, you need to analyse quite closely how the river behaves in that particular area?-- Yes.

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Nothing further, Commissioner.

COMMISSIONER: Thank you. Do you want Mr Beckley excused?

MS WILSON: Yes, thank you, Madam Commissioner.

COMMISSIONER: Thanks, Mr Beckley?-- Thank you .

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WITNESS EXCUSED

MS WILSON: I call Ashley Horneman.

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ASHLEY SIMON HORNEMAN, SWORN AND EXAMINED:

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MS WILSON: Is your full name Ashley Simon Horneman?-- Yes.

And you're the project manager for the ferry terminal upgrade programs?-- That's correct.

For the Brisbane City Council?-- Correct.

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And you have provided a statement to the Queensland Floods Commission of Inquiry?-- Yes.

Have you got that statement in front of you?-- I do.

Madam Commissioner, I tender that statement.

COMMISSIONER: Exhibit 556.

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ADMITTED AND MARKED "EXHIBIT 556"

MS WILSON: If I can take you to paragraph 10 in your statement, where you refer to the flood level standards. The use of Q100 in the flood level standards is included in design documents?-- That's correct.

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So, that is a standard that in designing ferry terminals, the Q100 is a standard that is applied?-- Yes.

And it's expressed from the Q100 and then it's expressed at various height levels at relevant points, for example, Q10, Q25 and Q100?-- Generally for design purposes we use Q100.

Okay. So, to design a ferry terminal, is it the case that it is designed to withstand a Q100 flood?-- Designed to survive a Q100 flood, yes.

40

And when you use the term "survive", that means to be able to be used again intact or with damage?-- You would expect some damage, yes.

But to be able to be repaired and to be able to be used a short time after the flood?-- That's correct, yes.

Now, in terms of obtaining the Q100-----?-- Yes.

50

-----what is the Q100 at that point in time point in the river, where is that data obtained from?-- We obtained that from City Projects Office formerly City Design. They provide us with a one page sheet of ranging from Q10 to Q100 and DFE flood levels and velocities.

So, the data is obtained from the Brisbane City Council?--

That's correct.

1

Now, at paragraph 33 you set out the following - the ferry terminals that had to be reinstated, that you had to start again; is that the case?-- That's right.

And there's seven of those and also there was West End, but that was a project that was - that had already commenced before the floods?-- Yes.

10

So, there are eight - after the floods there are eight new terminals that the Brisbane City Council has to build?-- That's correct.

Now, the replacement terminals will have different design standards than the previous terminals?-- Yes.

And you go through those differences in your statement and they include the deflection structure upstream?-- That's correct, yes.

20

And is that so that when pieces of debris come down the river, that the terminals will be designed to survive that?-- It's - the deflection structure is designed to deflect any debris away from the main pontoon itself so we don't damage the pontoon.

And the retractible gangway is another design initiative that these new terminals will have?-- That's correct.

30

And can you tell us how that will work in a flood?-- At the moment it's just a concept design. At the moment the idea is that as the flood level rises, it also rises off its landing on the land side. It is then retracted - retracted 90 degrees to face downstream so it's out of the main debris flow.

And is that where it was seen that a lot of damage to these terminals occurred?-- Yes, correct, debris, yes.

Is that just a concept at the moment or something that is actually being progressed?-- It's a concept design that's being accepted and the detail design will be progressed shortly.

40

These new terminals will also deal with debris loading. Is that different than the deflection structure upstream criteria that would be - that these terminals would have?-- Be the same criteria.

Okay. These terminals will be built to flood design standards derived from council's improved three dimensional modelling of the January 2011 floods?-- Yes.

50

You talked before about the Q100 was used as a design standard for flood loading. Will these new terminals be built to Q100 standard?-- The new terminals will be built to the three dimensional model which we are - which will model the 2011 - January 2011 event.

So, it will not be Q100 per se, it will be based upon the January 2011-----?-- That's correct.

-----event?-- That's correct.

And that's where the models will be worked from that?-- As I understand it, yes.

Now, do you have some knowledge of the role that the Brisbane City Council plays as the assessment manager for the constructions of pontoons and landings?-- Yes, I do, some general knowledge, yes.

10

Well, perhaps if you can assist and - because if you can assist us to answer some of these questions. The Brisbane City Council assesses the design standards and the flood resilience standards, and the flood resilience standards are part of design standards for landings and pontoons?-- Not that I'm aware of. The DA is just - the council's development assessment manager.

20

Yes?-- That means that they - the designs that we submit to them get passed to DERM or DD or any of those State Government concurrence agencies and they may look at it from a more structural point of view.

The relevant standards are defined within the Queensland Coastal Protection and Management Regulation; is that the case?-- Schedule 4A, I think it is.

30

Yes. That is the responsibility of DERM?-- That's correct.

You refer to the schedule 4A. Schedule 4A contains the IDAS Code, which is the Integrated Development Assessment System Code?-- Yes.

And if you can have a look at this document, which is section 4A of the Queensland Coastal Protection and Management Regulations 2003? Now, have you got that document in front of you?-- Yes.

40

Are you aware that the Brisbane City Council is wanting the Department of Environmental Resource Management to have a review of the Code?-- I am not aware of that, no.

Do you have any awareness how the schedule 4A is applied?-- I understand it's applied to ensure that there's - the integrity of the design meets whatever DERM's particular requirements are.

50

Perhaps if I can go to page 37 and we might be going beyond your expertise, but if you can assist that would be good. This looks at the design construction and safety of all prescribed tidal work. Can you see that?-- Mmm-hmm.

Now, if the development meets the probable solution that is in column 2, then it is deemed to satisfy a specific outcome; is

that your understanding?-- Yes.

1

Now, the Brisbane City Council can't change the specific outcome, that is a matter for DERM; is that your understanding?-- That's my understanding, yes.

However, have - the probable solution includes reference to the relevant planning scheme. Can you see that at B?-- Yes.

And in this case, what we're referring to, the relevant scheme in Brisbane is the Brisbane City Plan?-- Yes.

10

And by looking at B, if the Brisbane City Plan is more stringent than the Australian Standards referred to in the probable solution, then the standard in the Brisbane City Plan applies?-- Correct, yes.

That's your understanding?-- That's my understanding.

So whilst the Brisbane City Council can't change the specific outcome, they could include in its planning scheme a more stringent standard?-- Potentially, yes.

20

Potentially, did you say?-- If they decide to do that.

If they decided to do that they could include a more stringent standard and that would be the standard that would apply?-- Yes.

So, that would, in effect, bypass DERM to change the Code?-- My understanding is that's correct, yes.

30

Thank you very much, Mr Horneman. They're all the questions I have got for you.

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

MR FLANAGAN: No questions.

MS McLEOD: No questions, thank you.

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COMMISSIONER: Mr Porter?

MR PORTER: Just one brief thing, Commissioner. Mr Horneman, my learned friend asked you about the eight terminals that suffered major damage?-- Yes.

And you indicated that council were pursuing a strategy to replace those eight terminals. Just so it's clear, though, those eight terminals were initially reinstated; is that correct?-- Yes, that's right.

50

And about when were reinstated?-- Sorry, except for West End which - West End we planned with the actual upgrade we were going to do - we went ahead with that so it wasn't reinstated immediately.

And so at the present minute for those - excluding West End, those seven that suffered major damage, are they operational now?-- Yes.

And they're operational by the reinstatement of them to their previous design standards?-- That's correct, yes.

All right?-- Yes.

10

All right then. Thank you.

MS WILSON: Madam Commissioner, for completeness, I should tender the document that I just showed Mr Horneman, which is the schedule 4A.

COMMISSIONER: Exhibit 557.

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ADMITTED AND MARKED "EXHIBIT 557"

MS WILSON: And I have no further questions.

COMMISSIONER: Thanks, Mr Horneman. You are excused?-- Thank you.

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WITNESS EXCUSED

MS WILSON: Madam Commissioner, I call Gillian Soole.

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GILLIAN KAY SOOLE, SWORN AND EXAMINED:

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MS WILSON: Is your full name Gillian Kay Soole?-- Yes.

And you are the regional manager of Development Assessment West?-- Yes.

And you have provided a statement to the Queensland Floods Commission of Inquiry?-- Yes.

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Have you got your statement with you?-- Yes.

Madam Commissioner, I tender that statement.

COMMISSIONER: Exhibit 558.

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ADMITTED AND MARKED "EXHIBIT 558"

MS WILSON: Now, you are going to have to speak up because everything that you say is recorded and we are going to be - that's going to have to be picked up. Now, you provided a statement with respect to the Coles shopping centre at Bellbowrie?-- Yes.

30

Now, can I ask you to have a look at this document, which we will show you, which is the Bellbowrie Local Plan, and if I can take you to page 303 which is referred to as page 303 of that document? Have you got that?-- Yes, yes.

Now, the site marked CC, can you see that?-- Yes.

On that plan, that is the location of the existing Coles shopping centre; is that the case?-- I'm not sure. It doesn't look correct to me on this map.

40

CC is, if we look at the bottom of the map, is regarded as "convenience centre". What does that mean?-- I don't believe that is the location, I believe the location is on the following page.

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On the following page?-- -----of - yeah, 304-----

1

Yes?-- -----in Moggill Road. It's a location here that the shopping - that the Coles Shopping Centre is.

Okay. I'm going to give you a pen and I'm going to ask you to mark where you say that the - where you - okay. Perhaps if I could see that?-- Okay.

And we can - in fact, have we got the pointer? There's a pointer, and if you could - you see there is a - Miss Soole, there is a - it's up on the screen and if you can just show us all where you just marked that map?-- Can you see that? That - where that - there?

10

All right. It's in the - okay. When we look at the - the bottom of that map it sets out what various things mean and centres - when a convenience centre, does that have any meaning to you?-- It would be a location that's been identified as potential for a convenience centre.

20

And when we're talking about a convenience centre, what does that encompass?-- It's part of the order of centres in the town plan, so it would be a type of centre in the hierarchy that would - we would use in terms of planning for centres.

And would - does that include types of development including shopping centres?-- Yes.

Does that include more than just a corner shop but rather a more - larger-scale development?-- It could. It depends on the catchment and what's envisaged for that area.

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COMMISSIONER: Ms Wilson, before you go on, I just might ask that the hard copy be handed up here so that I and the Deputies can have a look.

MS WILSON: Certainly. And I tender that document, too.

COMMISSIONER: It will be Exhibit 559.

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ADMITTED AND MARKED "EXHIBIT 559"

COMMISSIONER: Did you end up marking it, Miss Soole?-- Yes, I did. With a circle-----

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How did you mark it? I'm just having trouble spotting it?-- With a circle.

A circle. Oh, I see it now.

MS WILSON: Now, in terms of the Bellbowrie Shopping Centre, the existing Bellbowrie Shopping Centre, the existing centre was originally approved prior to the 1974 flood; is that the case?-- Yes.

1

In 1973?-- Yes.

There have been some extensions to the shopping centre since that time?-- Yes.

10

But - and were they assessed against the current City Plan?-- They were assessed against what - the planning scheme that was in place at the time the applications were assessed.

And many of those were before the current City Plan?-- Yes.

Now, the shopping centre is an existing lawful use?-- Yes.

And can continue to lawfully operate without need for further approval?-- That's correct.

20

So despite the floods it can continue to operate with no further approval because it has an existing lawful use?-- Yes.

However, if any further development occurred on that site then that would have to be assessed against the Brisbane City plan?-- Yes.

Now, at paragraph 23 of your statement you refer to discussions with the owner of the shopping centre?-- Yes.

30

And these discussions occurred after the floods of 2010/2011?-- Yes.

And was that the case to - to - for the owner and the Brisbane City Council to look forward about - to look forward to what further developments could occur there?-- Yes. It was also to see if there was anything that could be done to assist them if they wished to do something about the shopping centre or do further work on the shopping centre.

40

The preliminary discussions included the possibility of raising parts of the shopping centre?-- Yes.

Now, what is the Council's attitude to that?-- We would support that and we would obviously work with them to assist them to raise the centre on that site.

And is what being contemplated to raise the entire centre or just parts of it?-- There was discussions on both options but it's up to, obviously, the owners or their representatives to work out the best approach as to how they might want to do that.

50

And when looking at raising the shopping centre, is that to improve flood immunity?-- Yes.

Now, are there - is there any height restrictions that may apply for this not to occur?-- There's no impediments on that - I mean, there is some height restrictions but it would be part of the assessment but the use is established so it would just be as per the requirements of the town plan and what - what they would lodge to be assessed.

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Thank you, Miss Soole, that's all the questions I have for you.

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COMMISSIONER: Mr MacSporran?

MR MacSPORRAN: Nothing, thank you.

COMMISSIONER: Mr Flanagan?

MR FLANAGAN: No questions.

COMMISSIONER: Ms McLeod?

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MS McLEOD: No questions, thank you.

COMMISSIONER: Mr Dunning.

MR DUNNING: Thank you, Commissioner. Ms Soole, can I just take up that last point that our learned friend Ms Wilson was raising with you. What are the impediments to the shopping centre being raised to produce improved flood immunity?-- Under the town plan there's no impediments, they would have to go through a-----

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COURT REPORTER: I'm sorry, I didn't hear you.

WITNESS: Under the town plan there's no impediments, they would need to go through an assessment process and subject to the proposed design, there's an assessment process for that, but other than that we believe the use is established, the building footprint's there, it's not a difficult assessment process or application for us to deal with

40

MR DUNNING: All right. And you've indicated that it's one that you'd favourably receive?-- Yes.

What about the issue of Council costs, fees associated with it, have you given any intimation to the developer about that - the owner about that?-- We did - with the owner's representatives we discussed the options of significantly discounting fees and pre-lodgment advice to assist them move forward with that project if they wanted to proceed with it.

50

Then in terms of the owner's decisions what are the other impediments that - what are the impediments, given they're not, what are the impediments that stand in the way of, for example, raising the centre?-- The - obviously the owners or the people would have to make a business decision as to whether the investment required to raise the centre would -

would give them a business outcome, a commercial outcome to warrant the investment.

1

And is the density of the population and the forecast density of the population in that area a relevant consideration in that regard?-- It would be.

All right. Can you explain to the Commission in what way?-- Obviously anybody proposing to invest in a shopping centre would want to do significant research about the growth, potential population catchment and balance that against - investment against the benefit of what they would get in return in terms of additional revenue, tenants, that sort of thing, so a lot of consideration before spending money to expand a shopping centre or increase the gross floor area.

10

All right. And what are the growth prospects for that catchment area?-- My understanding, this area not significant in - under - what we know at the moment, so it's a fairly remote area so the densities are not expected to increase significantly in the next sort of planning terms of five to 10 years, so-----

20

All right. Now, we've discussed this - or the fact that there aren't any particular Council obstacles and we've discussed the cost obstacle. What about the existing tenants, do they present any issues for the existing owner?-- Obviously the current - well, the manager or owners need to - they've already got existing tenants in place with tenants' agreements so that would also be part of their consideration if they were to progress doing anything with the shopping centre. They would need to work with the existing tenants to work through that process.

30

All right. Yes. Thanks, Miss Soole. Commissioner, I have no further questions.

COMMISSIONER: Thank you.

MS WILSON: I have no other questions, Madam Commissioner. May Miss Soole be excused?

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COMMISSIONER: Thanks, Miss Soole, you're excused.

WITNESS EXCUSED

MS WILSON: That is all the witnesses that we have this morning.

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COMMISSIONER: All right. What time do you want to resume? 2.30 or-----

MS WILSON: 2.30, yes, Madam Commissioner.

COMMISSIONER: All right. We will adjourn until 2.30 then.

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THE COMMISSION ADJOURNED AT 12.16 P.M. TILL 2.30 P.M.

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THE COMMISSION RESUMED AT 2.31 P.M.

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COMMISSIONER: Yes, Ms Wilson?

MS WILSON: Thank you, Madam Commissioner, I call Victoria Ashworth.

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VICTORIA JOY ASHWORTH, SWORN AND EXAMINED:

MS WILSON: Is your full name Victoria Joy Ashworth?-- Yes, that's correct.

And you are the owner and manager of Victoria on Rosalie, a shop at unit 3/18 Nash Street, Rosalie?-- That's correct.

20

And you have made a statement to the Queensland Flood Commission of Inquiry?-- Yes.

Can you have a look at this document, please? And is that your statement?-- Yes.

Madam Commissioner, I tender that statement.

COMMISSIONER: Exhibit 560.

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ADMITTED AND MARKED "EXHIBIT 560"

MS WILSON: At the time of the floods, your business was located at Nash Street, Rosalie?-- 3/11 Nash Street.

40

Okay. And what kind of business was Victoria on Rosalie?-- Boutique clothing.

Now, you leased those premises?-- Yes.

At the time of the floods, you were leasing the premises still?-- Yes.

Now, were you aware of any flood risk to that property, to your shop, at any time before January 2011?-- No.

50

Did you make any checks in relation to the flood risk of that property?-- No.

Now, at the beginning of January 2011 you were overseas?-- That's correct.

And you received a phone call?-- I did.

And when was that?-- Would have been about the 9th of January. I was due to return on the 10th. I was made aware of the problems in Brisbane.

And when you are referring to "the problems in Brisbane", you are referring to the flooding in Brisbane?-- Yes.

What about specifically any flooding around your shop?-- No, that wasn't mentioned.

10

On the 11th of January you were also made aware that there was maybe problems with flooding at your shop?-- Yes, at about 2.30 in the morning on the 11th.

And did you go out to your store on the 12th?-- Yes - on the 11th, we flooded on the 11th.

Okay. And what was the flooding on the 11th? That's the Tuesday?-- When I arrived in the village, it was quite easy to take all my clothing out of the store. I had many people to help me. The waters actually started lapping my store at about 6.30 in the morning.

20

On the 11th?-- On the 11th.

Okay. And on the 12th, what was the level of water at your shop?-- Say about two feet from the ceiling.

Did you get an opportunity to see where - the direction that the water was coming from?-- The direction of the water was coming from Baroona Road and the water was also coming up through the drains in Nash Street. I was witnessed this before in Rosalie Village when we have had a heavy rain where the street will flood.

30

When did you witness that?-- Last summer, last summer season.

And we're talking about the last summer season, is that 2010/2011?-- 2010.

40

So, in the latter part of 2010?-- Yes, that's correct.

But before the flooding events in January 2011?-- Yes.

At paragraph 9 of your statement you say that you assumed that the water was from the Brisbane River?-- Yes. At first I assumed that it was just from the river, because I'm - I hadn't been down there to see what the river was doing because I was just too busy, you know, taking things out of my shop and looking after people in my area.

50

But you later found out that it was backwater from the drains in the area?-- I saw that myself on the day of the flood when the waters were rising.

Did you just - how did you pinpoint that it was from the drains?-- I could see it comes up through the drains.

Now, your premises were damaged, the premises that you leased were damaged?-- Yes.

You had a loss to fixtures and other equipment that you couldn't move out?-- Mmm-hmm, that's correct.

What do you estimate the loss of your - the loss to be?-- Well, the shop fit is worth at least 50 to \$60,000. I lost \$20,000 in winter stock from the previous year and just incidents that you need to run a store.

10

You provide suggestions to the Commission about what could avoid - to avoid future flooding in the area?-- Mmm-hmm.

And that is that drains be fitted with one way valves to prevent stormwater back up?-- That's correct.

You say that, "I have since learnt that these drains have caused the same problems during previous floods and nothing has been done to rectify them." Is that what we were talking about in the December - in that latter half of 2010?-- Yes, that's correct.

20

It's no other event that you're talking about?-- No, it's storms.

Okay?-- Heavy rain.

You also refer that, "Shop owners in Rosalie need to have a flood plan." What do you mean by that?-- Just an evacuation plan to help each other.

30

Evacuation to, what, to be able - so you can get your stock out?-- Yes.

So that you know what areas will be above flooding; is that what you're looking at?-- Yes.

Thank you. That's the only questions I have?-- Thank you.

40

COMMISSIONER: There may be more, though. Mr MacSporran?

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

MR DUNNING: No questions, thanks, Commissioner.

MS BRIEN: No questions, thank you.

COMMISSIONER: Ms Brien.

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MS McLEOD: No questions, thank you.

COMMISSIONER: Thanks very much, Ms Ashworth. You are excused?-- Thank you.

WITNESS EXCUSED

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MS WILSON: Thank you, Madam Commissioner. I call Peita McCulloch.

PEITA LOUISE McCULLOCH, SWORN AND EXAMINED:

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MS WILSON: Is your full name Peita Louise McCulloch?-- It is.

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

Can you have a look at this document, please. Is that your statement?-- It is.

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Madam Commissioner, I tender that statement.

COMMISSIONER: Exhibit 561.

ADMITTED AND MARKED "EXHIBIT 561"

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MS WILSON: Have you got a copy of your statement there as well?-- I do.

Now, you are the - a part owner and resident of 90 Haig Road, Auchanflower?-- That's correct.

Now, that was your fiancé's grandmother's house?-- Yes.

40

And you became a part owner of the property in 2009?-- Correct, we bought his best friend out in 2009, his share.

When you became a part owner of the property, had you been aware that that property had been flooded during the 1974 floods?-- Yes.

And how did you become aware?-- Given that Jake's grandmother owned it in '74 we knew that it flooded, they have got photos of where it flooded to, and given that I am a town planner I was aware of the flood implications on the site from the Brisbane River.

50

Now, you are a town planner and you are presently working with the Urban Land Development Authority?-- Yes.

And you have also worked - been employed with the Brisbane City Council?-- Yes.

But you make your statement and you gave your evidence as a resident?-- As a resident, yeah.

The first level of the house was raised shortly after - before - sorry, shortly before you became a part owner?-- Yeah, it was raised somewhere between 2007/2008 so we could rent it out, it was quite unstable, so it got restumped and at that time was raised.

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And what level was it raised to?-- It was raised to what Jake thought was the flood level but turned out to be 5.92 metres which is the flood level. He raised it to what you our next door neighbours' was thinking that was the correct one. It turns out it was, but, yeah.

So let's take this slowly. What level was the house actually raised to?-- 5.92 metres.

Okay. And that was considered to be the flood level, was it?-- Yes, the flood level at our property is 5.9 metres.

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And does that include the freeboard or not?-- Yes.

5.9 metres?-- It includes the freeboard. That's for habitable floor level.

In 2010 you carried out extensive renovations to your house?-- Yes.

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In preparation for this renovation, there was a full town planning investigation?-- Yes.

What do you mean by that?-- I basically went through all the pros and cons of renovating in a flood area, given that I knew it flooded. Also we live in a character res - residential area and it's small lot, so it's quite a difficult, I guess, house to make sure you are compliant with all of council's regulations and I didn't want to go through lodging an application with council, I wanted it to be compliant and make it self-assessable, we didn't really want to go through the timeframe and the cost to lodge an application. So, going through the Small Lot Code, the House Code, the Character Code, making sure that what we could do was actually a feasible outcome for the site, that we wouldn't overcapitalise and spend too much on it, and once we worked out obviously it was the right height flood-wise we figured it was - we could definitely build a house there and not overcapitalise and build what we wanted on the site.

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COMMISSIONER: Ms McCulloch, can you slow down a bit, because it actually being recorded?-- Yeah, sure, sorry.

MS WILSON: As part of that process, you stated that you took into account that it had previously been flooded?-- Yes.

And as part of that decision-making process, you had to decide whether to rebuild and renovate on a flood zone?-- Yeah, we

basically looked at the fact that it did flood and well - what the risk - would we flood again, if we raised - you know, being above council's flood line we thought, well, we knew that we would always have some damage to the yard, I always expected there to be some flooding in the future. Being that the habitable floor was above the flood level, we deemed the risk to the actual house and contents minimal and made the decision based on that to renovate.

1

As part of your decision-making process, did you take into account the Brisbane City Council's Q100 line?-- Yes.

10

And where did you find that Q100 line?-- It was in flood report that was attached our property.

To be clear, what do you mean - what do you understand the Q100 level to mean?-- I believed that a Q100 meant it was a one in 100 year event. That doesn't mean that it only occurs once every 100 years, it was just sort of a major flood event that could occur, and that was the line that was given. I also understood that the Q100 level was based on modelling that was undertaken post '74 and taking into consideration the Wivenhoe Dam and what that would do to mitigate flooding in Brisbane.

20

And Ms McCulloch, you are going to have to slow down?-- Sorry.

COMMISSIONER: You do say quite long sentence and you say them fairly fast, so just try and break it up a bit and go a bit slow. It is because we're lucky enough to have the actual by hand recording here.

30

MS WILSON: If we can go to your statement?-- Yep.

If we got to paragraph 7 of your statement where you start to discuss the events of the January 2011 flood?-- Yes.

And this starts on the 10th of January 2011?-- Yes.

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Where you received information that Torwood Street at Auchenflower was starting to flood?-- That's correct.

Now, you were at work when you - you were told this information?-- Mmm.

Does this area where Torwood Street was starting to flood, has that ever flooded before to your knowledge?-- Yes.

Torwood Street is quite renowned to be flooding during king tides. It also has a lot of overland flow, so during the big storm events it has water in it anyway. Leading up to the January 2000 (sic) floods it did have - at some of the larger tides, it did have a bit of water in the streets, maybe ankle depth, but it does probably four times a year go under by - we're only talking up to maybe calf height, but it is - does have water in it quite regularly, yes.

50

In your opinion, does the Milton open drainage culvert come

into play in relation to this flooding at Torwood Street?-- I'm not an engineer to obviously answer that. I believe it does, but - I mean, I know I have seen water come up from the drains. I assume - I don't know in the instance of how it plays with to do with king tides and things, but I believe they're all connected to some degree, yes.

1

Now, Torwood Street where this flooding first started to occur, how far away is that from your own residence?-- Maybe 100 metres, maybe a bit more.

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Now, you took some photographs?-- Yes.

And perhaps we can - now is a good opportunity to go through those photographs. The first photograph that you will see - can you see that on the screen?-- Yes.

That is a photo of your house after the renovation?-- Correct.

20

And this renovation was completed in October 2010?-- Yeah, October 2010.

The second photo - that's obviously from the front of the house?-- That's from Haig Road, yes, that's the front.

This is the photo from the back of the house?-- Correct, we have a dual street front.

Then if we can go to the next photograph? Now, where is this photograph taken from?-- I'm standing on my deck, looking out at Vincent Street, which is our rear street and-----

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So-----?-- Vincent Street is the - there is a street beyond my fence.

Okay. So, we saw a photo just before of the back of the house. That's looking out from the back of the house to Vincent Street?-- Yes, correct.

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COMMISSIONER: Can I just orient myself? Is Vincent Street between Haig Road and Milton Road?-- It is, it - you have Haig Road, Vincent Street, another street, and then Milton Road.

Thanks. And when you come out of Torwood Street into Haig Road, you can turn right and there's a roundabout near the Milton State School, I think?-- Yes, that's correct.

Are you-----?-- We're-----

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-----to the right?-- We turn left.

You turn left. Right. Thanks.

MS WILSON: If we could have a look at the next photograph, please? In your statement you refer to water coming into the house and coming through the wall?-- Yeah, it came through

the wall of our stairwell downstairs about 10 o'clock at night-time.

1

Now, the stairwell downstairs, did you have any concerns at any point in time about the flood immunity of the stairwell?-- Yes.

What was that, what were they?-- Given that it was an enclosed structure within the flood zone but it was considered by council - I got advice that it was a void, not a habitable or nonhabitable room, so I-----

10

No, no, Ms McCulloch, you really are going to have to slow down?-- Sorry.

Anyway, so you-----?-- It is an enclosed structure within the flood zone so I always knew that it would get damaged if we had flood. That was always the risk that we were willing to take because I wanted to have a secure access point for our rear yard, I didn't want people to be able to walk up to my deck from the backyard. So, yes, we were always aware that the stairwell would be an issue if it flooded.

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COMMISSIONER: And I think too you said it was nonhabitable?-- Yes, we-----

So, it wasn't-----?-- Before when we were doing the plans with the architect and getting it signed off by the building certifier, we received advice from council that it could be considered as a void, so it didn't actually technically fall under the habitable or nonhabitable floor levels, and that was obviously a risk I took with insurances, but given that it wasn't - there's no "void" defined within the planning scheme, so it was considered to be an acceptable structure.

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MS WILSON: And it was a risk that you were prepared to take in relation-----?-- Yes.

-----to that, the stairwell? The next photograph shows that your house on the 13th of January?-- Yes.

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Is that at the peak of the flood?-- No, I believe the peak was about 4 a.m. perhaps. This is about 8 o'clock in the morning when we canoed in.

And we can see a line at the bottom of your house?-- Yes, about two floorboards above where the current water level is, that was where the peak came to.

Okay. And where did water come into your house in relation to the floorboards in the upper level?-- We had about 15 centimetres over the floorboards.

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So, was that 15 centimetres over 5.92?-- 5.9.

5.9?-- Yes.

And can we have a look at the next photograph? This is a

photograph from your rear deck?-- I'm standing in the kitchen looking at the rear deck, yes.

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And we can see that the water is still over your floorboards there?-- No, that's just residual water. By this time, which I think it must be around 9 o'clock, the water had fully receded off the deck, quite quickly actually. Between 7 and 9, it went down quite substantially, between that time, so-----

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And if we could have a look at the next photo? This is in relation to the kitchen?-- No, this one's actually bathroom. The next photograph is the kitchen.

Right. We will have a look at the next photo. This is on the 13th of January and the notation on your photo is the 7.46 a.m.?-- Yes.

And you could still see the residual water; is that it case?-- Correct, it was sitting just under the floorboards at that time.

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The damage to your property included damage to the Gyprock walls-----?-- Yes.

-----carpentry, fridges, because you couldn't get that out?-- Yes.

What about your wooden floorboards?-- They had to be fully replaced, they basically buckled. We waited the required - couple of months basically for the insurances and the bills to see if they would come back down but they just - I don't think - after two floods the old floorboards actually didn't survive. The new floorboards fared a little bit better in the extension, but they - the insurance company deemed it appropriate to basically - to rip the floor out and put a new one in.

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Aside from the necessary repairs that you had to do after the flood, are there any other measures that you are considering to do to reduce the risk of flooding at your residence?-- Not at this time. We had an engineer out just after the floods with our builders to look at the option of raising again. They determined the cost to be excess of 100,000 to raise and that excluded any cost associated with cracking of the walls, windows, mirrors and things inside the house due to the length of the house. Given obviously that our property value's gone down we didn't think - it's basically just not worthwhile to spend the money to raise it again and I think at this point with not knowing what the flood level is, do you raise it a metre, do you raise it half a metre, is it ever going to happen again, so we're basically at this point in time not taking any extra measures, no.

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What level were you considering raising it to?-- Immediately I panicked and just went let's just raise it a metre. That was without - there is well before the TPI came through with council, but that was just me not wanting to ever go through

this again. But beyond that day really that week which was about three weeks after the floods, we haven't really considered it again.

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Finally, I asked you some questions about the Milton/Auchenflower open drain culvert. Have you got any views about what you would like to see - what works you would like to see happen around there?-- I don't know what the works can be done, given I am not an engineer. I would like to see some sort of flood mitigation happen to that area. I believe they're - I know they're looking into backflow devices within our area. We have had meetings with our local councillor to determine what they may be and they're undertaking a study at the moment, I think - this is council - so it does look like something will be done. I would - I mean, that's - I believe that with the culverts being either capped or piped or some sort of backflow measures then we will have reduced flooding in the Auchenflower area, yes.

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Thank you, Ms McCulloch. Can you just wait for one moment?

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COMMISSIONER: Can I just ask, were the photos part of the exhibit already.

MS WILSON: That is what I am just finding out. No, Madam Commissioner, I have to tender those photos.

COMMISSIONER: Exhibit 563.

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ADMITTED AND MARKED "EXHIBIT 563"

MS WILSON: Ms McCulloch, that's all the questions I have for you.

COMMISSIONER: Mr MacSporran?

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

COMMISSIONER: Mr Dunning?

MR DUNNING: Very briefly, thank you, Commissioner. Ms McCulloch, my name is Dunning. I appear on behalf of the Brisbane City Council. I got just a couple of very quick questions for you. One of the things the Commission is doing is looking into how people come to understand the particular aspects of the planning scheme. Can I pass you a document and ask you to have a look at it for me? Now, this is not the Floodwise report, in fact, for your property, but it's one taken from 2009?-- Yes.

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Now, I take it because of your professional occupation, you

have seen Floodwise Reports like this-----?-- Yes.

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-----during the 10 years you were at council. Thank you. And, in particular, if I can direct your attention to the disclaimer in paragraph 2 and 3 and the explanation in paragraph 1. I don't want you to read them aloud, I want you to read them to yourself?-- Sorry, which paragraphs again, sorry?

If you go to the disclaimers, the paragraphs numbered 2 and 3?-- Yep.

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Just read those to yourself. And then the first paragraph under the heading, "Explanations". That language varied a little bit over time, but generally expressions either in those terms or material identical to them appeared in these sort of reports, didn't they?-- Sorry, what was that, sorry?

The language may have changed slightly over time, but generally provisions like those three I have just taken you to consistently appeared in these reports that were provided to people who made a flood inquiry about the-----?-- I believe so. It looks fairly standard to what was given if you asked for a flood report, yes.

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Thank you. Commissioner, I tender that document.

COMMISSIONER: Exhibit 563.

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ADMITTED AND MARKED "EXHIBIT 563"

MR DUNNING: And just finally, Ms McCulloch, if I have understood your statement and your submission to the Commission correctly, the concerns you have about the DFL are driven really by your perception of the extent of the 2011 flood compared to 1974 flood?-- I - well, yes, potentially. It's probably more my concern is the Q100 level is what most deem to be a safe habitable level, which is what you build your houses or units to, and if that water - it doesn't work in those instances, then where to from here, I suppose.

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Sure. The concerns you express are at least in substantial part driven by an impression that you have, certainly at the time you prepared your statement, that the 2011 flood was a flood of a lesser magnitude than the 1974 flood?-- Given that we knew what the height of the '74 flood was on the house particularly, we do know the water was less, but in the time when I wrote the submission it was quite quick, I didn't really - I have given it more - we have had a lot more time to think since then and at the time of the submission I didn't take into consideration that the '74 floods had a lot of localised flooding which this one doesn't which would explain why it was probably lower in volume of water at our property

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particularly.

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Right. But just getting back to that, the particular question I am interested in, at the time you prepared your statement consistent with the evidence you have given now, the views you formed were on the basis that the 1974 flood was a flood of greater magnitude than the 2011 flood?-- Yes.

Okay. Thanks, Ms McCulloch. Thank you, Commissioner.

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COMMISSIONER: Ms Brien?

MS BRIEN: I have no questions, thank you.

MS McLEOD: No questions, thank you.

MS WILSON: I have no other questions. May Ms McCulloch be excused?

COMMISSIONER: Yes, thanks, Ms McCulloch, you are excused.

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WITNESS EXCUSED

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MS WILSON: Madam Commissioner, unfortunately that is all the witnesses we have today. Because Mr Nelson was stood down we have not got any further witnesses for today.

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Can I raise a couple of matters? Can I remind the parties that if they do wish to cross-examine a witness that they give us an estimate of the time that will be required for cross-examination and also provide us with any documents that they wish to show the witness before cross-examination, and the practice direction will be amended to the extent that if a party does not wish to cross-examine a witness, if they could also inform the Commission. These matters will just assist and be able to work out the time-----

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COMMISSIONER: Well, that's evident. Everybody can see that how we time the days will depend very much on how long people will take so we look to your goodwill as well as the effect of the practice direction in achieving that.

MS WILSON: Thank you, Madam Commissioner. May we adjourn for the day?

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COMMISSIONER: We'll adjourn till 10 o'clock tomorrow, thank you.

THE COMMISSION ADJOURNED AT 3.01 P.M. TILL 10.00 A.M. THE FOLLOWING DAY

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