

**BOARD OF INQUIRY
WATERVIEW CONNECTION PROPOSAL**



IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of a Board of Inquiry appointed under s149J of the Resource Management Act 1991 to consider applications by New Zealand Transport Agency for resource consents and notices of requirement for the Waterview Connection Proposal.

THE BOARD OF INQUIRY
Environment Judge L Newhook
Commissioner R Dunlop
Alan Dormer
Susan Jackson
Sandra Hardie

**Transcription of HEARING
Day 3 – Tuesday 15 February 2011**

COURT RESUMES ON TUESDAY 15 FEBRUARY 2011 AT 9.31 AM

THE COURT: JUDGE NEWHOOK - HOUSEKEEPING

MS JANISSEN CALLS

MICHAEL CAMPBELL COPELAND (SWORN)

- Q. Is your full name Michael Campbell Copeland?
- A. That's correct.
- Q. And have you prepared evidence-in-chief dated the 11th of November 2010?
- A. Yes.
- Q. And have you prepared rebuttal evidence dated the 1st of February 2011?
- A. Yes.
- Q. Is there anything in your evidence that you wish to correct?
- A. No.
- Q. And are your qualifications as set out in your evidence-in-chief, at paragraphs 3 and 4?
- A. Yes.
- Q. Do you confirm that the contents of your evidence-in-chief and rebuttal evidence are true and correct?
- A. Yes.

MS JANISSEN:

Your Honour, I understand that the Albert Eden Local Board does not wish to cross-examine this witness, so there's no one as far as I know who wishes to cross-examine.

THE COURT: JUDGE NEWHOOK

Is that the case, the local Board's not wanting to cross-examine?

MS WILSON:

Yes, Ms Wilson for the local Board, that's correct.

THE COURT: JUDGE NEWHOOK

Then let's see if there are questions from members of the Board.
Member Dormer?

QUESTIONS FROM THE BOARD: MR DORMER

Q. Mr Copeland, I gather the cost of the project is estimated to be in the vicinity of \$2 billion, is that right?

A. That's correct, yes. Sorry, I read that, I mean sorry to refer to others but Mr Parker would be more aware of that than I.

Q. Now if it's got the benefit cost ratio of 1 to 1.2, a very simple question, forgive me.

0940

A. Sure.

Q. What does that mean the public benefit is in terms of millions of dollars?

A. The range for the benefit cost ratio is 1.2 to 2.1. What it means is for every – if we take the lower end of the range at 1.2 that says for every dollar we put in we get 1.2 dollars of benefit back and the benefits versus the costs has also incorporated the cost of capital, because the benefits take longer to accrue, the costs are incurred up front. So if you like it gives a rate of return to the public of 8% plus some.

Q. And just in terms of dollars, 1.2 of two billion is?

A. Sorry, well it would be 2.6 billion, if my maths are correct, off the top of my head without a calculator, for the two billion put in. Sorry, 2.4 billion, a fifth of two billion yeah.

Q. That gives a public benefit of a net .4 of a billion?

A. Yes in my rebuttal evidence I refer to Mr Murray's evidence. If I could just –

Q. Your maths is no doubt far better than mine. How many million is .4 of a billion?

A. 400 million.

Q. And that's over the lifetime of the project?

A. Yes. It's over the lifetime of the project. I'm not wishing to overcomplicate my answer to you, but if we imagine a sheet of, a spreadsheet, a sheet of paper, we've got some costs in the early years,

some large costs which are the construction costs, and then the benefits don't kick in until the project is completed, and then we have a stream of benefits over a period, and the analysis period is taken as 30 years. If you added up all the benefits and compared it with the costs you'd get a much higher difference than the .4 – sorry, the 400 million, and that is because we have to take into account that those benefits don't occur until later in the period.

Q. So it's all that present data?

A. So it's all – exactly, exactly, you're onto it.

Q. And that \$400 million of net, public net benefit, by whom will that be derived? Sorry, to whom will that be derived?

A. Okay. The benefits essentially in that particular calculation are road user benefits. So it's essentially to users of the road. So it's measured in terms of vehicle operating cost savings, time savings, changes in road accident costs, which in that instance in part are those benefiting road users but also agencies which have to otherwise provide health services and so forth. So if you like that's the general taxpayer. So, but essentially most the benefits would accrue to road users.

Q. And would I be correct in assuming that, as a generality, whilst there will be some national benefit to this the bulk of the benefit will be derived by Auckland road users?

A. Correct.

Q. One last point. So if we had this public benefit of 400 million over 30 years and if it were proposed to add to the start up costs of the project further conditions, which would have the effect of requiring \$25 million worth of expenditure before the motorway opened, that would – how significant a dent would that make in the 400 million?

A. Well if we were going to assume that one is our cut off point then I guess you could say that the project would still be a goer. My understanding, and again sorry to defer to others, Mr Parker's probably better able to answer this, if you added costs to the project, unless they were horrendously large in which case it may force NZTA to go back to the drawing board, as it were, but as I understand it by adding costs to the project what would happen, the NZTA has only got a fixed amount of

money to spend on roading improvement projects and public transport projects and so forth, what would happen would be you'd either get a cancellation or a deferral of expenditure on other projects, be that in Auckland or elsewhere in New Zealand.

Q. Putting it more simply, if there were extra conditions imposed that added \$25 million to the construction costs, that wouldn't reduce the net benefit to merely 375 million would it?

A. Well –

Q. Because that 25 would be borne right up front?

A. It would be, but we talked before about the net present value of it. If it was \$25 million in two years time it would be an extra cost in today's dollar terms of something in the vicinity of say \$22 million, if we present valued that. Because it wouldn't happen at times zero if you get my meaning. But you've got benefits accruing to one group of people, if you like, and you've got costs being incurred by the NZTA I guess on behalf of the taxpayer.

Q. Oh no, the costs are surely being borne by the local residents? The benefits are being derived by the nation and the region and the drivers –

A. Yep.

Q. – and the costs are being borne by the people whose community this is going through?

A. Well those particular costs – and I'm not qualified to talk about their significance – are outside the calculation of the benefit cost ratio. I mean other than the purchase of land which NZTA will have to pay for the costs of it, what economists call intangible items, those which aren't measured in dollar terms, are outside the calculation of that benefit cost ratio. So the costs in this case are the costs which NZTA incurs in doing this project, which includes some litigation costs, but arguably there could be other non-mitigated costs over and above that which would have to be considered separately. But the costs that NZTA are paying come from what I understand to be a fixed bucket of resources which NZTA has to spend on roading projects, well transport projects, it's roading plus public transport, throughout New Zealand and it sets various priorities by various means and has decided that this is a

priority, this is one which is going to get done. If indeed the costs go up, unless they went up horrendous – if they doubled, for example, I assume that would cause NZTA to go back to the drawing board, but assuming they weren't of that sort of significance then simply the costs would go up and NZTA would have less in their bucket for other projects, be they in Auckland or elsewhere in New Zealand.

Q. Certainly I appear to have the wrong end of the stick in regards to the sort of notional 25 million to which I referred earlier and I'm grateful for your help there. So if the costs of the project to NZTA were increased by 25 million that would – and that wouldn't be incurred for say another two years, that would have the effect of reducing the net benefit by say 22 or 23 million?

A. In their present value terms, that's correct

Q. Thank you because I had it the wrong way round, I thought we'd add to the amount to be subtracted.

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP – NIL

QUESTIONS FROM THE BOARD: MS HARDIE – NIL

QUESTIONS FROM THE BOARD: MS JACKSON

Q. Mr Copeland, when you say "time travel reliability is important", and I agree with that statement, can you sort of quickly explain how that comes into the 1.2?

A. Well it's part of the benefits of the project, so we, again if we go back to this spreadsheet example we have some negatives in the first few years, which are basically the capital costs of the project which are incurred by NZTA, and then we have a series of benefits in years running out into the future. And part of those benefits are accrued to motorists and that is a function of how many motorists there are times the extent to which travel reliability's improved. And so that goes in, if you like, the top line of our benefit cost ratio which is the benefits divided by the costs, if we like, 2.6 billion of benefits in net present value terms

divided by the two. So the trip time reliability benefits are included in that 2.6 on the top line.

0950

Q. So if there was more benefit to more road users, the 1.2 would be higher?

A. That's correct.

Q. Right.

A. And I keep focussing on the minimum value –

Q. Oh it's just a number –

A. – because there are various other measures, but the point, the key point for me in terms of it being consistent with efficiency is anything greater than one, because in that instance benefits are greater than the cost.

Q. And this \$400 million of benefits that's the excess, working on that 1.2 again, how much of that would be of benefit to the local community?

A. I couldn't disaggregate it. Sorry again, to use the Billy Goat's Gruff concept of a bigger goat after me, but I think he was before me. Mr Murray, in his evidence he has disaggregated where the benefits occur in terms of travel times savings and so forth. Clearly there are a number of people going through Auckland who will benefit and arguably they have nothing, they might even not have anything to do with the Auckland region. There may be exports going to the port or people going to the airport, people like myself from Wellington who you'd regard as not an Auckland resident, who would benefit by reduced congestion and a lower taxi fare or whatever. But having said that, I would have thought there are a number of trips having either their origin or their destination within the local area, in other words within the area where the motorway extensions and connections are being made, and therefore there would certainly be some benefits to local residents and local businesses.

Q. But you don't have that as a percentage?

A. No I don't. I mean again making work for other people, I'm sure – you know Mr Murray would have the disaggregated data. In his evidence, in paragraphs 53 to 60, you will see some estimated time savings on some of the local roads, where because as I understand it traffic, as a

consequence of the project, not only are we improving the travel time distances on the two motorway bits, but also there is a transfer of traffic onto State Highway 1 from the local arterial roads within the project area and I guess – and he’s identified that the time savings per vehicle if you like, in those paragraphs, on those particular routes which will give you some idea of the significance, the time savings. For people who are – having said that, not all people who use those local roads would be local residents, because quite often now people use “rat-runs” as they call them where people divert off the major roads to use the local roads. My taxi driver this morning didn’t get it right I don’t think because we still got held up, but he perceived it to be a shorter route than using a main route.

QUESTIONS FROM THE COURT – NIL - JUDGE NEWHOOK

RE-EXAMINATION: MS JANISSEN – NIL

MR RICHARDS:

Your Honour, I wondered if I could just question Mr Copeland?

THE COURT: JUDGE NEWHOOK

You are?

MR RICHARDS:

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THE COURT: JUDGE NEWHOOK

Your name is?

MR RICHARDS:

South Titirangi Ratepayers.

THE COURT: JUDGE NEWHOOK

Sorry?

MR RICHARDS:

South Titirangi Ratepayers.

THE COURT: JUDGE NEWHOOK

South Titirangi Ratepayers?

MR RICHARDS:

Yes.

THE COURT: JUDGE NEWHOOK

And your name is?

MR RICHARDS:

Rob Richards.

THE COURT: JUDGE NEWHOOK

Can you come near a microphone please or we're not going to record you. Have you given notice that you wish to cross-examine this witness?

MR RICHARDS:

No I haven't but I noticed that Albert Eden are not so I thought maybe it's an opportunity for me to speak.

THE COURT: JUDGE NEWHOOK

No, no we're not, we're conducting the hearing in a way that doesn't involve people just coming when they feel like it and turning up and speaking when they feel like it. It's not a political meeting, this is a Court hearing involving an extremely complex project, with a large number of players and I have deliberately been case managing it in order to have an understanding of who wants to be involved with which of which parties' witnesses and when and for how long, so that we can timetable the whole thing. Now these, our notices to parties about these requirements have been going out to parties and should have been read and understood, they're not difficult to understand, and I don't

consider, for myself, I'll consult my colleagues, but I don't consider that we can just have somebody popping up from time to time. I'll just see what –

MR RICHARDS:

Yeah well with respect sir, on Friday a Mr McKenzie was allowed to ask questions. I don't think he was on the timetable.

THE COURT: JUDGE NEWHOOK

Yes we did make a bit of an exception as we were getting started in the process, but people should be getting, gaining an understanding of the process. And you'll also recall that on Friday I reiterated that parties should confirm or modify their requests for cross-examination and give new estimated times in the light of their developed understanding of the caucus reports and the rebuttal evidence that they would by now, by today, have had a chance to read and so if I was minded to make an exception on Friday for Mr McKenzie I'm less minded to make one today. Now I'm just going to consult my colleagues and see if they were going to differ from my view. No, our collective decision is that we are getting to the point where we're needing to play by the rules and we are not going to permit the questioning. One imagines that if you have matters that are of particular interest to you in this area they will have appeared in your evidence if you have filed some, or if not that they will have at least appeared in your submission and you're going to have to content yourself with those. I will add one other comment, for the benefit of all who are listening, and that is questioning by people in the courtroom will almost never be undertaken after the Court has concluded its questioning and re-examination, if any, has been done by or on behalf of NZTA, and there is a prescribed order for questioning which you will have started to observe as we've been through a number of witnesses now.

MR RICHARDS:

Yes thank you sir. Sir if I put my questions by Friday is that correct for next week?

THE COURT: JUDGE NEWHOOK

If you wish to question witnesses you should by now have lodged a notice with the EPA identifying the witnesses that you wish to cross-examine and on broadly what topics and for approximately how long. Now that is supposed to have been done by now.

MR RICHARDS:

Oh right, I had notification last night, late about 10 to seven I think, that Friday was, this Friday will be the cut off date by which all these indications and who –

THE COURT: JUDGE NEWHOOK

I don't understand that. I'm just going to leave you to talk to the EPA about that and they can consult me if they need to, all right.

MR RICHARDS:

Thank you.

THE COURT: JUDGE NEWHOOK

We need to get some constructive discipline into running complex hearings. I'm sorry that's how it needs to be.

MR RICHARDS:

No that's all right, thank you.

MS JANISSEN CALLS

HUGH LEERSNYDER (SWORN)

Q. Is your full name Hugh Leersnyder?

A. Yes it is.

Q. And have you prepared evidence-in-chief dated the 9th of November and rebuttal evidence dated the 3rd of February?

A. Yes I have.

Q. Are your qualifications as set out in paragraphs 2 and 2 to 4 of your evidence-in-chief?

A. Yes they are.

Q. And is there any aspect of the evidence you wish to correct?

A. No.

Q. And do you confirm then that the contents of your evidence are true and correct?

A. Yes.

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THE COURT: JUDGE NEWHOOK

Yes, good morning Mr Leersnyder, let's see who we've got. The Onehunga Enhancement Society would like to question you. Would you like to come near a microphone please, just remind me of your name again.

MR JACKSON:

My name is Jim Jackson I'm chairman of the Onehunga Enhancement Society.

CROSS-EXAMINATION: MR JACKSON

Q. Mr Leersnyder, in terms of the Waterview Project, can you confirm that all work, all earthworks, including the tunnel, the cut and cover and access ramps form the total of 1.4 million cubic metres of material to be removed from the site?

THE COURT: JUDGE NEWHOOK

If that's a question that's best answered by others, just say, "It's not in my area."

CROSS-EXAMINATION CONTINUES: MR JACKSON

A. I believe that's a question that's probably better answered by Mr Walter, but 1.4 billion, sorry 1.4 million is a figure that I have heard.

Q. Can you confirm the number of truck members that would be involved in the removal of that material from Waterview to one of the selected sites or any of the selected sites?

A. No, I'm sorry that's not within my area of expertise.

Q. So could I sort of put a question to you, is that I understand NZTA has a volume of seven cubic metres per truck and therefore that will involve 200,000 round trips of removing material, possibly through residential streets. I see you're involved in traffic and construction. Is that a fair question to be putting to you?

THE COURT: JUDGE NEWHOOK

No.

MR JACKSON:

Not.

THE COURT: JUDGE NEWHOOK

Sorry Mr Jackson, he's not a traffic engineer.

MR JACKSON:

It says, "construction traffic." You don't see it, oh well okay.

THE COURT: JUDGE NEWHOOK

"Construction management."

CROSS-EXAMINATION CONTINUES: MR JACKSON

- Q. Sorry I apologise. Sorry it was construction management, that's what I was referring, I apologise. But it was in terms of the process that you are involved in, in terms of removing material, does that form part of the questioning that I can put to you or not? The process of actually removing material, and you've indicated you're saying it's not part of your construction management programme?
- A. The actual detail of how the material is removed and where it goes is not something that I am experienced or qualified to comment on.

THE COURT: JUDGE NEWHOOK

The Friends of Oakley Creek.

MS DOCHERTY:

I'm Heather Docherty from Friends of Oakley Creek.

CROSS-EXAMINATION: MS DOCHERTY

- Q. The Friends of Oakley Creek have some questions that have arisen in response to reading your rebuttal evidence and your evidence-in-chief. As the CEMP, the construction environmental management plan covers a broader range of specific management areas, we're not quite sure whether you'd be the right person to ask so can you please direct us as you have?
- A. Surely.
- Q. Who might be the best person, thank you. As this project's the largest motorway project in New Zealand and runs a significant length of Oakley Creek and we acknowledge that there's other impacts on the creek as a result of its urban context, the motorway contributes to these long term effects. Has other management, catchment management documents been referenced in the management plans that have been provided in CEMP, such as the Oakley Creek watercourse management plan?
- A. My understanding is that Dr Tom Fisher will be giving evidence on the stream and the hydrology within the stream and I also understand that

he has had communication on that particular document so your questions on that topic might be best referred to Dr Fisher.

Q. Dr Fisher, thank you. And with regards to vegetation management, such as the tree schedule, is that something better directed to the vegetation specialist?

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A. Yes I suspect that – well it depends on the nature of your question, but I suspect that Mr Slaven might be the appropriate person there.

Q. It does refer to some statements made in your evidence-in-chief, but I presume –

THE COURT: JUDGE NEWHOOK

Put the question and see. There may be some crossover, I perceive, between who might answer some of your questions.

CROSS-EXAMINATION CONTINUES: MS DOCHERTY

Q. So if we refer to paragraph 8 of your evidence-in-chief it refers to the removal of existing vegetation prior to construction and a council approved arborist checking the trees which can be removed and which cannot. The focus of this paragraph appears to be on the amenity value of trees rather than the ecological values of vegetation. So there's two parts to my question.

THE COURT: JUDGE NEWHOOK

Just pause before you do. I'm not sure that it's paragraph 8, it's certainly not the paragraph 8 I'm reading.

MS DOCHERTY:

68, I beg your pardon.

THE COURT: JUDGE NEWHOOK

Yes, what are these two parts to your question?

CROSS-EXAMINATION CONTINUES: MS DOCHERTY

- Q. Firstly, how would the vegetation removal be managed to minimise the ecological impact on the areas such as waterways and the wetlands, especially in areas such as Waterview Glades which is construction yard 7?
- A. How will the...?
- Q. The removal of vegetation be managed to, with regards to ecological values, rather than simply the amenity values of trees?
- A. Yes, the management of ecological matters will be detailed within the ecological management plan, which is an appendix to the construction environmental management plan and has also been appended to the evidence of the witnesses who will be speaking on ecological matters, and I think that there are three or four of those.
- Q. And now referring to paragraph 70 of the same evidence-in-chief about the community liaison and sort of public information conditions, I note that in the CEMP the, it outlines the environmental emergency response methods. Will – if in the event of an environmental emergency, how will this be communicated to the community, especially given that people may be working in or near the creek, if an unforeseen emergency occurs?
- A. There are – the emergency response procedures are detailed in the construction environmental management plan and depending on the nature of the event there's an escalation of information transfer which ultimately relies on the information of the event being given to the Auckland Council, who I anticipate will be the body that will be monitoring the compliance of the construction activities. And there are mechanisms also highlighted within the conditions of the draft conditions and also within the construction environmental management plan which allow for a community liaison group to be established and for two-way communication to occur between NZTA and the community through that liaison group. So –
- Q. Would that ensure a swift response, an immediate and swift response? We have schools, school children down working adjacent to sometimes very near the water down by the creek. Should an emergency

environmental event occur will there be – I'm just wondering how that information will quickly get to community groups such as Friends of Oakley Creek but facilitate those sorts of community events?

THE COURT: JUDGE NEWHOOK

Just before you endeavour to answer that Mr Leersnyder, I don't imagine that you necessarily had in your head every last word that's in the CEMP, although I would expect you to be familiar with it. I'm just going to ask Ms Docherty whether she has read the CEMP from the point of view of endeavouring to find that information so that her questions could be a little bit more directed to some aspect of that, rather than as quite as open as they are.

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MS DOCHERTY:

Certainly, I'm referring to this CEMP paragraph 3.5.1.1

THE COURT: JUDGE NEWHOOK

And do you wish to ask the witness in detail about that paragraph? For instance, do you wish to be critical of it, as to some inadequacy, or are you going –

MS DOCHERTY:

I felt that there was –

THE COURT: JUDGE NEWHOOK

Are you going to suggest that there might be some enhancement to it?

MS DOCHERTY:

From my understanding of reading it, I was not – I couldn't find the link between the communication within the contractors and the environmental managers, people involved in the actual construction of the project, with community groups for an emergency response and the timing of that response.

THE COURT: JUDGE NEWHOOK

- Q. That sounds like a fair question Mr Leersnyder. Can you point to something in the CEMP or elsewhere that deals with Ms Docherty's concern?
- A. Yes if the detail is not within the CEMP, the CEMP requires the development of a – and indeed the conditions of the – proposed conditions or draft conditions of the consents require the development of a communication plan. And I expect that a useful component to that communication plan would deal with how you could communicate emergency issues with the local community. And that it's a necessary process to revise and update the construction environmental management plan following the process that we're currently in.
- Q. Can you just refer us to a clause in the CEMP that points us in the direction of the development of such tools?
- A. Section 3.6 of the CEMP relates to communication and interface. And s 3.6.2.1, "public engagement", relates to processes around engaging with the public. And if my memory serves me correctly, I believe that there is a condition as well on that topic.
- Q. Right, well if necessary we'll come back to that.

CROSS-EXAMINATION CONTINUES: MS DOCHERTY

- Q. Moving on, my next questions revolve around clarification of the integration of environmental testing in one of those sites and results. Would you be the best person to ask about these monitoring locations?
- A. The monitoring locations?
- Q. Yes.
- A. Perhaps if you ask the question I could let you know whether I can help.
- Q. I refer to paragraph 17 of your rebuttal statement, in which you make reference to the map which is annexure B, which shows the locations of the flow of water and sediment quality monitoring?

1015

- A. Yes I have that.
- Q. How would the sediment monitoring flow and treat – and sediment monitoring sites relate to the freshwater ecological monitoring that has

been proposed in the freshwater conditions. Are these sites the same as what's indicated on this map?

- A. I understand that many of those sites are the same as being proposed for the ecological monitoring, but the exact location of the ecological monitoring is probably best directed at Mr Eddie Sides.
- Q. My next question relates to the significant, to trigger events. What measures will be in place and what sort of response will be triggered if there is a significant effect as a result of rapid weather changes in combination with construction works, such as the effects that we've seen lately at the Long Bay Green Reserve after the recent cyclone event in January?
- A. If I understand the question correctly, are you referring to trigger effects in relation to sediment discharges?
- Q. It's a response to the – it's what sort of response will there be. In the – beg your pardon, it maybe something that is better directed to Mr Sides perhaps, it's freshwater.

MS JANISSON:

Graeme Ridley. I think that would be Graeme Ridley yes if it's sediment, yes.

CROSS-EXAMINATION CONTINUES: MS DOCHERTY

- Q. In your revised proposed conditions, I refer to condition F5 –
- A. I wonder if you could help me with a page number on that please?
- Q. Certainly, page 99. The different aspects of monitoring, the link between different aspects of freshwater monitoring and groundwater monitoring has been addressed in this amended condition, but however there's still an issue with the timing of this monitoring. What is the proposed frequency of the review of monitoring results as proposed in F5?
- A. I suspect that this question is also best directed at Mr Sides, who has been involved in the expert caucusing on freshwater monitoring conditions. The – I can certainly comment on the frequency of the water quality monitoring, which is referred to in F3 with respect to the monthly water quality. Is that...?

- Q. Right. Would that monthly water quality, are you referring to F3(d)?
- A. Yes.
- Q. Does that monthly water quality, does that include the ecological testing?
- A. No, no that's just with respect to freshwater, freshwater quality.
- Q. Will there be a link made between the freshwater ecological monitoring results and these results here from quality water?
- A. Yes I anticipate that there will be and that the interpretation that would be undertaken by the freshwater ecologists would use the information from the water quality as one of the inputs to their analysis.
- Q. So am I right in thinking that the freshwater ecologists and the groundwater experts, the water quality experts, will be liaising to share that information as a result of the monitoring results?
- A. I would expect so and I think that this was also a subject that came up within the expert caucusing and so –
- Q. For which area, sorry?
- A. Sorry?
- Q. For which – for the ecological caucusing?
- A. The freshwater ecological –
- Q. Freshwater?
- A. Monitoring, yep, and there were discussions between the freshwater ecologists and the groundwater experts.
- Q. With the ongoing monitoring will the people that will be conducting this ongoing monitoring be part of the – are they part of the team that are currently working on the project or would a different group come in to do the testing?
- A. How the monitoring is carried forward beyond now will be a subject for NZTA to determine. So it may or may not be the people who are currently involved.
- Q. So it will be part of the tendering process, as part of a complete package?
- A. I'm sorry I'm not sure just exactly how that, how the allocation of those tasks would be carried out.

- Q. Okay, we'll move on. I refer to the stormwater caucusing statement from the expert session, specifically paragraph 10.

WITNESS REFERRED TO STORMWATER CAUCUSING STATEMENT

- Q. Our stormwater expert Bronwen Rhynd has advised us that there's one unresolved issue, which is the relocation of wastewater mains and river flows to Oakley Creek, particularly in sector 9 which has not been addressed. I note that that surfacing issue was passed onto Andre Walter, as we know Mr Walter has already been cross-examined and this issue was overlooked. I'd like to know as a result of this caucusing statement has the rerouting of wastewater mains been identified as an area that could, or should, be addressed through the CEMP?
- A. I'm sorry I wasn't involved in that caucusing exercise. It might be that Dr Fisher, who was involved, might be able to respond more appropriately to that question.

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- Q. Finally, it's a question revolving around the ongoing managements of plantings in the landscaped areas. Is ongoing maintenance in the area that you deal with, or is it better directed to somebody else?
- A. I'm not – in so much as it fits within the procedures that are documented within the CEMP, I might be able to help you, but perhaps ask and let me...
- Q. There's some conflicting time periods given for the maintenance periods and it's also unclear what this maintenance would include. I refer to proposed condition LB4, page 44 and also condition B8, which is page 56.
- A. Is that 54, sorry?
- Q. 44 and 56. Proposed condition LB4 states that ongoing control and managements of landscaping within the designation is the responsibility of NZTA. However, condition B8 states that maintenance period, the maintenance time period is two years following the completion of construction.

THE COURT: JUDGE NEWHOOK

No I think that latter has been the subject of agreement in the relevant caucusing concerning vegetation. Have you found that? Can somebody on the NZTA team assist, if I'm correct in that understanding I think that period's been pushed out, Ms Linzey?

MS LINZEY:

Certainly there were some recommendations from the caucusing for longer vegetation periods and then there was a response to that in the memorandum from counsel from the NZTA, in respect of both of those conditions as well.

THE COURT: JUDGE NEWHOOK

And does NZTA say it's not binding to a longer maintenance period?

MS JANISSEN:

Yes, it's in Mr Andre Walter's evidence and it's five years for landscape maintenance, that's the position from the Agency.

THE COURT: JUDGE NEWHOOK

So the experts, I think Ms Docherty, we're talking a period up to 10 years if I recall correctly?

MS JANISSEN:

Yes.

THE COURT: JUDGE NEWHOOK

The NZTA has come back and said, and I'm not sure on what scientific basis they have said this, but they have said five years should be sufficient. Have you got some questions in your mind that might flow from that about the period? So all I'm signalling to you is that on page 56, we've moved beyond two years it would seem.

MS JANISSSEN:

Sorry sir, page 56 relates to weed control and that's a period of two years following completion of construction. Page 44 relates to the maintenance of landscaping, which is a different issue and it – at the moment I think it's shown as red line struck out for a period of two years. It should say for a period of five years. So they're two different issues, one is –

THE COURT: JUDGE NEWHOOK

So there's an error in that blue line in there is there?

MS JANISSSEN:

Correct. That should say, "for a period of five years."

THE COURT: JUDGE NEWHOOK

Got that Ms Docherty, on page 44, LB4. The word struck out in blue should be reinstated, except that "two" becomes "five".

MS DOCHERTY:

So the management periods will be consistent between those two, or are they sep – they're just kept separate?

MS JANISSSEN:

Different issue, they're separate.

THE COURT: JUDGE NEWHOOK

Sorry the NZTA response is maintained for five. But you've currently got in here Ms Janissen, "maintained thereafter."

MS JANISSSEN:

Thank you sir, it's a typo.

THE COURT: JUDGE NEWHOOK

And that is the position?

1030

MS LINZEY:

That's correct, in terms of the advice note the issue was that the vegetat – I mean I suppose the position that, the NZTA's response as set out in the memo is that they have a responsibility for maintaining the vegetation within the designation footprint, or as long as they have the designation –

THE COURT: JUDGE NEWHOOK

Indefinitely.

MS LINZEY:

Indefinitely.

THE COURT: JUDGE NEWHOOK

And that's typical of motorways.

MS LINZEY:

That's correct, yes.

THE COURT: JUDGE NEWHOOK

Yes, all right. Now the –

MS DOCHERTY:

Sir the operational footprint is that –

THE COURT: JUDGE NEWHOOK

Yes within the operational footprint of the –

MS DOCHERTY:

Including buildings?

THE COURT: JUDGE NEWHOOK

- motorway. Anything within the designation.

MS LINZEY:

Yes and I suppose that was the issue with the way the condition was drafted, was because there are some areas of the designation of the open space replacement that the NZTA is not looking to retain ownership of in the long term, and so some of the open space areas for example, so that there would be a transference of the responsibility for maintenance of those areas, but certainly the operational areas of the designation, there's that ongoing commitment in those areas. That would include the ventilation buildings for example that remain within the designation footprint and the interchange areas.

MS DOCHERTY:

Does that include the heritage area and streamworks?

MS LINZEY:

The northern side that the – yes, in fact the entire heritage area that's been identified remains within the designation, yes.

THE COURT: JUDGE NEWHOOK

All right, well Ms Linzey's not on oath at the moment but I've invited her involvement in this line of questioning in order just to get it focused and to assist you so that we don't have you asking a whole lot of questions of a whole lot of witnesses where ultimately the answer could become available when she rocks up in the witness box several days from now. So we're grateful for your help Ms Linzey, and what she's saying Ms Docherty, in the experience of the Board members, is very typical of how these sorts of conditions are set up around the designation for motorways.

CROSS-EXAMINATION: MR MCCURDY

Q. Peter McCurdy from the Star Mills Preservation Group. My particular concerns for the Oakley inlet area and looking at the protection of that area during construction, looking at the coastal conditions – sorry, ecology conditions, the very specific conditions M3 to M8 for (inaudible 10:32:44) monitoring, but for the waterway itself and particularly the

fauna in that waterway, there's nothing at all specific about the ecological monitoring there and I'm wondering what this proposed – at the moment, particularly that waterway is full of flounder, mullet, eels, shags and the heron as well at times in the (inaudible 10:33:12). So I'm wondering what there is in the way of specific ecological monitoring for that part of the group?

- A. Yes. The matters around the marine ecological monitoring are, will I expect be more appropriately addressed by Sharon De Luca and those of the freshwater component, the freshwater ecological elements of Oakley Creek by Mr Eddie Sides. So I suspect that that question perhaps could be retained for those two experts.

THE COURT: JUDGE NEWHOOK

Is that all right Mr McCurdy?

CROSS-EXAMINATION CONTINUES: MR MCCURDY

- Q. Just slightly further on that same question, trigger events. Very often an ecological event is not picked up by water quality monitoring but by the sudden death of fauna in the creek, and particularly the cement discharge can happen very very quickly and with the notification of that sort of thing it would quite likely be a local who would pick it up. So it comes back to the communication and the speed of response from the public, public liaison person, public information person, and get it back to deal with that. And I see for a formal response you've got a period of 10 days, but I was wondering how you would give an instant response from observing that sort of event?

1035

- A. Based on my experience with the regional council, if a member of the public saw some environmental event happening, for example a discharge of cement or something which caused an elevated level of pH in the stream and an environmental effect, then the mechanism, the most normal mechanism would be to call the council's pollution hotline and that would be responded to by council officers who would come out and investigate what the situation was and would be in touch with both

the people who were involved on the site and also the person who had raised the issue with them. So that would be, from my regional council experience, the mechanism by which that would be dealt with.

- Q. Coming to the CEMP, page 9, condition 7P on “minimising tree removal and protecting trees retained”, the reference to the schedule E7, which is the tree schedule has been struck out. What then is the status of the tree schedule?
- A. Sorry, can you just help me with the reference?

THE COURT: JUDGE NEWHOOK

It’s page 9 of the conditions book.

MR MCCURDY:

Yes and CEMP 7P.

THE COURT: JUDGE NEWHOOK

Now what was it, you said it had been struck out Mr McCurdy?

CROSS-EXAMINATION CONTINUES: MR MCCURDY

- Q. The reference in the tree schedule has been struck out, so I was wondering what its status is after that.
- A. That subclause relates to the matters that need to be included in the finalised CEMP and so the CEMP, the finalised CEMP needs to include the process to minimise tree removal and protect trees retained. And –
- Q. So does that imply that the tree schedule in P7 is still the mechanism for defining trees to be removed or retained?
- A. It may or may not be. That would be a part of the review of the CEMP as I read it.

QUESTIONS FROM THE BOARD: MS JACKSON

- Q. Mr Leersnyder, you refer to a construction liaison person for community input. What would your opinion be on having say three of those people, maybe one at Te Atatu, one at Waterview and one by the southern

portal? Is it better to have people actually in the community, maybe that person should even live within the project footprint. What do you think?

THE COURT: JUDGE NEWHOOK

Just pre-answer that, for my benefit, floating in a sea of paper, where is the reference?

MS JACKSON:

In Mr Leersnyder's evidence-in-chief.

THE COURT: JUDGE NEWHOOK

You haven't noted the paragraph have you?

MS JACKSON:

No, sorry Your Honour I haven't.

THE COURT: JUDGE NEWHOOK

All right we'll come back to it later.

MS JANISSEN:

It's "Public Information Condition 1" as well I think.

THE COURT: JUDGE NEWHOOK

Page?

MS JANISSEN:

Thirteen.

THE COURT: JUDGE NEWHOOK

Yes, now would you like to answer the question Mr Leersnyder?

1040

QUESTIONS FROM THE BOARD CONTINUES: MS JACKSON

- A. Yes, conceptually certainly having one, two or three of those people would be useful it, I expect it will depend on the demand in that area, but I see no issues with having more than one person involved.
- Q. And do you think they would be more effective if they actually lived in the immediate area? For example, if I live within the project designation and there's a horrendous noise, for example, at 10 o'clock at night and I call this liaison person wouldn't it be better if they were close at hand and they could come and see what the problem was?
- A. Yes, yes that might be an advantage, but living close to the site I think that there are other attributes in terms of their ability to communicate effectively both within, to have an understanding of what was happening within the project and to have good communication skills with the community would be paramount and so living in close proximity may or may not be an advantage, but I'd say it was secondary to the particular skills that they had in terms of communication and their ability to liaise.
- Q. You talk in here about the layout of the construction yards. That can be developed later on and changed can't it, and the one that I'm thinking about is construction yard 1 with these, with the pony club? Nothing is set in stone yet about where you're going to put things and construction yards? Is it open to change depending on – it just bothers me these kids leading these ponies around the back of the construction yard and I would have thought that to change the layout could help any concerns in that area.
- A. Yes. I expect that that's an issue that might be better addressed by other witnesses. However, my understanding it's, the layout with the construction yard is not open slather, there are particular activities that I understand have been identified that are more noxious than others and that the locations of those have been identified to try and minimise the effects of the construction yards. There are also requirements of fencing the construction yards, and I understand that Ms Wilkinson will be addressing the issue of construction noise and how that might be mitigated from those construction yards.

- Q. One last question. I read that there is no intention to store explosives within the designation or in any of the construction yards, is that correct?
- A. Again, that's probably addressed by other witnesses, but that's my understanding.
- Q. So if you're not sure that means that there is currently no provision in the CEMP for construction explosive materials?
- A. Yeah I can't recall.

THE COURT: JUDGE NEWHOOK

- Q. There's nothing in the conditions?
- A. No.

QUESTIONS FROM THE BOARD: MS HARDIE

- Q. Just one question Mr Leersnyder. With regards to your rebuttal evidence, you've talked about it'll be impractical to have compulsory and monthly reporting provided to Auckland Council. Just, you know we're in a fairly modern age, and I'm just wondering whether or not there would be advantages in actually having the reporting done on a monthly basis in a set format so that everybody knows where to go for the information, rather than information being presented in dribs and drabs?
- A. I think that there's no doubt that there's got to be good communication between the Auckland Council and the NZTA and their construction contractors. The challenge is that we're talking about a project which spans about 13 kilometres of road and a considerable period of time and there are different levels of monitoring, some of which is continuous monitoring, such as the pH from the groundwater and others, other monitoring which is much less frequent, such as some of the ecological monitoring, and so, which might occur on a six-monthly basis or a 12-monthly basis. And so consolidating all of that information into one report on a monthly basis and then feeding that through the Auckland Council and then having that distributed amongst the Auckland Council's experts I think is unnecessary. And in discussions that I've had with the Auckland Council, they also identify similar issues. There are circumstances I'm aware with the Victoria Park Tunnelling

Project for example, there are monthly meetings between the council and the contractor, and you know issues can be identified and raised at that time. But formal requirements to report on everything once a month I think is onerous and unnecessary, on both parties.

- Q. Just one more question. With regards to the proposed community liaison group, I might have the name wrong, which is proposed to be made up of New Zealand Police, NZTA, Auckland City, et cetera, what happens if they aren't in agreement in terms of traffic? Is there something in your CEMP which relates to the hierarchy or the responsibility? Who has the ultimate decision at the end of the day?
- A. With respect to which matters? You mentioned the community liaison working there –
- Q. Sorry, this is probably more with respect to traffic?
- A. Traffic.
- Q. In terms of the group that co-ordinates temporary traffic plans et cetera?
- A. Right. I'm sorry that question is probably best directed at Mr Gottler, who will be called shortly I understand.

QUESTIONS FROM THE BOARD: MR DORMER – NIL

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP

- Q. Mr Leersnyder, you were previously asked a question about the community liaison person, or persons and whether they might be resident in the – might be appropriately resident in the communities affected. Am I correct in understanding that the NZTA or perhaps more particularly the contractor, might be responsible for appointing the community liaison person or persons, and might such a person already be resident with their household in Auckland, at a location outside the potentially affected communities on this project. Is that a scenario that might arise?
- A. Sorry, is your question, has that person been appointed –
- Q. No, that's not my question.
- A. Sorry.

1050

- Q. Am I correct in understanding that the community liaison person or persons –
- A. Yes.
- Q. – would be appointed by NZTA or the contractor?
- A. Yes.
- Q. Is it possible that such a person or persons would already be resident in Auckland with their households and that such place of residence might be outside one of the subject communities?
- A. Yes that is possible.
- Q. Right. So the inference of what I'm saying I think is quite clear. If we go to propose condition Pl.1 on page 13, in the second sentence we read, "The liaison person's name and contact details should be made available in the CEMP and on site signage by the NZTA". Now I would bet you dollars to donuts that someone who's got a noise problem in the middle of the night probably won't have the CEMP readily to hand. They might not even have noted the details from the site signage, possible. Do you think it might be appropriate if the liaison person's name and contact details were distributed through the community liaison group, or groups, that are provided for by condition SO.1 on page 52? Would that be a good way of getting that information out to the people who are likely to need it?
- A. The contact details of the community liaison person, yes absolutely.
- Q. Thank you.
- A. Yes.
- Q. If we go to the stormwater caucus report, on page 6 in paragraph 10 you'll recollect that the representative for the Friends of Oakley Creek asked you a question about how potential ecological effects of relocating some stormwater lines in the upper catchment would be picked up and dealt with?
- A. Yes.
- Q. And I'm not sure that you were here the other day, but I put the same question to Mr Walter and he assured me that those services would be dealt with in the same way as all other articulated services, that it's one of the basic things that you do on a project like this. You identify where

they are and you move from out of the work area relatively early in the project. Now what I'm coming to is, can you give me an undertaking that one or other of the management plans provides for the relocation of services and, as part of that, any ecological effects that might arise from their relocation is addressed in such management plans?

A. I would expect that the effects of the relocation of those services would be around erosion and sediment control and the potential discharges of sediment laden water into the receiving environment and to that extent, yes I believe that the erosion and sediment control plan and the freshwater and ecological, the ecological monitoring plan or ecological management plan cover the matters that might arise as a result of movement of the services.

Q. Right, I don't want to sort of appear overpressing on this, but is that a belief or is that something that you know?

A. To the extent that there are other experts on erosion and sediment control and ecological matters that are coming later in the proceedings, and who can respond in detail to the management plans it's certainly my belief that they have those matters covered.

1055

Q. But some other witness might be able to give me, as a member, some greater confidence in that confidence in that situation?

A. Yes.

Q. Now in one of the CEMP conditions, CEMP point 1, on page 6, it's a pretty important condition, "The Agency is to update and finalise the CEMP and is to provide it to the manager major consents at the council to review prior to commencement of work to ensure compliance and consistency with the conditions." And then, I think it's helpful that the Agency, in the 10th of February version of the conditions, have added a condition CEMP point 14 on page 11, which tells us what happens in the event, and I imagine it's an unlikely event, but sometimes these things do happen, if there's any dispute or disagreement between the council manager and the Agency. It says, "That matters shall be referred in the first instance to the NZTA manager and to the resource consents manager, Auckland Council to determine a process of resolution." And

I, for myself, I think that's a positive to have anticipated that and to have set out a process, which is to apply in the first instance. Now if they were having a really bad day Mr Leersnyder, and they couldn't agree, like it's, you know we're probably talking about low levels of probability now, but I'm interested in the process aspect of this and you can see where I'm headed, so what happens after that?

A. I think you're right that it is an unlikely event, but there are other processes available through the ombudsman's office and from my experience at the regional council, there has been – I have had rare occurrences where somebody has approached the ombudsman to consider a matter of disagreement between two parties. And there are also available to the council a suite of enforcement procedures under the Resource Management Act that could be available and implemented should they choose.

Q. I think if the yellow metal was ready to start and someone was proposing you refer something to the ombudsman, I think that would really focus the minds?

A. Absolutely, which is –

Q. Perhaps the enforcement provisions are really ultimate recourse, it's – I don't know.

THE COURT: JUDGE NEWHOOK

Just to follow up on that last exchange, it might be Ms Janissen and Ms Linzey, that it's worth your while thinking in terms of whether there are quickfire dispute resolution methods that might perhaps be employed as an extension to CEMP 14. It's an issue that was of some interest to me because it just seemed to sort of come to a stop with the process at CEMP 14. I, for myself, would hesitate to think that the ombudsman's office would actually have the people with the qualifications to assist in this and it might be that a very quickfire arbitration process or some other dispute resolution process – this is an area of process that's been developing quite a bit in recent years.

THE COURT: COMMISSIONER DUNLOP

Your Honour, could I just add to that?

THE COURT: JUDGE NEWHOOK

Please.

THE COURT: COMMISSIONER DUNLOP

I can't help the parties with a specific condition reference but building on what you've said, in one of these columns there is a reference to, I think it's the complaints one, where complaints are unable to be resolved there's a reference to the very thing you've mentioned, "mediation." It's not "arbitration" but "mediation."

1100

THE COURT: JUDGE NEWHOOK

That was mediation I think, and again you'd want a fairly quick fire process probably. Equally one that was fair. I stress both in relation to CEMP 14 and the condition that Member Dunlop rightly reminds me about. Arbitration in relation to CEMP 14 in particular I suspect perhaps. Perhaps mediation or some other (inaudible 11:00:41) process than the other, but we'll throw it back over to you and to any other parties that are interested in that aspect.

QUESTIONS FROM THE COURT: JUDGE NEWHOOK

Q. I just have one other matter to raise, it's almost been done to death, but on page 13 of the conditions, "Proposed Public Information Condition", PL1, where we've got a community liaison person, which myself I think is a great idea, it simply occurs to me that one person might not be enough and Member Jackson's idea of say three might be better, just in the statistical sense. Because as sure as God made little apples somebody's going to try and phone this liaison person in the middle of the night when a problem's occurred, and that person's going to be away on leave or sick or looking after a sick relative in the South Island or something. So I just think that could be, I think it could be beefed up. I'm not sure if they need to look at it in the footprint of the project, but they need to be contactable and there need to be enough of them to achieve it. Would you go along with that Mr Leersnyder?

A. Yes I would sir.

Q. I finally managed to ask a question out of that didn't I, and it was quite succinct.

RE-EXAMINATION: MS JANISSSEN – NIL

COURT ADJOURNS: 11.02 AM

COURT RESUMES: 11.20 AM

THE COURT: JUDGE NEWHOOK

Now, there's a request to bring Mr Millar up the batting order is there Ms Janissen?

MS JANISSEN:

Yes sir, if I could make that request now, Mr Millar has a commitment in an arbitration this afternoon and just to ensure that he is complete this morning I was wondering if we could call him now, because I do note there are no parties that wish to cross-examine him.

THE COURT: JUDGE NEWHOOK

There's some questions from members of the Board, and we're okay with it, so we'll have him sworn thank you.

MS JANISSEN CALLS

PETER JAMES MILLAR (SWORN)

Q. Is your full name Peter James Millar?

A. Yes.

Q. And have you prepared evidence-in-chief dated the 9th of November 2010 and the 1st of February 2011?

A. Yes I have.

Q. Are your qualifications as set out in paragraphs 2 through 5 of your evidence-in-chief?

A. That's correct.

Q. Is there anything that you would like to correct in your evidence?

A. No.

Q. Could you then confirm that the contents of your evidence-in-chief and rebuttal are true and correct?

A. I do.

QUESTIONS FROM THE BOARD: MS JACKSON

Q. Mr Millar, in the documents there's many piles are driven for foundations for temporary construction platforms and I don't remember seeing in what I've read anything that addresses the vibration from extracting those piles once they're used. So is that correct, has that been taken into account somewhere?

A. Well the vibration criteria that had been set for the projects requires that whatever activity, be it withdrawal of piles or construction of piles, must remain within those criteria that are set for the vibration limits. So construction activities need to be designed to ensure that they will not exceed those criteria.

Q. So these things are driven into the ground, left for some considerable amount of time, which could go longer than expected. How can we have some sort of assurance that the vibration is not going to be more than you'd expect?

A. Well, for instance if they tried to extract them using vibration methods and find that the vibrations generated by that process exceed the criteria that are set, then they need to change their practice to ensure that they do comply and that may mean they have to, for instance, drill alongside those piles to loosen the ground to produce the energy required, such that the generated vibrations do not exceed the criteria.

Q. Okay, that's fair enough. And you said in your evidence-in-chief that the vibration assessments have drawn on data obtained through on site measurements of existing vibration environments. So you're quite happy that those environments are relevant to this project?

A. Yes. But those are for operational vibrations from vehicles, not from construction activities. We've used experience on other construction projects to draw the same conclusion in respect to the likely construction methods to be applied here.

1125

Q. We heard too that there is now going to be no pile driving at night. Is there going to be no pile vibro – extraction at night?

A. I wouldn't expect there would be and because of the reduced criteria for night-time would, in my opinion, preclude that.

QUESTIONS FROM THE BOARD: MS HARDIE

Q. Mr Millar, in the proposed conditions for construction, CNB1 item 11, it's got in bracket notification could be as little as 24 hours. I'm just wondering why you may need such a short duration for notification?

A. Sorry can you just draw me to the –

Q. Item 11 in CNB1.

A. This is the modified form –

Q. Sorry, page 24.

A. My apology. Oh, this would only apply in the event that something occurred – this is within the tunnel. And the ground conditions that are expected to be encountered within the tunnelling works are East Coast Bays formation materials, that's relatively weak rock. So it's unlikely that the use of blasting or other techniques will be required, but in the event, the most unlikely event, that that was encountered provision has been made for the purposes of removal of an obstruction. Difficult to envisage a condition that would require that, but we felt that it was necessary to provide for that. I'm happy to expand on that if you wished in terms of the types of things that could happen, for instance, if there was an unknown feeder from a volcanic intrusion, we've provided for that, even though it's not known and not expected.

Q. So what would your expected timing of notification be?

A. Well because a tunnelling activity requires to keep on moving to ensure that the ground remains supported it, 24 hours would be the sort of – because they're probing, would be probing ahead and would foresee that some metres ahead of them 24 hours would provide sufficient time for them to prepare for that. As I said it's a most unlikely condition to expect.

Q. With regards to item 11 it suggests that "excavation works along the tunnel alignment shall receive prior notification no greater than seven days", and then in brackets "and not less than 24 hours". So would it be reasonable to assume that there will be seven days' notification or up to seven days, or is it going to be closer to 24 hours?

A. Sorry there's also another factor here that in the event that such other activities were being undertaken that might generate noise at the

surface, this also provides for that opportunity to be covered so that affected property owners are made aware of that. This is an impact called “re-reradiated or regenerated noise”, where construction activities, the vibrations generated by them, are very low, probably imperceptible, but the vibrations then impact or generate a response in the structure of the building and create a very low humming noise that may be perceived or recognised by property owners for that short period, as the construction works progress past their property. So those levels of vibration are below, probably below perception levels, certainly a factor of a hundred below that’s likely to cause structural damage to a building, but may create an environment, whereas associated humming noise may be perceptible to people

FURTHER QUESTIONS FROM THE BOARD: MS JACKSON

- Q. Sorry Mr Millar, in your evidence-in-chief too, you said when construction activities are continuous over long periods, limits should be reduced to improve the tolerance to the disturbance. What’s a “long period”, how do you – I mean when would you said that people have had, just had enough and so things need to be toned down a bit?
- A. Well there are two criteria for vibration often applied. One is the potential to cause damage to structures and the other one is the physiological effects, the impacts on people and people are obviously much more sensitive at night-time and so therefore lower levels are set to provide for that. But also situations where an activity is taking place outside that receiver for a long period of time and the standards provide for what’s called “intermittent” or “short-term” activities and then long term activities, there are processes by which one can identify the numbers of occurrences or whether it’s a continuous event to push it into that lower bound criteria. So the criteria that are set are always a compromise between permitting construction activities to make progress, reasonably, and to take account of the receivers ability to operate and continue to be relatively unaffected by the activities. So an occurrence which is going to – generally the provisions that people apply are that something less than four or five occurrences a day would

be generally reasonable as long as they were within the criteria set for “intermittent” events and then it would become what was considered to be a longer term event.

Q. So when you give people notification, you would give them some idea of the duration?

A. In the event it's tunnelling works, then the tunnelling will progress depending on the type of machinery, but expect it somewhere between three and 10 metres per day. Along the tunnel route, that would mean that people may be subjected to that for up to a week before that it's progressed sufficiently ahead of the property or past that property to ensure that they're not any longer perceiving it. And as I indicated, for most of the tunnel, because of the depth of it, that level of vibration would be barely perceptible. So I would envisage it's nothing in terms of the potential for damage to structures, it's less than 10% of what might cause superficial or cosmetic type cracking. So there's no risk to the property itself, it's purely a perception level of vibration, which is significantly less than what would normally cause people disturbance, so I would expect that should be acceptable for that period of time.

Q. When you're excavating the tunnel with these roadheader machines, what's the difference in vibration between one machine working at a time and four machines working at a time?

A. Well, if there are four machines they will probably be operating in different parts of the tunnel, one coming from the south, one coming from the north. It is unlikely that the two tunnels would be constructed concurrently at the same advance, one would be delayed from the other to ensure that the effects of loading of the ground on the tunnel would be small, so there'd probably a hundred, 200 metres offset, so there'd probably be 100, 200 metres offset so there would be no cumulative effect. You would only have one machine operating in one tunnel, in one direction, one heading.

Q. Would you say that again please because I understood that there's two machines, they're offset 50 metres, but they're coming concurrently from both directions?

A. That's in two tunnels, two separated tunnels.

- Q. So there's four machines?
- A. Well that would mean four headings. They would be operating two from the south and two from the north.
- Q. Yes, that's the way I heard it the other day.
- A. So except when they meet in the middle they are not really impacting on each other, and the 50 metre offset of the two going in the same direction would be sufficient to ensure that there was no interaction.

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP

- Q. Mr Millar, in paragraph 12 of your rebuttal evidence you're discussing vibration effects and how they might be managed at 1510 Great North Road the –
- A. Yes.
- Q. And in the last sentence you say, "I understand that the Agency has agreed with Unitec not to relocate students during exam time or during the period leading up to exams". Is that covered by way of a condition or is that in a side agreement, which I think I've read about, as between the Agency and Unitec?
- A. I believe it's a side agreement, but you may want to address that to Ms Linzey or others.

THE COURT: JUDGE NEWHOOK

Can we have a quick answer to that now Ms Linzey?

MR LINZEY:

Yes, as I understand it it's a side agreement that's been prepared with Unitec.

THE COURT: COMMISSIONER DUNLOP

I'll just make the comment Your Honour that if the Board were to think that that was a matter sufficiently important to be subject to a condition it leaves me – I can't speak for my colleagues – it leaves me wondering about how I might ever sight the detail of it to be satisfied about it. So I'll just leave the matter there thank you.

THE COURT: JUDGE NEWHOOK

Ms Linzey if you could make yourself a note to address that aspect for us when you give evidence at the relevant time, no doubt you're second slot, and be prepared to answer questions along the lines that Commissioner Dunlop has indicated, which are also of interest to me as well.

MR DORMER:

My only interest sir is in relation to the building that Mr Dunlop referred to. Perhaps question Ms Linzey now, could I raise the concern about the relevance, or otherwise, of an agreement with Unitec when the building is owned by a third party and the Unitec lease is about to expire. I would have thought you needed to sign everything with the owner as well?

MS LINZEY:

Yes there –

THE COURT: JUDGE NEWHOOK

Or conditions of consent?

MR LINZEY:

All condit – yes, and certainly that's something we can have a further response to, but the lease agreement – the site is also designated which adds to the complexity of it, as I understand, in terms of what it can be used for, so it is restricted to being used as student accommodation and so the – although there's a tenancy agreement – I might have to defer to Cameron in terms of the agreement for the lease. That's a renewal process it goes through with Unitec, but they have a, there's a limited scope –

MR DORMER:

Unitec doesn't have to agree to renew though does it?

MS LINZEY:

I believe –

MR DORMER:

And the owners would then be left with a building which they would be able to let out for student accommodation?

MS LINZEY:

Yes.

MR DORMER:

And if you want to avoid a condition through the side agreement process then I would have thought the side agreement had to incorporate the consent of the owner?

1140

THE COURT: JUDGE NEWHOOK

We'll see where it gets to. There may be some matters on which Mr Lawlor might brief you Ms Linzey before you give evidence at the relevant time and/or there may be a call for some brief submissions from counsel.

QUESTIONS FROM THE COURT: JUDGE NEWHOOK - NIL

RE-EXAMINATION: MS JANISSEN – NIL

WITNESS EXCUSED

MS JANISSSEN CALLS

GRAEME JOHN RIDLEY (SWORN)

Q. Is your full name Graeme John Ridley?

A. It is.

Q. And you've prepared evidence-in-chief dated the 9th of November 2010 and rebuttal evidence dated the 1st of February 2011 in these proceedings?

A. That's correct

Q. Your qualifications as set out in paragraph 2 of your evidence-in-chief?

A. Yes.

Q. Is there any aspect of your written evidence that you would like to correct?

A. No.

Q. And do you confirm the contents of your evidence are true and correct?

A. I do.

THE COURT: JUDGE NEWHOOK

Now we have a request from Ms Docherty, Friends of Oakley Creek, to question this witness, having been referred to him by a previous witness and I think it's reasonable in those circumstances that she should be allowed to –

MS JANISSSEN:

Certainly.

THE COURT: JUDGE NEWHOOK

- question Mr Ridley. So I think we might deal with that now, Ms Docherty.

CROSS-EXAMINATION: MS DOCHERTY

Q. Mr Ridley, earlier in my questioning of Mr Leersnyder I referred to the escape of sediment from a large property development in the Long Bay Marine Reserve following an unexpected extreme weather event in January. What sort of measures will be in place and what sort of response would be initiated as the result of an unexpected large scale trigger event?

- A. The - just firstly I think we need to bear in mind the Long Bay development is quite different from what we're looking at, in terms of the, this particular project and I say that in terms of the nature of the development; the slopes associated with the development and the, I guess the nature of that particular rainy event itself, which I think you referred earlier to the January, 23rd of January event. Essentially, in terms of this particular project we, one of the key things we have in place in association with our structural control measures, and I'm talking about erosion and sediment control measures, is what I refer to as our non-structural measures, and that refers to a team approach where we have a erosion sediment control team which is responsible for not only implementation, but also maintenance and ensuring the effect of operation of those control measures, pre-storm, during storm and post-storm. I'm not saying that those measures weren't in place for the Long Bay development but they, those measures certainly will be in place with this proposal.
- Q. Will that response team be – will they be effective after hours of construction of the actual surface works? I note that the, there's a certain time of the construction works, but will that response team be active after hours?
- A. Yes, unfortunately if you work in the construction field it's a 24 hour seven day a week job and that team has people available throughout, or will have people available throughout the, throughout on the 24/7. And particularly during storm events the storm event you refer to is actually a forecast event and often they are forecast events and so you can actually determine when they're going to occur to a certain degree, and make yourself available over that particular period.
- Q. So that response team will be effective within a matter of hours of say a forecast predicting an extreme weather event?
- A. I would expect so, yep.

THE COURT: JUDGE NEWHOOK

Forest & Bird, who wishes to question the witness. Mr McNatty.

1145

CROSS-EXAMINATION: MR MCNATTY

- Q. Are you familiar sir with the technical report, G22?
- A. I am, that is my Erosion and Sediment Control Plan.
- Q. You make a statement in your paragraph 5.2, that you propose to implement designs, stormwater and sediment design standards that exceed TP90. Can you quantify that statement please?
- A. In paragraph 4.2 I talk about the erosion, sorry paragraph 5.2, I talk about the erosion and sediment control measures. As you're aware, TP90 is the accepted industry standard for erosion and sediment control in the Auckland region. In this particular project we're going, well I should say, while we're implementing controls to TP90 standard, we're also going beyond TP90 standard, and that includes as I've listed there three particular things and that is one, we've got manual decant rising devices on the ponds. We have proper structured forebay and we also have our floating booms across sediment retention ponds for prevention of mulch entering the decant systems. They're just three examples, there are other examples as well.
- Q. When you say you quantify it, does that mean that we can actually expect higher standards than the 75% that is (inaudible 11:46:36)?
- A. The 75% is not related to TP90, that's actually a TP10 long term stormwater standard. TP90 doesn't have a specific water quality treatment standard associated with it. However, the – and you'll hear evidence from Mr Jonathan Moores later, he refers to some works and research which looks at efficiency of sediment retention ponds.
- Q. If we are going to look for a standard then I think would it be appropriate to use something like the Anzac standards as the final trigger standards or (inaudible 11:47:14) standards?
- A. No I don't believe so, no.
- Q. In relation to the discharge into the marine reserve area, we're aware that the Oakley discharges into the marine reserve. Would it be practical to use the proposed 80% suspended solids figure as appropriate to the Oakley Creek?
- A. I'm sorry I'm not familiar with the standard you refer to?

- Q. My understanding, and I stand to be corrected, that the treatment levels on State Highway 16 carriageway were expected to be treated to at least an 80% total suspended solids?
- A. Surely, again, my evidence is related to the construction activities, the erosion sediment control. The 80% standard is the long term stormwater discharge standard and Tim Fisher will refer to that in evidence given later.

QUESTIONS FROM THE BOARD: MS JACKSON - NIL

QUESTIONS FROM THE BOARD: MS HARDIE

- Q. I've just got one question. Just with regards to the construction season and whether or not this has any impact on the erosion and sediment control systems that have been put, or proposed to be put in place. There's a proposal for the construction season to be restricted between 1st of May and the 30th of September, unless otherwise agreed. Is there, just in terms of your erosion and sediment controls that you're putting in place, does this happen to have impact on those controls or do you just simply stop work for that duration?
- A. If you're referring to condition E23 on page 84, is that the –
- Q. Yes it is.
- A. So that condition, just to clarify, that condition talks about no "surface" earthworks, so that's an important point. Obviously the surface earthworks are the ones that are impacted on by the rainfall and that has that restriction as you mentioned. And essentially what would happen is over the winter months it wouldn't, typically, on most earthwork developments that I'm involved with typically it doesn't mean there is no earthworks over the winter period, but there's a restricted earthworks programme over the winter period. And typically that would mean that we would be looking at our less risk activities over that period so we would avoid activities such streamworks, for example, or earthworks close to streams over that particular period.
- Q. And earthworks close to coastal?
- A. Possibly as well.

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP – NIL

QUESTIONS FROM THE BOARD: MR DORMER - NIL

QUESTIONS FROM THE COURT: JUDGE NEWHOOK – NIL

RE-EXAMINATION: MS JANISSSEN – NIL

WITNESS EXCUSED

MS JANISSSEN CALLS

JOHN PETER GOTTLER (SWORN)

Q. If your full name John Peter Gottler?

A. Yes.

Q. And have you prepared evidence-in-chief dated the 12th of November 2010 and rebuttal evidence dated the 2nd of February 2011?

A. I have.

Q. And are your qualifications and experience as set out in paragraphs 2 through 4 of your evidence-in-chief?

A. Correct.

Q. Is there anything in your evidence that you wish to correct at this time?

A. Yes.

Q. Perhaps refer the Board to what it is.

A. The conditions in my rebuttal evidence.

THE COURT: JUDGE NEWHOOK

Q. In your rebuttal, yes annexure A is it?

A. Condition TT.3.

Q. Page 16 of your rebuttal, yes.

A. And on the third line down there's an additional "as far as practical". That should be struck out.

Q. At the moment it reads – oh yes I see. Take out the words "as far as practical" where the second appears.

A. Second line in, line 3. And in addition to that, TT.4, there's a small typo error where on line 2 Auckland Transport and the authority ATA has been left in. "The authority" and "ATA" in brackets should be struck out.

Q. Let's call it AT shall we.

A. It's called AT.

Q. Do those same changes need to be made in the conditions book, to your knowledge?

A. Not that I'm aware of. Oh they have, sorry.

Q. Ms Linzey tells us they have, yes and so we're looking for page 19.

MS LINZEY:

Not the first one but the second one does, first one...

MS JANISSEN:

Actually I'm not sure sir which "as far as practical" that matters if it's in the beginning or the end, but perhaps we can clarify the beginning of that sentence for you.

THE COURT: JUDGE NEWHOOK

Matter of semantics I guess.

MS JANISSEN:

Yes it is. And in the wording in TT4.

THE COURT: JUDGE NEWHOOK

Yes, just the reference to Auckland Transport.

MS JANISSEN:

And while we're there sir, in TT7 the "or" in that first line it should be deleted. It should say "significant long duration impacts", and that was agreed during the traffic caucusing, but it just hasn't transferred into this yet. That's in TT7, the word "or" should be deleted. And in TT9 the reference should be to "Richardson Road" not Richmond Road.

1155

EXAMINATION CONTINUES: MS JANISSEN

Q. Subject to those corrections Mr Gottler, do you confirm that your evidence-in-chief and your rebuttal evidence is true and correct?

A. Yes. Just to assist the Board, perhaps you could open up to my evidence-in-chief, page 10, which has the diagram there, just for your reference.

THE COURT: JUDGE NEWHOOK

Q. Is there a particular point that you wish to make about the diagram?

- A. No, but I'm sure that would make it easier as the questions come through, if we can refer back to that diagram rather than try and find it later.
- Q. Yes, we've only got one questioner, Jim Jackson from Onehunga Enhancement Society. We'll see what the relevance of his questions are to our inquiry.

THE COURT: JUDGE NEWHOOK

Your turn Mr Jackson, if your questions are relevant to our inquiry.

MR JACKSON:

I understand that this hearing is not required to consider the disposal location for the Waterview Project. However, we are seeking information regarding the volume and the construction traffic movement associated with removing it from the site?

THE COURT: JUDGE NEWHOOK

Yes well in the latter regard of course, if disposal sites were to change during the course of the works, which is always possible, but for places where there are permitted activities for clean fill dumping and/or consents are gained, the transport routes could change. What are those transport routes, how are they of interest to the Onehunga folk?

MR JACKSON:

There's effectively two sites we're talking about, one is the Three Kings Quarry in Mt Roskill and the other one is the Wiri site.

THE COURT: JUDGE NEWHOOK

Those are currently proposed, yes.

MR JACKSON:

And I guess there's other sites which are in the area that we'd look at.

THE COURT: JUDGE NEWHOOK

And the causeway?

MR JACKSON:

Correct. And there's another site in Onehunga in terms of a reclamation that was claimed, to go ahead shortly, so that's another opportunity there.

THE COURT: JUDGE NEWHOOK

Is that something that's planned by NZTA that one?

MR JACKSON:

They're funding quite a substantial amount of it.

THE COURT: JUDGE NEWHOOK

All right, well let's see how your questions go.

CROSS-EXAMINATION: MR JACKSON

Q. We understand the project will generate in excess of 1.4 million cubic metres of material, which is from the tunnels, the cut and cover sections and access ramps associated with the project. Can you indicate the number of truck movements required to shift this volume of material under the current NZTA transportation requirements?

A. That's not in my evidence, that is covered by Andrew Murray and Andre as well. My role is to manage what is provided in the process of traffic management.

Q. So could residential streets be used in terms of the disposal of this material from the Waterview Project?

A. Are you talking about trip end again?

Q. Yes.

A. The intention is to use state highway, but it depends on trip end solution so I wouldn't be able to give you a direct answer on that, it depends on where the material goes.

- Q. In terms of the timing of the project obviously there's the two possible sites which don't have consent at the moment and you're obviously trying to commence work later next year. In terms of –

THE COURT: JUDGE NEWHOOK

It's earlier than that I think Mr Jackson. I think you might find it's earlier than that.

MR JACKSON:

Well that'll be really good, yes.

CROSS-EXAMINATION CONTINUES: MR JACKSON

- Q. In terms of determining the route for such a – I mean I estimate, or we estimate using NZTA's rule of thumb there was about 200,000 truck movements to take place to remove this material to a location they choose and that's going to put a lot of stress on residential roads if maybe the Three Kings Quarry was to be used?
- A. Hypothetical of course, depends on what route is chosen but you do have a process, a system, systems based process that would manage that risk, if you were looking for a risk management solution in terms of temporary control.

1200

QUESTIONS FROM THE BOARD: MS HARDIE

- Q. Just with regards to condition TT7, give us a bit of a definition of what is significant long duration impact would be?
- A. Sorry could you – so TP7 did you say?
- Q. TT7.
- A. TT7 yep. The question was?
- Q. If you can just give us a bit of a definition of what a significant long duration impact would be.
- A. What we're looking for here is to not disrupt the local road because in that particular case you only have one way in and one way out. That's why we removed the "or" because obviously minor disruption would not

be practical. But in terms of a duration, most temporary traffic controls run from five minutes through to, for a specific material delivery, through to six to 12 months on a main shoulder closure type temporary control.

Q. So from what you're saying do I read that condition to mean in terms of the overall project that you're looking to get the work carried out in a certain sector as quick as possible, as opposed to how long someone's going to be waiting in queue waiting to get past a sector of work?

A. The current situation that exists right now would be retained in the temporary controls as part of the requirements of the temporary controls. That's covered under one of the, the other T3 condition, but so the existing configuration would remain here. The temporary control is deliberately aimed at producing the minimum disturbance, so these periods would be totally dynamic, in terms of the construction sequence.

Q. So when you're talking about significant long duration impacts for any of the sectors are we talking, what sort of duration are we talking?

A. We're looking at trying to avoid long queues and long delays outside what's already there. A good example might be the school tunnel crossing. It would be specially set up to make sure that it was done, for example, during a school holiday, where the underpass is.

QUESTIONS FROM THE BOARD: MS JACKSON

Q. Mr Gottler, I asked a question the other day, maybe you can answer it. When you reduce the widths of lanes and you reduce the speed limit temporarily, like they've done on Newmarket Viaduct for example, how effective is it, because I'm convinced there's only about three of us in Auckland that bother to slow down to those limits – I'm one of them I might add. Are they effective and is more compliance warranted to make it effective to make it safe?

A. Well at the end of the day I mean, you're right, I mean 70 kilometre speed limits is what you're intending to do, but the most important thing is of course, in terms of temporary traffic control, is to make sure we don't have collisions and errors. The preconditioning work is where we put most of our efforts into, in terms of information to the community, on site information as well and you'll see, not so much in Newmarket, but in

other different controls we will add chicanes and cones and signs to create the environment that visually looks like people will want to travel at that speed limit. The next level of course is enforcement, that you're probably referring to, which is the next stage of the development, but we're obviously not trying to enforce people for speeding unless there's a speeding issue that needs to be addressed.

1205

- Q. So the problem I have is in the protection of the workmen that are working very close to a live motorway lane, and I think enforcement is important for those people. One was killed not so long ago. So I think that's far more important surely than having one or two people slow down to 70 and hold everybody up, surely the obligation is to make it a safe work place. So I'm sorry I don't understand why the enforcement isn't a lot more prevalent than it is?
- A. It is very important to have the enforcement, there's no doubt about it, and the police are in, for example, the structured group that will be developing the sites specific TMPs, so you will see the enforcement in there. There are lots of techniques that the enforcement use. Their specialists in that area are police. We're providing the engineering input if you like and the engineering management to make sure that we get people through the site safely.
- Q. The other question is walking school buses. You're going to make sure that there is still plenty of provision for kids to walk to school in amongst the construction and to keep them safe too?
- A. The previous speaker who also – has actually developed a liaison, a community liaison group within – CEMP, the construction environmental management plan. That also flows, if you look at the diagram that I referenced you to before, that also comes down to our site specific temporary traffic management plans, communication plan. That will be fed of course into your governance group, construction temporary management plan, which is what every TMP will be developed for. So in relation to the walking school bus, yes absolutely, it will be part of the SSTMP, site specific TMP's.

Q. So if the school considers that there's an issue, who do they go to to talk about it, their community liaison person?

A. They go straight into their community liaison, there's a special one called the Education Liaison Group. Hugh would probably be better to ask this question of. I know a little bit about it, if that's of any help to the Board.

THE COURT: JUDGE NEWHOOK

Q. Sorry who will help us?

A. Hugh Leersnyder.

Q. Been and gone.

MS JANISSSEN:

But sir, if I could just perhaps refer the member to "social condition 1".

THE COURT: JUDGE NEWHOOK

Page?

MS JANISSSEN:

Page 52.

THE COURT: JUDGE NEWHOOK

Anytime anybody refers to a condition, if they could tell us the page, to speed the process.

QUESTIONS FROM THE BOARD CONTINUES: MS JACKSON

A. But again if you look at the diagram, that leads it through to the governance group from the CEMP down into the governance group and then becomes part of the construction temporary management plan. That construction temporary traffic management plan's a live document, it will be alive for the entire duration of the project and the governance group will be managing that and be responsible for that.

QUESTIONS FROM THE COURT: COMMISSION DUNLOP

Q. Mr Gottler I'd like to ask further questions about the same subject, just focusing in a little bit more on the conditions. TT3H, on page 19, sets out what one of these site specific temporary management plans are going to deal with. And in paragraph 8 it says, "Measures to maintain pedestrian cycle access with thoroughfare to be maintained on all roads and footpaths adjacent to the construction works where practicable." Now I think you might agree that "where practicable" is possibly not a high enough performance standard when it comes to educational facilities. It would seem to me, giving you the benefit of my thought, that you'd need to make sure that children and others could get into those schools and whatever on a permanent basis, without interruption. Would you agree with that as a concept?

1210

A. Yes, I'd suggest to you that the intention is for that to be the case. I mean sometimes there's a 24/7 operation, sometimes some of the night activities might not be able to provide students with the access to school, but it's unlikely that they would be going to school during those periods. So the where practicable situation is to cover 24/7 for the entire project.

Q. So, yes I'm speaking to others in the room now. Might need some editing to make it clear that for education facilities it's unequivocal that pedestrian access and cycle access shall be maintained. And then just, I'm mindful that I think I'm correct in saying the Education Liaison Group only meets every three months, well not less or not more than three months or something. But if we go over to the social conditions on page 52, in S01 there's the Community Liaison Group to be set up and we were there just a second ago and amongst the things they can talk about are particular concerns raised by education facilities or parents. I was wondering whether it wouldn't be worth actually adding the words, "including transportation" at the end of C, to make it clear that that's one of the matters that are properly on the agenda?

A. You'd have to talk to Hugh in that respect, I mean it's not my area of expertise but in terms of temporary traffic control, I think we've covered it well in the TTN.

Q. Well I don't know that I will get to talk to Hugh again. The point's out there Your Honour.

THE COURT: JUDGE NEWHOOK

It's in our minds at least.

QUESTIONS FROM THE BOARD: MR DORMER – NIL

QUESTIONS FROM THE COURT: JUDGE NEWHOOK – NIL

RE-EXAMINATION: MS JANISSSEN – NIL

MS JANISSSEN:

Sir, actually Ms Linzey just pointed out, just following on from that last question, if I can just assist the Board. Open space condition 12, which is on page 50, provides that "during construction, the Agency shall maintain pedestrian access for all open space available for public use during construction and education facilities for accesses affected by the work." So perhaps that covers it in part but we certainly take on board Mr Dunlop's suggestion in relation to the other condition as well. I don't see a problem with adding those words.

THE COURT: JUDGE NEWHOOK

Yes, thank you for that. It's quite useful having Ms Linzey's mind map, it's a very good resource, we're grateful to you Ms Linzey.

MS JANISSSEN:

Our next witness is Ms Siiri Wilkening. Both on construction and operation noise, and I understand that there is now no request for cross-examination at this point.

THE COURT: JUDGE NEWHOOK

Yes I understood that the Albert Eden Local Board withdrew their request to cross-examine her this morning. Unitec was left on our list, has that request gone as well?

MS JANISSEN:

Apparently it has, yes.

MS JANIŠSEN CALLS**SIIRI WILKENING (SWORN)**

Q. Is your full name Siiri Wilkening?

A. Yes.

Q. And have you prepared evidence-in-chief on construction noise dated the 10th of November, and rebuttal evidence on construction noise dated the 2nd of February?

A. I have.

Q. And have you prepared evidence-in-chief in relation to operational noise dated the 11th of November 2010 and rebuttal evidence dated the 1st of February 2011?

A. I have.

Q. Will you confirm that your qualifications and experience are as set out in paragraphs 2 through 5 of the evidence-in-chief?

A. Yes.

Q. Is there anything in your evidence that you would like to correct?

A. No.

Q. Do you confirm then that the contents of your evidence-in-chief and rebuttal evidence are true and correct?

A. Yes.

1215

THE COURT: JUDGE NEWHOOK

Right now, no question from Unitec, have you confirmed that? Right, let's see whether there are questions from the Board.

QUESTIONS FROM THE BOARD: MS JACKSON

Q. When you read through the report some of these local people have horrendous ambient noise levels now and to add another 10 decibels to it seemed a bit horrific. Why would you say that that was less than a minor effect to add 10 decibels to what was already really over the top?

A. Excuse me, would we be able to clarify? Are we talking about construction or operational noise? Unfortunately, they are quite –

Q. No sorry, this could be operational noise.

- A. – separate. Operational noise, thank you. I am not entirely sure that, what you refer to because we are not adding 10 decibels to those people that already receive high noise levels. Those are the people living currently adjacent to State Highway 16 and the Great North Road interchange, and in that area we're actually reducing the noise levels from the current noise levels. The area in sector 9, which is currently open space, currently receives very, very low noise levels from urban environment. In that environment certainly the noise level increase is by quite a bit, not beyond what is reasonable for an urban environment, but we are certainly not adding noise to those people that already get high noise levels now.
- Q. Talking about noise barriers, for the construction you've said at one stage you need to put up some sort of barrier so that you're blocking a line of sight to the construction and you've suggested stacking shipping containers? Is that serious?
- A. That is correct as one option. That is for construction only, which is of temporary nature and that is quite unusual way of dealing with it. It just portrayed that there are options of dealing in specific areas with high construction noise levels that cannot be mitigated any other way. For instance, it wouldn't be possible to build a six metre high barrier out of wood easily, it is easy in that case to use other mechanisms, but it is just an example. It's certainly not recommended for operational noise.
- Q. I'm glad to hear that. So maybe we're talking mainly the construction yards?
- A. Yes, that's correct. That example was brought for sector 9 again where construction yards are quite close to residences. The residences are slightly elevated above the construction yard and normal size barriers would not break that line of sight, that acoustic line of sight, and so something higher might be required.
- Q. And you could also use the containers for storage of materials at the same time?
- A. That is correct. If you've driven along State Highway 1 currently at Greenlane, where the road gets widened, there are actually containers

stacked which are being used as site offices and also are used as noise mitigation in that area.

Q. Still on these noise barriers, some of these are really high and some of it's concrete and to my way of thinking that would be like living in a concrete box. So how much input or how much communication goes on with the community before you put these noise barriers up? Do they, for example, if I had a lovely view out over the estuary maybe I'd like putting glass or something, blue glass, whatever. So how much do you talk to the community about what sort of noise barriers you're going to put up on their boundaries?

A. Well if we step one step back, the design of the noise barriers, the heights, the locations and what they are made of, that was something developed by a range of people involved in the project. My involvement relates to the height and the location of those barriers and a minimum requirement in terms of material weight. The urban design people of the project would have input in, or would design what they would look like. There were several community meetings where preliminary pictures were shown from the urban design team, and I do know that, at least in one instance, for (inaudible 12:20:02) we met the residents and we were told that they wanted to keep the view and they'd rather have no barriers than lose the view, and certainly those things are taken into consideration when the best practical option in our mind was determined for those barriers.

Q. So I guess the problem becomes when you've got residents in a line and they want different things, but yes I'm pleased to hear that they did have some input into what was going to be built on their property boundaries.

QUESTIONS FROM THE COURT: COMMISSION DUNLOP

Q. Ms Wilkening, could you have a look at condition CNV point 2 on page 26 please. In particular table, under the heading "D "Internal Noise for Educational Facilities"?

A. Yes.

- Q. And if I'm reading this correctly, classrooms are to have a level of 45 dBL Aeq and lecture theatres are to have a level of 40. Now I'm sitting here thinking, well one would apply say to Waterview Primary School and the other might apply say to Unitec. You've seen the question coming. Can you explain the rationale around the different levels please?
- A. I will. These levels are taken out of the standard, which I've quoted in my assessment. It's recommended design sound levels and reverberation times for building interiors and it contains a whole number of different rooms or room criteria. And educational buildings are the first section and it actually sets lower criteria for lecture theatres than for classrooms, generally because those rooms are much larger. And once you've got a large room and you've got intrusive noise, it actually is more disturbing and affects listening far more than in a smaller room where the reverberation time's lower and people are sitting much closer together. That is the main reason why actually the criteria are lower for lecture theatres or school halls.
- Q. It may well be what the standard says. Do you, in a professional sense, embrace that line of logic that you've set out, is that your view?
- A. Oh certainly. These criteria are not inhibiting learning, they are actually noise levels that are suitable for normal educational activities. This is during construction only, so it is a limited time. I realise it's a long time, but it is limited to a certain amount of time. A lot of schools currently have higher noise levels than this, so these criteria are actually suitable for educational purposes and I don't see that they aren't.
- Q. What would you say to a proposition that went along the lines that young adults attending a lecture that they or someone else has paid for might be well motivated and able to concentrate better than the minds of little people in a classroom, bearing in mind that this as you've I think indicated is going to go on for a finite time, if not a limited time, at least a finite time. Now some children are going to be living with this if it's approved, for years?
- A. You are correct, there are differences in concentration but there are also differences in noise level. Young adults in a lecture theatre tend to be

quiet and listen, children actually work in groups and actually generate noise themselves. So these noise levels are not high noise levels for activities as they go on in primary schools. The other thing is that those criteria are to apply at all classrooms, so there will be some classrooms that are more affected than others, but the further away you move from a construction site, if we take for instance Waterview Primary, which is pretty much perpendicular to the construction site, meeting those criteria are the first rooms which are most affected means the rooms furthest away actually get quite a lot lower noise levels and children do move through rooms. So it's unlikely that the same child will have a level of 45 inside the classroom for the entire five years.

- Q. And on the same subject in paragraph 33 of your rebuttal, if I'm understanding this correctly and you'll put me right if I'm not, you're saying that the criteria based on the recommended design levels and a certain standard, which are of 35 to 45 primary school classrooms. Is it correct that you've sort of gone to the top end of that range in nominating 45?
- A. Yes that's correct.
- Q. You didn't say why?
- A. That is correct, and that's coming back to the fact that this is an activity of a finite duration. These criteria, as I said, I consider from experience to be reasonable. Using the construction noise standard, which would actually apply, we would end up with a much high criteria and by allowing for lower criteria for the worst affected rooms the outcome's actually better for the school than it would have been otherwise.
- Q. For primary schools and kindergartens this to apply for nine to three, I guess they expect that's when the children are there, but is it correct that teachers often work outside those hours in classrooms?
- A. That is correct. The – there are criteria for offices and other facilities as well. However, in this case we considered – or I consider – that it's a working environment like any other working environment adjacent to this project and there may be other people working next to this project that deal, have to deal with the noise levels that occur. And I think it should be borne in mind that what happens on the construction site the noise

should always be reduced to what's practicable. So it's not a free for fall. It is not – we will be creating 75 decibels at all times so there will be noisy times, there will be quiet times, there's a variation over the years and within each day, so.

Q. I'm pleased you raised the issue of levels in workplaces because that doesn't seem to have got a lot of attention and documentation that I've retained, I may have overlooked it or forgotten it, but what sort of noise levels would you expect of this work, say, at the end of Rosebank and Patiki Road to be exposed to in some of those workplaces in those locations?

A. Inside the offices?

Q. Yes.

A. Again, the construction noise standards sets out recommended (inaudible 12:28:40) for businesses, which sets actually a noise criteria and at one metre from the facade of 75 dBA. Taking a normal facade we could probably take off about 20 decibels so 50 to 55 I would expect on site.

Q. And is that, presumably that's considered appropriate as an office working environment is it?

A. It's a reasonable level to be working in. So it is not unreasonable. One could operate in that level. And again it is a temporary activity. There won't be five years of activity outside those offices. There will be a few weeks, or maybe months, but apart from that at those times the noise levels will be elevated. It is a large construction project, like any other construction project, and the construction noise standard does acknowledge that levels have to be higher otherwise things could not happen.

QUESTIONS FROM THE BOARD: MS HARDIE

Q. In your rebuttal you've actually made a comment with regards to the Avondale Motor Park and you've said that you consider at least half of the motor park could be affected by the construction noise. I'm just wondering in terms about – from that are you expecting that they could have half occupancy for a duration of this construction?

- A. Excuse me, I didn't hear the first part.
- Q. In item 103 –
- A. Yep.
- Q. – of your rebuttal you talk about “we consider the noise levels at Avondale Motor Park” that at least half of the site...
- A. Yes.
- Q. Would be affected by noise. What sort of level of noise were you expecting them to be subject to?
- A. As I've set out previously we would anticipate or treat the motor park similarly to dwellings, which means the external criteria of 70 during the daytime and 45 at night-time would apply. The problem is that a caravan or a tent doesn't really provide much in terms of insulation, so if you've got an external noise level of 70 the internal noise level is marginally less, while in a building, in a proper building the noise level reduces considerably and it's actually possible to live in that environment. So I would anticipate, even with using the shipping containers or similar barriers, that the noise levels will still be relatively elevated for people in those caravans.
- Q. So would you anticipate that those people would be able to sleep?
- A. The night-time noise criterion for sector 9 we've actually set to 45, because of the existing low noise environment. However, there will be times when that may need to be exceeded, for instance the concrete batching plant is in that area and there are also construction yards that I understand will operation 24/7. So that is something that will probably come out of the detailed design, but I'm not sure that at all times that park will be usable as it is at the moment.

MR DORMER:

Ms Janissen my questions of this witness may well raise legal issues that she's not the appropriate person to be answering, and if you think that's the case at any time don't hesitate to interpose.

QUESTIONS FROM THE BOARD: MR DORMER

Q. Ms Wilkening, when Mr Foster spoke to us last week he concluded with the proposition that this Board's focus should be on the adequacy and appropriateness of the design criteria so that the Board can be satisfied the implementation of those will achieve appropriate mitigation. And so I'm focusing on the adequacy and appropriateness of the design criteria and if we could start at page 25 of our conditions.

A. Yep.

Q. And see in the point 2, "Construction noise, except blasting, shall as far as practicable comply with the following criteria". Now are you able to list for us the circumstances in which it may not be practicable?

A. Probably not exhaustively, but I can give examples if that would help.

Q. Okay, well make a start.

A. If we look mainly at night-time first because that seems to be a general problem. Any works that occur within the existing state highway network, so on State Highway 16 that would require lane closures. For instance the building of the bridges of the Great North Road interchange which cross State Highway 16 would require a full closure. I understand these things could not occur during the day, they would have to occur at night to avoid traffic problems. Some work, for instance on the causeway, will require working within the tide, so whenever the tide is low certain works can occur. The tunnelling has to occur 24/7 I understand for safety reasons, which also in turn requires the batching plants to be available and work at night-time for instance, to provide concrete on short notice. While a lot of these activities can be mitigated to a certain degree, it may not be possible at all times to mitigate right down to the criteria that we'd like to achieve. And that is where my "as far as practicable" comes in, because some activities such as, even during the day, rock breaking in close proximity –

Q. Are we finished, I'm making a list.

A. Sorry, all right.

Q. Have we finished with night-time "may not be practicable"?

- A. Just trying to think, anything affecting Great North Road, I would anticipate, if that again requires a road closure. Yes I think that's what I can think of at this moment.
- Q. Now I'll start item 2 on my list, daytime?
- A. Daytime, generally very high noise activity, such as rock breaking in close proximity to houses. That's something we wouldn't want to do at night, that is something that may not be able to be fully shielded or mitigated right down to even 70 at times. Some forms of piling, potentially. I'm saying again, this is not an exhaustive list, this is just what I can think of from my noise point of view. If there were for instance helicopter deliveries of equipment, as was originally planned, I'm not sure if that's still planned?
- Q. Did you say, "helicopter deliveries"?
- A. Well it might be out now. But such activities that cannot be shielded or entirely enclosed or there is no reasonable alternative that creates lower noise levels.
- Q. So I've got a bit of a list then as to the circumstances in which it might not be practicable to comply. Who will decide this on a day by day basis, whether it's practicable or not?
- A. I would anticipate that's the construction manager or the construction team of some kind.
- Q. So the person making the noise?
- A. Well, they are not working in a vacuum, they have to abide by management plans, which are being seen by the council. They have to work with the community through the liaison groups and other consultation processes and they will be the ones having to deal with the complaints as well. So while you're correct, they are the ones creating the noise, they are also the ones having to deal with the lead-up to everything and the fallout if something goes wrong.
- Q. Then on page 27, we have a similar set of construction vibration standards, subject again to the "as far as practicable". Would you like to go through the same exercise and give me a night-time –
- A. Vibration?
- Q. Yes.

- A. That would be Mr Miller I'm sorry.
- Q. I missed my chance. Now in some of the earlier documentation and I haven't seen reference to it recently, there has been talk of conditions about moving people out of their houses in the event that the noise just got too bad. Are you able to assist as to where I might have seen those conditions because I can't see them in the new conditions?
- A. No, it's not in any of the conditions, it is covered in the management plan, rather than the conditions itself.
- Q. Now I had your construction noise management plan before.
- A. May we direct you to CNV 1.9, which says, "Mitigation options including", sorry on page 24, I've got the old version unfortunately.

1240

- Q. This is an assessment of construction noise?
- A. Yes.
- Q. Is that right, we have the appendix –
- A. I was just referencing the conditions. If I may very briefly, CNV1.9 on page 24, it says, "Mitigation options," what the CNV and P shall cover, "Mitigation options including alternative strategies where full compliance with the relevant noise and vibration cannot be achieved." Now moving people out certainly isn't alternative mitigation measure which is described as being a last resort in any case, because it is quite drastic.
- Q. I wouldn't mind a holiday in Surfers Paradise. I'm supposed to be having a holiday in Surfers Paradise but this hearing's in the way. I've got CNV1, I'm just looking for the bit about moving folk out?
- A. It's covered by the alternative strategies in CNV1.9.
- Q. So, "It's proposed that we impose a condition that requires NZTA to finalise a plan with discretion being left to NZTA as to what people we moved out when and under what circumstances." Would that appear to be the case?
- A. Yes, I think so. Through the mechanisms of for instance the construction noise and vibration plan, which has to be seen at the very least, I'm not sure what the condition says exactly, by the Auckland Council. So again, it's not a vacuum of NZTA doing things without involvement with the community or the council, I would anticipate, which

is similar to many other roading projects. In Vic Park Tunnel for instance, people they moved out when night-time works were very noisy and it seemed to work fine there. So it's not an unusual mitigation measure or management measure, it is something that is done as a last resort if nothing else can be done reasonably to reduce noise level to a reasonable level.

- Q. For the folk affected it may well be somewhat short of a last resort. There would be circumstances in which they might find it preferable to move out. It might well be a last resort so far as the funding, Agency's, funding and road building agency is concerned, but so far as –

THE COURT: JUDGE NEWHOOK

I wonder if I could interpose here. I suspect that we have actually got to that point that you anticipated Member Dormer, where others might be better placed to answer the mechanisms. This witness I perceive is well placed to talk to us from her experience of how people are affected by what levels of noise, but when you're getting into how you mitigate beyond lessening the noise or stopping the noise and other things to do with the science of noise, perhaps Ms Linzey in due course and counsel could be a bit better placed to talk to us. We've already signalled this bunch of words, this "as far as practicable", is something that is high on our agenda. Does that assist you from the point of view of my thinking at least?

MR DORMER:

I thank you for your help, yes.

MS JANISSSEN:

If I could perhaps also assist that section 12 of the CNVMP does already provide for the relocation, I think it's called – there's another word for it.

MS LINZEY:

Yes, "residential relocation", so it provides a whole hierarchy of different mitigation measures already in that plan that's already been put forward.

THE COURT: JUDGE NEWHOOK

Ms Linzey, you're obviously, well you've got your radar well tuned to this area of inquiry by us and we'll be very happy to have your help with it when we come to your evidence.

MR DORMER:

And, if I may signal again, I would anticipate similar help might be forthcoming in relation to who decides on alterations to houses.

1245

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP

Q. Is it possible, indeed likely, that there will be trucks working on the project at night?

A. Yes.

Q. In some of the construction yards?

A. Yes.

Q. Some of those are close to residential areas?

A. Yes.

Q. And there are batching plants. I don't know how shotcrete gets from a batching plant to the inside of a tunnel, but a truck would be a candidate for that?

A. Yes, that's correct.

Q. Coming to the nub of it, what provision have you made in your analysis and in any management plan or imposed conditions for dealing with truck reversing alarms? Those things that go – you know what I mean?

A. Yes.

Q. Which in my experience can be loud and penetrating and potentially disruptive of sleep. How do you handle that?

A. I have discussed reversing alarms in general in my assessment, which is D5 in section 7.6. It is recommended that any night-time work that requires reversing alarms that non-tonal reversing alarms are being used. They are (inaudible 12:47:16) alarm that rather than beep, go shhh, shhh, shhh, which is – sorry, it is –

THE COURT: JUDGE NEWHOOK

I'm reasonably certain that our transcription equipment will be produce a series of Ss and Hs to record that answer for us. That's fine.

QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER DUNLOP

A. They are – so they're non-tonal, they are broadband, they are quite focused. So you can only hear them once you are behind the equipment rather than to its side and they don't transmit through building structures as well as the high pitched tone, and are generally far less annoying because they blend in with the general broadband of urban noise, cars on distant roads and things like that. They are being used more and more on several construction sites, including Vic Park Tunnel. It's also in the construction noise vibration management plan as a requirement at the moment so, yeah.

Q. You indicated that it was in that documentation as a recommendation so it would be your expectation that it would fly through as a provision of the plan?

A. I would think so yes.

Q. Like you're not getting any orange lights from your (inaudible 12:48:36)?

A. No, not – no.

Q. The Board thought this was sufficiently important, it might have to be subject to a condition as opposed to a plan that's to be reviewed by the council, is that right?

A. I would think that's fine. It is not an unusual practice and it's becoming more and more commonplace because of the complaints that you raised.

QUESTIONS FROM THE COURT: JUDGE NEWHOOK – NIL**RE-EXAMINATION: MS JANISSEN - NIL****WITNESS EXCUSED**

MS JANISSSEN CALLS**ANN LOUISA WILLIAMS (SWORN)**

Q. Is your full name Ann Louisa Williams?

A. It is.

Q. And have you prepared evidence-in-chief dated the 8th of November 2010 and rebuttal evidence dated the 1st of February 2011?

A. That's correct.

Q. And are your qualifications and experience as set out in paragraphs 2 through 6 of your evidence-in-chief?

A. Yes.

Q. Is there any aspect of your evidence that you would like to correct?

A. No there's not.

Q. Do you confirm then for the Board that the contents of your evidence are true and correct?

A. Yes I do.

CROSS-EXAMINATION: MS DOCHERTY

Q. I just want to clarify some points in the groundwater conditions. I'll point you towards condition G10 on page 76. Could you please clarify the term "continuous flow", does this return to a technical term or an ongoing flow in monitoring?

A. It's an ongoing monitoring.

Q. In perpetuity?

A. Not in perpetuity, for as long as the gauge is installed and functioning.

Q. Is there any indicated time length, time period for that?

A. The period of monitoring is indicated in the construction environmental management plan and I believe we've indicated for at least a year prior to commencement of the work, and that's as much for NZTA's interest as for anybody's, and for continuing for a period of up to three years after completion of the project.

Q. Also referring to that condition G10. I note near the end of that condition the statement, "The NZTA shall continue to monitor the flow, at monitoring station installed at change 2900". This location, where –

does this location refer back to clause B of G10, where it states change 2020, it's been amended, or is this a separate location?

A. A separate location.

Q. And over the page to condition G11, we've got here details of the time period of monitoring. In clause C, "Up to 12 months following the completion of the tunnelling and to ensure there's no affects on the base flows." Do you consider that this period is long enough, the 12 months to ensure that the measure of affects of groundwater takes into account longer term weather patterns, such as drought?

A. I'm not sure that that's relevant.

Q. Does drought have an effect on groundwater levels?

A. Quite possibly, not a significant effect, it could have an effect on shallow groundwater levels, but I'm just struggling to find why this would be significant.

Q. To take into account the longer term weather patterns that occur and how this may affect the base flow of Oakley Creek?

A. Yes, but that's something that the monitoring of the base flow prior to construction, its significance prior to construction. Obviously following construction, once everything's completed this becomes interesting information and quite possibly Auckland Council will continue to monitor some of these sites for the future for that sort of information.

QUESTIONS FROM THE BOARD: MS HARDIE – NIL

QUESTIONS FROM THE BOARD: MS JACKSON - NIL

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP – NIL

QUESTIONS FROM THE BOARD: MR DORMER - NIL

QUESTIONS FROM THE COURT: JUDGE NEWHOOK - NIL

RE-EXAMINATION: MS JANISSEN - NIL

WITNESS EXCUSED

COURT ADJOURNS: 12.56 PM

COURT RESUMES: 2.16 PM

MS JANISSSEN CALLS

GAVIN JOHN ALEXANDER (SWORN)

Q. Is your full name Gavin John Alexander?

A. It is.

Q. And have you prepared evidence-in-chief dated the 9th of November 2010 and rebuttal evidence dated the 1st of February 2011?

A. Yes I have.

Q. Are your qualifications as set out in paragraph 2 of your evidence-in-chief?

A. Yes.

Q. Is there anything in your evidence that you would like to correct at this stage?

A. No there's not.

Q. Do you confirm that the contents then of your evidence-in-chief and rebuttal are true and correct?

A. I do.

MS JANISSSEN:

Sir, I understand that there are – subject to one issue about a condition, there are no questions or cross-examination. I understand Unitec no longer wishes to cross-examine.

THE COURT: JUDGE NEWHOOK

Unitec, no. All right then, moving forward to questions from the Board, starting on my left, Member Hardie.

QUESTIONS FROM THE BOARD: MS HARDIE

Q. Mr Alexander, just wondering with regards to condition S4, which is proposed here, I can't see which page it's on, page 67, 68?

A. Yes.

- Q. I'm just looking at the timing in terms of when an alarm or alert level is detected. There seems to be 24 hours after that alarm level is detected that it will be further investigated, and then another 72 hours to confirm what the level actually hours, and then another 48 hours before the property owner or occupier is notified. I'm just wondering, seems to be like there's like a six day duration between, from the initial alert level and notification. Can you just tell me, what sort of difference in level between estimated settlement and level in which you'd actually notify an owner? You know, you talk like two times the amount of detection versus the estimated level or...?
- A. There's two aspects to this. The first is these ground settlements develop relatively slowly, over a period of days in terms of mechanical settlement and much longer in terms of the consolidation or the groundwater related settlement. And they develop as – we're talking about the tunnel, as the tunnels advance they start developing before the tunnel gets underneath the affected property and continue for some time after that. So there's, they progressively develop so there is time to respond as long as people are looking at the monitoring data and evaluating it. The second aspect is that the first 24 hours is about double checking the accuracy of a survey. So then first thing you check you've got the right number and then you respond, and you respond by essentially going through and doing another check of the damage. This relates to building damage categories, that particular part of the condition. Other parts relate directly to the magnitude of settlement itself, which is defined, the minutes are defined in figure E14 and there we've set the alert level at 75% of the calculated settlement and the alarm level at 100%. Those are values we don't actually expect to reach because we've deliberately been conservative in our assessment of those settlements. Does that answer your question?
- Q. If say the alarm did go off?
- A. Yes.
- Q. And if say in an area you'd estimated that there was to be 20 millimetres of settlement under a residential house and in fact in the checking

survey that was carried out within 24 hours that movement was more than that, what would happen then?

- A. If the – I need to refer back to the conditions to find the precise detail. In general though the NZTA consults with the land owner and the occupier to agree the appropriate method that – appropriate way forward, and that really comes down to the extent of damage which is predicted at building and the extent to which the monitoring suggests that it might exceed that. In many locations, and if you refer to the figures G1 to G4 where we have mapped the expected building damage categories, you'll see it's very limited in terms of the overall footprint or scope of this project. So there's many, many properties where negligible or less damage is predicted, and therefore this is seen as no risk to those properties. It's only a small number of properties where more than negligible damage is predicted and that forms the basis of the trigger levels for the building damage monitoring and re-assessment. And I'll just elaborate on that a little further. The, many of those building – areas of building damage are categories 1 and 2 which are largely decorative, no or little effect on weather tightness. So appropriately managed by increasing the frequency of monitoring, visually checking for weather tightness and agreeing the condition before and afterwards so that appropriate repair can be made at the end of the project. In many cases it's best just to leave the repair where weather tightness isn't affected if it's just decorative.

Q. I think with regards to S4 it talks about that consultation with the property owner following –

A. Yes.

Q. – there is fixed days. So you say you've got quite a large factor of safety in your settlement calculations, perhaps suggest that it's unlikely that they'll reach the alarm levels?

1425

A. That is my very clear belief at the moment, and as the project proceeds there'll be monitoring which will allow those predictions to be refined, certainly confirmed, hopefully refined, to give earlier warning and one of the intentions is that the earlier monitoring, or the monitoring in the

earlier areas of the work, will be used to update the relationships and parameters that have been used to calculate settlements, so that the settlement predictions can get better and better as the project proceeds and therefore the reliability of those predictions and the use of the monitoring to manage the settlement effects can get better and better.

QUESTIONS FROM THE BOARD: MS JACKSON

- Q. Mr Alexander, when you did the calculations, did you consider the same construction machinery and the same number of machines as what's going to be employed on this project?
- A. We followed the construction methodology that formed the basis of the scheme design at the time and have calculated the effects based on that and those effects in terms of the quantum of ground settlement, the distribution of it, and the damaging effects on buildings, in particular, are now included in the conditions, so it will be the responsibility of anyone who wishes to change the construction process to make sure they don't create worse effects.
- Q. In the instance of a historic building, if you see things are becoming of concern, does work stop while you decide why the damage is likely to be greater than what you'd expect?
- A. Not necessarily. In some cases it may be better to speed up the work and get the permanent support and the permanent groundwater control in position as quickly as you can. The historic buildings, really it's Unitec building 76, which is some distance from the tunnel alignment, so it's more affected by the groundwater related settlement than a mechanical settlement. So the quicker you get the permanent tunnel lining in, the quicker those groundwater effects reverse and the settlement stops. The other alternative mitigation is to do additional grouting of the ground around the tunnel to reduce its permeability so that the groundwater inflows reduce ahead of your work and that would slow down the groundwater related settlement as well. So there are mitigation measures, not necessarily involving stopping work. In fact stopping work and not doing anything would be the worst thing you could do where you have groundwater settlement.

THE COURT: JUDGE NEWHOOK

Not groundwater related, but I remember when Civil and Civic as contractors undermined the corner of the historic High Court building which fell off. That was simple civil engineering negligence I think. Produced a lot of work for lawyers.

MR ALEXANDER:

And probably a few technical engineers.

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP

Q. Mr Alexander, I was wondering if you could help me with an aspect of S10 and S11 on page 71. Something there I'm probably not understanding very well. Just looking at 10 for example, "The Agency shall undertake monthly visual inspections of various buildings during the act of construction phase." And that term is defined in S3 on page 68. It's basically – you know the tunnelling's getting close or after it's been completed. Sort of intuitively I would have expected that as you were passing under identified buildings, the monitoring might have been more frequently than monthly. But I expect there's some considered reason for setting that sort of timeframe and I was wondering if you could help me understand that please?

1430

A. The... If we look at the typical, if you will, rate of advance of the driven tunnels, that's at one to 1.5 metres per day is what we've based our modelling on as a reasonably I think slow and therefore most potentially damaging rate. That gives 45 metres per month, roughly, if we say one and a half metres a day, 30 days. Which means this monitoring occurs over a – if it's 150 metres either side, there's three months of work either side of the tunnel face approaching, or coming underneath the building. So there's six months of monitoring, there's six or seven steps to see things developing. And one of the responses to an alert or even with a good monitoring programme, recognition that, "Hey we're not at alert yet, but it looks like we're going to get there," would be to increase the frequency of monitoring in that event. And there may well be some

buildings which are, by virtue of their form of construction or particular sensitivity, warrant closer more frequent monitoring, and I'm thinking there's a prayer wheel at a Buddhist institute for example which is particularly sensitive that will come out of the detailed pre-construction condition assessments. So there's certainly room to tailor it, but I think as a starting point, in terms of a general frequency, the monthly – given it's starting well ahead of when the construction effects are likely to be at their greatest, should be enough.

- Q. You're quite certain about those rates are you for progress, because I thought I read different figures from those in the documentation that – and you've been working on this very closely so I expect you know?
- A. I'm sure there are a lot of different rates, but they are the ones. The one and a half metres forms the basis of our modelling of settlements.

QUESTIONS FROM THE BOARD: MR DORMER - NIL

QUESTIONS FROM THE COURT: JUDGE NEWHOOK

- Q. If you could turn please to page 11 of your rebuttal evidence. I guess it really starts over at the bottom of page 10, but it concerns the caucusing and the input there from Earthtech concerning condition S4 and as I read the various paragraphs down to condition – to paragraph 51, you record in the middle of that that you understand that new condition S17 was agreed in expert caucusing to address what Earthtech and procedures, the shortfall –
- A. Yes.
- Q. – in S4, but can you just confirm for me as to whether it was your understanding? You sound a little uncertain in that sentence. Is it your understanding that Earthtech are now happy about this issue with S17 having been added in?
- A. Yes it is. They – I drafted that S17 and circulated it as part of the caucusing and they agreed that it was an appropriate response and it satisfied their concerns.

MS JANISSSEN:

I think the reason for that wording was that at the time the caucusing statement hadn't yet been signed so we couldn't say for sure.

THE COURT: JUDGE NEWHOOK

It had been moving at a fair old clip.

MS JANISSSEN:

Yes. If I could just ask the witness to clarify a correction to condition S7, which is on page 70, and it's really just confirming a, it's more of a typographical error. It says S7 subparagraph B, the very last words, "figures G1 to G4 is categories 1 to 5". That should actually be moved to the end of subparagraph C, and that's what was agreed to.

THE COURT: JUDGE NEWHOOK

So the blue lining goes to the end of paragraph C is that?

MS JANISSSEN:

Correct.

1435

THE COURT: JUDGE NEWHOOK

Q. And is that your confirmation Mr Alexander?

A. It is, it has a defined-in prefix to it as well, so –

Q. So the lawyers are not now on the same page.

MS JANISSSEN:

It's just the part I indicated, it's just the second sentence, the last ones, there's G1 to 14.

THE COURT: JUDGE NEWHOOK

So it's just the second line, the figures G1, G4, it's categories 1 to 5, moves to the end of C?

MS JANISSSEN:

Yes correct.

THE COURT: JUDGE NEWHOOK

Q. And that's your understanding Mr Alexander?

A. It is, and that has been through the caucusing process as well and it just got left behind in the rush.

Q. So that becomes a bracketed piece on the end of C?

A. Strictly speaking, it should be bracketed and start with, "Defined-in figures G1 to G4, as categories 1 to 5.

Q. We'll add in the words "defined-in".

A. And that then times in with the caucusing statement as well.

Q. And B will end with figure E14 full stop, end bracket?

A. Yes that's correct.

RE-EXAMINATION: MS JANISSSEN – NIL

WITNESS EXCUSED

MS JANISSSEN CALLS

TERRENCE WIDDOWSON (AFFIRMED)

Q. Is your full name Terrence Widdowson?

A. Yes.

Q. And did you prepare evidence-in-chief dated the 12th of November 2010 and rebuttal evidence dated the 1st of February 2011?

A. Yes.

Q. And are your qualifications and experience as set out in paragraphs 2 to 4 of your evidence-in-chief?

A. Yes they are.

Q. Is there anything in your evidence that you wish to correct at this stage?

A. No.

Q. Do you confirm then that the contents of your evidence is true and correct?

A. Yes I do.

THE COURT: JUDGE NEWHOOK

Yes Mr Jackson, is he with us, Onehunga Enhancement Society, no. All right, Friends of Oakley, Ms Docherty.

CROSS-EXAMINATION: MS DOCHERTY

Q. I'll just refer to page 78 of the proposed conditions, condition CL2, "Prior to constructions works commencing, a range of baseline testing is proposed." Will baseline ecological studies be carried out in the same locations in conjunction with the soil quality and groundwater baseline investigations?

A. I don't know, that's outside my expertise unfortunately.

THE COURT: JUDGE NEWHOOK

That will be a question for another witness I think Ms Docherty. You could talk to counsel friends NZTA later and find out who it might be worth asking that of.

CROSS-EXAMINATION CONTINUES: MS DOCHERTY

Q. I refer to over the page, no sorry at the end of this page, condition CL6, CL7, which is over the page. Condition CL6 refers to the removal of contaminated soil and disposal of the contaminated groundwater and surface water. Whereas over the page reference is only made to engaging in qualified contaminated land specialist supervise the works. Are there any plans in place to deal with contaminated ground and surface water, with regards to condition CL7?

1440

A. Well condition CL7 is really an overarching condition to deal with contaminated land within the project that's being excavated by the project. So contaminated groundwater would, by default, be included within that definition of contaminated land.

Q. So it's not this separate –

A. It's not a separate issue. It's all dealt with as part of the same process.

THE COURT: JUDGE NEWHOOK

Stars Mills, Mr McCurdy.

CROSS-EXAMINATION: MR MCCURDY

Q. I'm referring to seal 2 again on page 78 and the subject of the Star Tannery. What sort of contamination might be expected in the area of the old tannery?

A. Well I guess I could start saying that we've investigated the north bank of the former tannery and actually haven't found any contamination and the south bank is as condition seal 2 states is to be investigated at some point in the future. We're really looking at metals, given that the tannery was in operation over 100 years ago we're probably looking at various salts and acids, but most of these contaminants will be very hard to find given that these activities took place over 100 years ago. So most – the most common contaminants would be metals which you might expect to find, but given that they're fairly ubiquitous within the catchment anyway then it might be difficult to say that they came from the tannery as

opposed to from stormwater runoff or through general deposition from motorway use.

Q. Are you aware that the tannery closed in 1890?

A. Yes.

Q. And we've been close to bankruptcy for some time before that. So it could be that the contaminants in fact and pre-salts, metals off chromium and aluminium and from history the main tanning agent was in fact oak. So it might well not be the metal salts and acid residues, might not have been anyway even if they've started to disappear since?

A. That's a possibility.

THE COURT: JUDGE NEWHOOK

We'd probably know well Mr McCurdy if the landowner had agreed for some testing to be done. Was that –

MR MCCURDY:

The landowner would –

THE COURT: JUDGE NEWHOOK

Is that your land?

MR MCCURDY:

It is indeed. The landowner has agreed to all requests for entry to the land, including surveyors, archaeologists. If the question had been asked the landowner most certainly would have allowed entry for –

THE COURT: JUDGE NEWHOOK

I'm sure I read somewhere that the landowner had not given permission.

MR MCCURDY:

The landowner was never asked sir. And secondly, all the experts who did ask were given access and assistance.

THE COURT: JUDGE NEWHOOK

Oh well, there appears to be a condition drafting to cover off the situation of which there hasn't quite yet been adequate investigation.

CROSS-EXAMINATION CONTINUES: MR MCCURDY

Q. And just one final detail question. You mentioned that there's been testing on the north bank. Are you aware that in fact the tanning pits were on the north bank, not on the south bank part of the site?

A. Based on the archaeological reports then yes. There is some discretion of location of tanning pits.

QUESTIONS FROM THE BOARD: MS JACKSON – NIL**QUESTIONS FROM THE BOARD: MS HARDIE – NIL****QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP**

Q. Mr Widdowson, I'm wondering sort of what to make of page 7 of your bundle, which is where you respond to the proposition from the council witnesses that it might be appropriate to form active sports fields in Phyllis Reserve. And in 7.1, there you sort of set out all the considerations. In 7.1 you say, "All the earthworks and the landfill would require strict management as detailed in the contaminated soils management plan which may need to be amended to cope with the landfill's specific tasks." Is that a problem? It seems as if you're putting it up there as an impediment, but it might be that all it does need in fact is as you say, an amendment?

A. Yes. The time my evidence-in-chief was compiled there was no plan to excavate the landfills as part of the project and the question concerning the location of sports fields is – came in subsequent to my evidence-in-chief being prepared. So whilst there's no direct planning for excavating into a closed landfill because that's not part of the project, should that be the case at some point in the future, then the management plan will have to be amended to reflect that activity.

- Q. But cutting to the chase, would there be a problem in making such an amendment?
- A. No.
- Q. If we run down through your paragraphs 7.1, 7.3, 7.4, they all include the word “could”, something could present –
- A. Yeah.
- Q. – a problem, something could present a problem, something else could present a problem. It may be that on the other hand those problems may not arise, so I’m sort of left asking myself whether you could assist us with the probability of those things coming about, make it a relatively high probability or relatively low probabilities.
- A. There’s a high probability that we’ll encounter – that the excavations into – if we’re talking Phyllis Street landfill here?
- Q. Yes we are.
- A. Then they will encounter landfill gas because it has been measured already by Auckland Council as part of their regulator monitoring regime, but ultimately it depends on the depth of excavation. If you’re excava – the deeper you excavate, the more risk there is that you’ll, the higher the chance that you’ll encounter landfill gas.
- Q. And are there well established engineering practices for containing and dealing with landfill gases?
- A. In terms of a construction activity then it’s really based round ongoing monitoring of the excavations. In terms of construction then yes, there are various methods of sealing against gas entry.
- Q. So cutting to the chase, if it were determined that there should be sports fields, further sports fields at Phyllis Road, do you think that there are engineering techniques available for facilitating that outcome?
- A. Yes, though I should add I’m not an engineer.
- Q. I suspect you’ve been around the subject for a while, looking at your CV. Coming to your paragraph 7.5, if I’m understanding it correctly Mr Widdowson, what you’re saying here is that to break the landfill open you in fact need another, need a resource consent and that hasn’t been applied for. Is that the thrust of your evidence?
- A. Yes. Yes.

Q. Heads are nodding.

A. Yes.

MS JANISSEN:

It's not part of the project, that's why.

QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER DUNLOP

Q. So that puts the Board in an interesting position doesn't it, if the Board were to conclude that on balance Phyllis Road were an appropriate place for the sports fields to be replaced then, I'm thinking in the layout here, that in some way have to be conditional upon the attainment of some further consent?

THE COURT: JUDGE NEWHOOK

That's something that might need to be worked around with other witnesses and/or counsel for NZTA.

THE COURT: COMMISSIONER DUNLOP

But thank you for drawing those matters to our attention Mr Widdowson.

QUESTIONS FROM THE BOARD: MR DORMER - NIL

QUESTIONS FROM THE COURT: JUDGE NEWHOOK - NIL

RE-EXAMINATION: MS JANISSEN – NIL

MR MCCURDY:

Sir I know this is against procedure, but I wonder if I might clear up a small confusion about the matter of access.

THE COURT: JUDGE NEWHOOK

Do you want to tell us something about that?

MR MCCURDY:

Yes, I believe there has been –

THE COURT: JUDGE NEWHOOK

Yes well while the witness is leaving the witness box – you don't want to question him or –

MR MCCURDY:

No, for the Court if that's acceptable?

THE COURT: JUDGE NEWHOOK

I'm sure I read that there'd been a lack of co-operation from a landowner and –

MR MCCURDY:

Yes sir and I –

THE COURT: JUDGE NEWHOOK

- I also thought that that landowner might be you, which is why I flippantly perhaps said what I did.

1450

MR MCCURDY:

I believe we found the source of the confusion. The landowner who refused access was the owner of the Goldstar site in Valonia Street, Owairaka.

THE COURT: JUDGE NEWHOOK

I'm sure I read that it was in relation to your site.

MR MCCURDY:

Yes, there's a reference to access, but in fact access wasn't asked for. But I'm in fact the Star Tannery site, or half of the Star Tannery site in Cowley Street, and I certainly never did refuse access to Mr Richardson or other experts who asked. And I believe there's confusion between the Goldstar site and the Star Tannery.

THE COURT: JUDGE NEWHOOK

Thank you for that, and I understand your wish to endeavour to set the record straight. I'm not sure that it's important for us to know who to believe, because at the end of the day as I observed, there appears to have been a condition drafted to cover off any want of adequate investigation on the south bank of the Oakley Creek in any event, and nobody's questioned this witness about the adequacy of that condition or hasn't pursued it very far, so thank you.

WITNESS EXCUSED

MS JANISSSEN CALLS**JEFFERY HSI (SWORN)**

- Q. Is your full name Jeff (inaudible 14:52:15) Hsi?
- A. Yes.
- Q. And did you prepare evidence-in-chief in this case dated the 12th of November 2010?
- A. Yes.
- Q. Is there anything in your evidence that you wish to correct?
- A. No.
- Q. Are you confirming that the contents of your evidence are true and correct?
- A. Yes I do.

CROSS-EXAMINATION: MR MCCURDY

- Q. Dr Hsi, I refer to your evidence-in-chief, paragraph 77 on the construction of temporary platforms for the flyovers in the final part of Oakley Creek. The proposal to build temporary platforms over the soft strata right up to the main channel for construction of the flyovers. The question arises because of two periods of extreme tidal and rain effects in Auckland in January. One particularly on the 23rd of January resulted in tidal levels more than half a metre over the maximum high water springs, from 3.6 up to 4.2 or 4.3 metres. And at the same time with very high rainfall, there was very high current velocity and turbulence in the creek. And we've seen that before but this is something I haven't seen in 25 years. I wonder could you comment on the effect of that same sort of event on the temporary platforms with the width of the creek constricted just to the main channel, should we get that sort of event again?
- A. Well yes, the construction platform needs to be designed in a way to resist any weight actions as well as supporting any construction equipment to be travel on top of it. So I guess when we have got that sort of event, the design is to take into account of those conditions. So the way to overcome this sort of situation can be for example, increasing the construction platform thickness or increasing the (inaudible

14:54:52) textile to reinforce the construction platform. So they are engineering means to overcome that sort of problems.

1455

Q. Okay, so that's a matter of temporary construction as I –

A. It's for the construction team as well as the future design team to consider for any possible scenarios.

QUESTIONS FROM THE BOARD: MS JACKSON

Q. Dr Hsi, when you've got the machine sitting on the edge and you're going to put in some of this in situ mudcrete is there sufficient clearance around the machine, I assume that there is, for workmen to work safely?

A. There will be sufficient space for the construction equipment.

Q. And you're happy that the – all I can think about is the State Highway 1 section down by Mercer that was only built very recently, and as you go over it you're lurching all over the place because of, I assume, ground compaction? Maybe it was – it was built through a swamp, same as like this causeway I would imagine, the same sort of mud foundation?

A. Yeah.

Q. So 400 millimetres settlement in 25 years, is that what you expect to happen?

A. That's the criteria set in the specification and the design is to have ground improvement measures to meet that settlement requirements, so the ground improvements may consist of different treatments, for example different depths of the treatment, to allow for a long term settlement, meeting that criteria.

Q. So that's why you say where the ground improvement is greater than five metres you do deep soil mix and –

A. Yep, yes.

Q. Okay. When you're removing the temporary piles that form platforms for the construction machinery and you vibro extract them, what effect does that have on the soft mud around the causeway?

A. The soft mud is already very soft so by vibrating the temporary piles, all of it, there wouldn't be any adverse effect to it because it's already very poor.

- Q. But the vibration doesn't travel and affect the other work?
- A. It should not be. I cannot see any adverse effect due to the withdrawal of the temporary work by vibrating it out, because that temporary – that marine mud is already so soft so by vibrating it it's not going to worsen it.
- Q. It could move it couldn't it?
- A. Then – correct, but then that material can cave back it so it's not going to cause any damage to the existing ground.
- Q. To your causeway?
- A. No.
- Q. Okay. That portable waterfill coffer dam, do you fill that with seawater do you? How do you construct that thing, this portable waterfill coffer dam –
- A. It's –
- Q. – to give yourself a dry working platform?
- A. It's a series of tubes that is going to be laid out into the sea and then you pump water into the tube to fill up the tube, so that the tube will form a waterfilled dam, so-called, and with that the tube you progressively lay it out section by section and then you connect them all together into a continuous coffer dam, which would enclose the working area and then you can pump the water up within the working area to make it dry to allow for the construction work.
- Q. So is it filled with salt water or freshwater?
- A. It's filled with the seawater.
- Q. With seawater, so that –
- A. With seawater.
- Q. Then you can just let it go when you're done?
- A. Yep.

QUESTIONS FROM THE BOARD: MS HARDIE

- Q. I've just got one question. I see you're doing – or the proposal is to do quite a bit of work in terms of the extension to the causeway, to the widening of the causeway. I'm just wondering, are you doing any actual

work over the existing causeway width, given that that's already showing signs of settlement?

A. You mean below the causeway? No.

1500

Q. Well yes, within the existing depth of the causeway, there's none proposed?

A. No, because it would be very difficult to do it. So what's going to be done is that the existing causeway is to be raised by a certain height to meet the height, future height requirement, so there would be further settlement due to this additional fill. However, the design needs to be taken into account, the settlement of the existing causeway in the long term, which needs to match the settlement of the newly expanded and raised embankment, causeway.

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP

Q. Really a question that Ms Janissen or Ms Linzey might be able to assist with. Just following on from the previous questions about the five metre of mudcrete work to be done, and as I understand the evidence, there's a suggestion or a recommendation that the deeper mudcrete treatments than five metres be undertaken. It just crossed my mind to ask whether there was any constraint in terms of the consent applied for that might limit that depth. There's no vertical dimension nominated in the consent.

MR BURNS:

If I could answer that.

THE COURT: COMMISSIONER DUNLOP

If Mr Burns can help, yes.

MR BURNS:

But no, the consent seeks that that take place without limitation as to depth.

QUESTIONS FROM THE COURT: JUDGE NEWHOOK - NIL

RE-EXAMINATION: MS JANISSSEN - NIL

WITNESS EXCUSED

MS JANISSSEN CALLS

ROBERT GORDON BELL (SWORN)

Q. Is your full name Robert Gordon Bell?

A. That is correct.

Q. And you've prepared evidence-in-chief dated the 12th of November 2010 and rebuttal evidence of 2 February 2011?

A. That's correct.

Q. Are your qualifications as set out in paragraphs 2 through 6 of your evidence-in-chief?

A. That's correct.

Q. Are there any corrections you'd like to make to your evidence at this stage?

A. Other than the errata that I've already put in my rebuttal in s 60 and 61.

Q. Subject to that, do you confirm that the contents of your evidence-in-chief and rebuttal are true and correct?

A. Yes.

THE COURT: JUDGE NEWHOOK

Forest & Bird, Mr McNatty.

CROSS-EXAMINATION: MR MCNATTY

Q. In one of your, I think in item 46 of your evidence-in-chief, you give an indication that the culverts that's at the Rosebank end there, only provides between .5 and .7% of the total tide volume that enters and leaves the Waterview estuary. Is it possible to increase the volumes that can flow through that culvert or a culvert in that zone?

A. Just firstly, I'd like to correct, it's .05% to .07%.

Q. Okay, my apologies.

A. Of the tidal volume that is exchanged each tide on Waterview estuary. Your second question is, that the culvert, size of the culvert, everything about the culvert is not limiting the amount of water that is flushed into that area. The only limitation is the sedimentation that has occurred over the last, since the 1950s and that now limits it to the highest part of

spring tides only, hence once you get below three metres chart datum, there is no flushing from that culvert.

Q. I understand. Further from that then, is it possible that if there was a channel realignment then that zone, I realise that culvert is totally impractical, but that zone could be used as a channel for flushing the Waterview Basin part of the marine reserve. I'm asking "possibility"?

A. When you say, "channel", there only exists a small scar hole that is four metres by three metres, it's nearly choked now, so there is no channel. I have been asked to assess it and in my opinion the only way to keep that effectively open would be to excavate a major channel through to the other channel. And as you will see in the caucusing, we disagreed on the impacts of that.

Q. If we look at your annexure A, the photo, the three photos that show a pre-causeway condition, subsequent causeway condition there, there is quite a noticeable channel in the pre-causeway function. That was a natural channel, would that be correct?

A. That's correct.

Q. Would you agree with the suggestion that in that pre-causeway condition where the Waterview Basin was getting a reasonable flushing mechanism?

A. Yes, it was a separate, almost a separate inlet, but in my work I was asked to just look at the effects on the existing environment and so this historic analysis is just to put it in context of where that existing environment came from.

Q. And then really then, is there any other mechanism that you could suggest there that would allow the Waterview Basin, the marine reserve to get more flushing, and is there merit in that?

A. My reasoning's outlined in section 97 of my evidence-in-chief, that I believe because of the sedimentation that has occurred historically, there is no practical effective way of increasing the flushing in that western end and even less so in the main body of the Waterview estuary. Because it would require extensive channel excavations with its associated disturbance and also it would affect the geomorphology of the current causeway channel and the banks and the channels there.

So you would cause substantial changes to the existing environment, in terms of the geomorphology.

Q. If I put it in a sort of a – try and put a little succinct summary, then are you under the impression that the Waterview embayment is going to continue to increase in sedimentation?

A. Yeah, that will continue.

Q. And therefore likewise increase in levels of contaminant?

A. It's not my brief to comment on contamination, that's covered by probably, Dr De Luca.

Q. If I understand, be corrected though, in paragraph 109 of your evidence, you refer to the technical report, G30, which is assessment of associated sediment and contaminant loads. Is that still outside your – what I'm looking for is a comment on that report, appears in my opinion, shows that there will be no reduction in contaminants from the motorway with the proposed mitigation but there'll be an increase but at a slower rate?

1510

THE COURT: JUDGE NEWHOOK

He's just commenting on that which Mr Moore has recorded Mr McNatty.

MR MCNATTY:

Yes sir I find that, but I also find a little bit of circularity between Mr Moore's, of the De Luca and Dr Bell's.

MR BELL:

Maybe if I could clarify?

THE COURT: JUDGE NEWHOOK

Yes, if you would help us with that.

CROSS-EXAMINATION CONTINUES: MR MCNATTY

A. Technical report sheet 30 will be covered by Dr Moore's in his evidence, but in terms of my team, in terms of modelling, we took the sediment

load part of that, the output from that study and that's what we modelled and which is described in the G, G.4. So we took the results for just the sediment itself, not the contaminants.

CROSS-EXAMINATION: MR MCCURDY

Q. Dr Bell, referring to condition C12 on – sorry C14 on page 101 of the conditions, that's the realignment of channels within the open inlet, because of the (inaudible 15:11:31). At least two lengths of the channel to be realigned with shell banks, is there a proposal to reinstate the shell banks after the realignment?

A. You'll have to clarify sir because the shell banks are on the seaward side. All the managed realignment channels are on the landward side so I'm –

Q. There are shell banks on the southern side to the east of the causeway bridge, two lengths, one immediately by the bridge, another one further to the east again. There are existing shell banks. They're probably not chenier banks in terms of that definition, but they are shell banks and as far as one can tell, healthy and they are there. So that's the reason for the question. Once the causeway moves the channel to the south is there a proposal to reinstate those banks or should there be a proposal to reinstate those shell banks?

A. I haven't been party to those, but I suspect they would be in the CEMP in terms of how that site is managed and certainly with the chenier banks on the north side, on the seaward side, there is propo – there is condition on that particular one –

Q. Yes –

A. – so I see no reason why that site can't be managed through the CEMP.

THE COURT: JUDGE NEWHOOK

Well just on the question of whether there are shell banks on the southern side, whether or not they're chenier banks, I wonder if Ms Linzey can help us. Is there a document we can flick to that offers us an aerial or photographic view for instance?

MS LINZEY:

At the moment I'm just trying to look at the one that's attached to Mr Bell's evidence, but I certainly can't pick it out from here.

THE COURT: JUDGE NEWHOOK

Which appendix are you looking at in his evidence?

MS LINZEY:

That was just –

THE COURT: JUDGE NEWHOOK

Oh, appendix A?

MS LINZEY:

Appendix A.

MR BURN:

Dr Bell himself may have a good idea of the availability of aerial photographs that we're used to, given that he's supplied most of them.

MR BELL:

Maybe you could flick up one or two of those, but I'm not a – I'm not aware that there are major shell banks -

THE COURT: JUDGE NEWHOOK

Q. Have you got your annexure A in front of you Mr Bell?

A. Yes.

Q. Dr Bell I'm sorry.

A. My annexure A of my evidence-in-chief is up in the western end. So this photo before you shows the, for the transcript, for the causeway bridges and then Oakley inlet to the right. And the first meander is to the extreme right and the second meander is off to the, off the image further to the right.

THE COURT: JUDGE NEWHOOK

Is that the area that you're asking about Mr McCurdy?

MR MCCURDY:

Yes, I believe that the first strait immediately to the east of the causeway bridge, I believe that is affected by the widening of the causeway and there are certainly shell banks there. And then the first meander there's shell banks there again which are affected.

THE COURT: JUDGE NEWHOOK

Q. Well, as I think I told the assembled, once before, we've found that the use of the aerial photography available from Yellow Maps, which I think is actually a Google resource, can be quite helpful. So somebody might like to study that before another NZTA gives evidence about ecological matters. In the meantime Dr Bell, do you have any comment about – make an assumption that there might be shell banks there, even if they're not chenier banks strictly by definition. Could they be, do you understand they could be dealt with in the same way as the chenier banks on the north side?

A. Yeah, absolutely, just the shell material just needs to be stockpiled and placed back once the channels are realigned.

Q. So for instance condition C12, would simply need to be amended by the addition of the words, "and southern", after the word, "northern", would that be sufficient or a rather simple approach?

A. Or else and amended C14 which is directly dealing with the managed tidal realignments.

THE COURT: JUDGE NEWHOOK

That's probably as far as we can take it at the moment Mr McCurdy, the witness is a bit mystified about your allegation and that may be looked at by NZTA's ecologists, marine ecologists.

CROSS-EXAMINATION CONTINUES: MR MCCURDY

- Q. The other matter I have follows on perhaps from the Forest & Bird's cross-examination. And there's something, as you said, in the caucusing there wasn't agreement. But it's a general question which I haven't found a guide to in the documentation. The NZTA proposes the modification of an existing structure, the causeway. The existing structure has clearly caused detrimental effects over the past 60 odd years. Is there any sort of responsibility on the part of the NZTA to address those detrimental effects of that existing structure when it seeks to modify it?
- A. In my brief from NZTA I only looked at the environmental effects of widening the existing structure which was assumed to be part of the existing environment. So my assessment is only on the widening works to be undertaken under the project as defined.

MR MCCURDY:

I wonder, could I possibly put that question to the Board?

THE COURT: JUDGE NEWHOOK

Not right now.

MR MCCURDY:

No, I don't mean now, for consideration.

THE COURT: JUDGE NEWHOOK

You may make submissions or representations, as we've been calling them, when it comes your turn Mr McCurdy.

MR MCCURDY:

Sorry sir, I didn't catch that?

THE COURT: JUDGE NEWHOOK

When it comes time for you to make your submissions or representations, as we've been calling them, you may address the question if you wish, of

whether, if (a) we have the power and (b) whether we should, if we do have the power, direct that anything occur in relation to the existing, or more particularly historical environment as opposed to that which the witness says has been his brief from NZTA.

QUESTIONS FROM THE BOARD: MS HARDIE – NIL

QUESTIONS FROM THE BOARD: MS JACKSON – NIL

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP

Q. Dr Bell, just perhaps a relatively small point arising out of your rebuttal, paragraph 54. We make a suggestion as to how navigation might be assisted at the Whau Bridge, or as I understand it, possibly at the causeway bridge for smaller craft. Do you know whether that's found its way into the conditions or whether, what I interpret as a helpful suggestion, is shared by your client?

A. It's, it came late in the piece. It's not in the conditions at present so it's just a suggest – a practical suggestion that –

Q. I see C11 actually deals with navigation of the Whau Bridge?

A. Yeah, that's in respect sir –

Q. Navigation vessels beneath the bridge during construction shall –

A. – of – during construction.

Q. So there's actually a handle there that something more could be hung off.

A. Right.

Q. I suppose it's almost trite to ask you if you think it's a good idea, you wouldn't have written it otherwise would you?

A. Maybe Mr Burns in his submissions could comment on that.

QUESTIONS FROM THE BOARD: MR DORMER - NIL

QUESTIONS FROM THE COURT: JUDGE NEWHOOK - NIL

RE-EXAMINATION: MS JANISSSEN – NIL

WITNESS EXCUSED

THE COURT: JUDGE NEWHOOK

A legal issue perhaps arising out of that last passage of questioning by Mr McCurdy of Dr Bell. He has, as we've perceived, other witnesses have been holding a brief from the applicant to deal with the existing situation and to look to see whether effects on the environment should be avoided or mitigated in relation to the proposal, or the project as we've been calling it. Perhaps to use a delightful phrase offered to me by my colleague, Member Dunlop, have we got a situation here where there's the father and the son, where the son might as a matter of law to deal with the evils inflicted by the father. So the predecessor to NZTA – I don't think, I'm sure it wasn't even called Transit then, I'm not sure what it was called in the 1950s when this North Western Motorway was constructed – National Roads Board I'm told, quite reliably I'm certain – and I'm wondering whether a matter that the counsel should be addressing for us is the phraseology that appears amongst other places where importantly in section 5(2)(c) of the Act, "avoiding, remedying or mitigating any adverse effects of activities on the environment". That word "remedying" is one that comes in for little attention in our work, it seems to me, across the board, but I'm wondering, and for the moment I can't think of any case law on the topic, whether the sort of situation that we have here now where NZTA's the current owner of the existing and historic works inherited from its predecessors it might have created a situation perhaps because engineering and ecological knowledge weren't – they are now – back in the 1950s, but where the word "remedying" comes into play in terms of what might be imposed by way of conditions or even design of the project. So...

MS JANISSEN:

Sir I'll be happy to address that further later, but I guess my short response to that, or immediate response to that is with respect to an assessment under section 5 the Board must be assessing the effects of the project before it, and that's the current proposal so in terms of what has gone on in the past, if there's no end to what a Board or a TLA will be assessing when it comes, with respect, to resource consent applications.

THE COURT: JUDGE NEWHOOK

Yes. Well that is one's traditional understanding of the way in which that section and other parts of the Act work, but I'm wondering whether in fact given the way in which we generally focus as I've said on avoiding in mitigating and rarely referring to the word "remedying", whether perhaps we haven't been missing something or in danger of missing something on this occasion. Given that the word is there, it must have been intended by Parliament to have a purpose. How can we remedy an effect that hasn't yet been created because the works haven't been started? What is the thrust of that word, what is the purpose of that word in that phrase under section 104, and one or two other places as well?

MR DORMER:

I wonder whether you can remedy a temporary effect.

THE COURT: JUDGE NEWHOOK

Yes but, one then even – but yes you could I suppose, that's a useful observation perhaps from Member Dormer that you might do your construction, create effects and then have to remedy them when you've finished, and that might be as far as it goes perhaps.

MS JANISSSEN:

Certainly I'll definitely look at that further.

THE COURT: JUDGE NEWHOOK

My question might be completely off the wall, I don't know, but I'm sure we'll receive a learned response, or I hope we will.

THE COURT: COMMISSIONER DUNLOP

At the end of the day it's for a single purpose isn't it.

THE COURT: JUDGE NEWHOOK

Yes, as Member Dunlop observes, has a single purpose and those words are all there, it must have a meaning. So interesting question.

COURT ADJOURNS: 3.26 PM

COURT RESUMES: 3.45 PM

MS JANISSEN CALLS

JONATHAN PHILLIP MOORES (AFFIRMED)

Q. Is your full name Jonathan Phillip Moores?

A. It is.

Q. And did you prepare evidence dated 10 November 2010 in these proceedings?

A. I did.

Q. Are your qualifications as set out in paragraphs 2 through 3 in your evidence-in-chief?

A. That's correct.

Q. Is there anything in your evidence you wish to correct at this stage?

A. No.

Q. You confirm then that the contents of your evidence are true and correct?

A. Yes.

CROSS-EXAMINATION: MR MCNATTY

Q. I'd like to start if I may sir, with your, I believe it's your G30 technical assessment of associated sediment and containment loads?

A. Yes.

Q. And I would like, if possible, on page 20 and 21 of that report a couple of questions that might help remove some confusion that I have. I'm not sure whether you were in Court on Friday last week, but I asked a question of Mr Andrew Murray about some transport numbers and we – in the areas from sector 2 through to including sector 5, we get the daily figure of approximately 300,000 from his table 4.13, page 65 G18. If I run back to your particular report G30, page 20, if I run through those sectors 2 to 5 inclusive there, I get approximately 200,000 vehicle movements per day. Can you enlighten us as to whether the transport

numbers were the first ones done to be the factor for your sediment numbers?

- A. I can confirm that the numbers in table 7 were used in our modelling of contaminant loads, yes.
- Q. That wasn't really what I – was there an input from the transport modelling that you used as base data for your sediment data?
- A. Yes, these numbers were provided by BacHus for us to use in our contaminant load modelling. So we ourselves didn't do any traffic flow modelling, that data was provided by others.
- Q. Sorry, I've still got some confusion, when in your estimate in your table 7, you have figures of approximately one half the numbers that are in the figures that are provided in the transport technical – is there any way that you might be able to explain that for us?
- A. I can only repeat that we were provided with these numbers and we used those numbers. I can't explain those differences.

THE COURT: JUDGE NEWHOOK

Probably as far as you can take it with him I think Mr McNatty.

CROSS-EXAMINATION CONTINUES: MR MCNATTY

- Q. In your modelling on suspended solids, did you attempt to reach the 75% or 80% total suspended solids?

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- A. As a load –
- Q. As a guideline, as a target –
- A. – reduction factor?
- Q. – as a reporting function?
- A. The estimated loads of sediment are based on a sediment removal efficiency of 80% for those sectors where that number has become appropriate during the project, and in two other sectors it remains at 75% suspended solids removal. And so those, the loads which are based on those are the removal efficiencies of those that are contained in my evidence.

- Q. I'm going to refer you back to that, again, the G30 report, the two tables, table 8 and 9 where you have presented estimated annual sediment load are at a "do minimum" scenario?
- A. Mhm.
- Q. And again in a, "with project" scenario?

THE COURT: JUDGE NEWHOOK

What page?

CROSS-EXAMINATION CONTINUES: MR MCNATTY

- Q. We're talking again page 20 and 21 of the G30. If I look at the suspended solid shift from any one of the sectors of table 8 and any one of the projected dates there, I don't see that 80% suspended solids being achieved. And if we're talking about sector 3 and 4, which I understand are in your 80% zone, the maths are a little bit different. I see them somewhere between 60 and 70%, and please correct me if I've...
- A. So there's two things which can help explain that. Firstly, in report G30 we didn't use 80% as a number, we used 75%. And secondly, the reason why that load reduction is not 75% is that there will be some areas which were not modelled as passing through a treatment device.
- Q. And so then how do we put these reports in the context then of your evidence?
- A. You'll see in my evidence there's a discussion of post-lodgement events, which means that that is the most current information. The G30 remains relevant, but there have been some adjustments reported in my evidence.
- Q. If I might then move on to the, again in the same two tables, and the contaminant loads and let's pick say sector 1 for zinc in the "do minimum" scenario and the same sector 1, say sector 2 in the "with project" scenario.
- A. Mhm.
- Q. I see only a reduction of fairly close to 45%? Is that the type of reduction that you anticipate in these...?

- A. You're indeed seeing a difference of the number or something around that number that you mentioned, but that is not the same as saying that was the treatment efficiency that was applied. Because there are additional areas of road contributing contaminants so you're not really comparing like with like. There are two things that are changing in these scenarios. Firstly, the area of road discharging stormwater is changing, and secondly, it's being treated to a different level than in the "no project" scenario.
- Q. But if I then make an alteration for the area of roading I found then that the figure climbs to something like, well climbs even less so you actually get less removal of heavy metals. And if I go out into a projection of any of the years of 216 between those two charts there the figures show an alarmingly poor recovery of heavy metals.
- A. What's your question?
- Q. Do you not find that, do you not find that figure inconsistent with the ideal 80% total suspended solids?

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- A. The idea of reducing zinc and copper, sorry TSS by 80%, and remember that is the only contaminant to which the 80% is being applied, does make significant reductions in the loads of TSS being discharged from the State Highway 16 sectors of the project. Now even adopting a lower removal rate for metals and that varies, depending on whether we're talking about the particulate or dissolve metal fractions, we still see quite a significant net benefit for the sectors of motorway corresponding with the existing State Highway 16. On the other hand, where the new motorway comes in, which is sector 9, we see a new source of contaminants, which while it will be treated, clearly unless you were to treat it to 100% removal there's going to be a new net source of contaminants. So yes, through most of the sectors there is an improvement, when in sector 9 we see the reverse happening.
- Q. Is there any way that you can then show what your accumulative contaminants can be?
- A. Do you mean the total from all sectors?

- Q. Where specific – I mean, we as Forest & Bird we're only interested in the affects on the Motu Manawa Reserve, which is the, so it's the catchments of the Waterview Bay, Waterview inlet I should say and the northern area of State Highway 16. It appears to us there that there's a strong possibility that Waterview Bay will continue to accrete in contaminants. Is there a practical function that you can move forward up until 90% removal of suspended solids and maybe hit some Anzac triggers that play beyond a particular function then you've got a different recovery or maintenance method?
- A. I can only offer an answer as far as my expertise goes, which is in the loads delivered to the receiving environment, their accumulation in that environment would be something better addressed by Dr De Luca.
- Q. If we put it in, I'm trying to put it in fairly simple terms. If our traffic numbers double, does our contaminant double?
- A. In a growth sense that would be a rough approximation. It would depend how those numbers were distributed and the devices that were proposed to treat different parts of the motorway.
- Q. Just to make it even simpler. If we take "a" particular sector of State Highway 16 causeway, which currently has minimal treatment and take it to treat the whole area and we double the number of vehicles on that particular sector, would that then double the amount of contaminants?
- A. Sorry, could you – were you asking as part of your question that there be a change in the treatment, as well as the change in the vehicle numbers?
- Q. No, no. I'm talking about if you double the traffic number in a particular sector, all treatment being equal, then do we get a doubling of contaminants?
- A. Yes.

QUESTIONS FROM THE BOARD: MS JACKSON – NIL

QUESTIONS FROM THE BOARD: MS HARDIE – NIL

QUESTIONS FROM THE BOARD: MR DORMER – NIL

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP – NIL

QUESTIONS FROM THE COURT: JUDGE NEWHOOK

Q. Your counsel and I think the previous witness called you Dr Moores, I read in your qualifications that you have a Bachelor of Science and a Masters Degree. Do you have a Doctorate?

A. I do not, I'm Mr Moores.

Q. You're Mr Moores, all right, we've been led astray, but better that way than the reverse.

RE-EXAMINATION: MS JANISSSEN – NIL

WITNESS EXCUSED

MS JANISSSEN CALLS

SHARON BETTY DE LUCA (AFFIRMED)

Q. Is your full name Sharon Betty De Luca?

A. It is.

Q. And have you prepared evidence-in-chief dated the 10th of November 2010 and rebuttal evidence dated the 1st of February 2011?

A. I have.

Q. And your qualifications and experience as set out in paragraphs 2 through 4 of your evidence-in-chief?

A. That's correct

Q. Is there anything in your evidence that you'd like to correct at this stage?

A. No there is not.

Q. Do you confirm to members of the Board that the contents of your evidence are true and correct?

A. I do.

CROSS-EXAMINATION: MR MCNATTY

Q. Can you confirm that your sediment testing show that the most contaminated part of the marine reserve is at the mouth of the Oakley Creek?

A. There are high levels of contaminants at the mouth of the Oakley Creek, yes.

Q. Are you aware of Dr Bell's evidence that proposes that most of these contaminants will be settled in the encountered area of the marine reserve south of the motorway?

A. Following an action? Sorry, what are you asking?

Q. Are you aware of Dr Bell's evidence that proposed that most of these contaminants will settle in the encountered area of the marine reserve south of the motorway, in other words in the Waterview inlet area?

A. Where I measured the contaminants in the mouth of the Oakley Creek those contaminants were bound to the fine sediment which had settled at the mouth of the Oakley Creek. They're largely stable in that area, I imagine, unless a big storm would come through and then yes, washed into the Waterview estuary.

- Q. Considering there'll be an additional volume of contaminants coming down Oakley Creek, will this increase the risk of an ongoing decline of the marine biodiversity as these contaminants accumulate in the southern part of the marine reserve?
- A. Yes, continual discharge of contaminants into the Waterview estuary will potentially cause adverse affects on marine organisms. We do however need to remember that there are untreated and uncontrolled discharges from a number of sources into the Waterview estuary, not just from State Highway 16 and State Highway 20.
- Q. In relation to the culvert at the western end of Waterview Bay, you say in the coastal caucusing notes that there's an unacceptable risk of contaminants to the Pollen Island. How did you assess that risk?
- A. A sediment sample taken adjacent to the culvert showed extremely high levels of heavy metals. My concern is that if you disturb those sediments they could be discharged to the northern side of the causeway where there is a greater diversity of more sensitive species and their species could be at risk.
- Q. Isn't it also true though in your evidence that you show that the northern side of the causeway has quite a successful flushing mechanism so that there is a low level of contaminant build-up in that zone?
- A. There is a low level of contaminant build-up in that area yes, but I've taken a precautionary approach and my opinion is that it's best to leave those contaminated sediments in place.
- Q. So can you actually quantify that risk, or as an opinion or as a probability?
- A. Not without some hydrodynamic modelling of if we disturb the culvert, if we enlarged it, if we moved it, if we cleared it, where would the contaminants be discharged to? I don't have that information to hand.

CROSS-EXAMINATION: MS DOCHERTY

- Q. I'll refer to condition M1 on page 103 of the proposed conditions. Clause C outlines procedures for responding to accidental discharges to the marine environment. Can you please explain how this is linked into

accidental discharges to Oakley Creek that may end up in the marine environment?

A. There is more detail about accidental discharges in the construction environmental management plan, CEMP. I haven't been involved in preparing conditions or monitoring around accidental discharges and if it is included in freshwater environment perhaps Mr Eddie Sides would be best to speak to about that.

Q. Presumably the downstream effects would be – if an event occurred in the creek –

A. If something is protected upstream, then it will follow through into the marine environment and we would certainly investigate and follow up and see what effects there were.

Q. Just turn over the page to condition M7, on page 104. In that proposed condition, there appears to be no timeframe that outlines when that response and contingency plan might be developed. Can you please outline when such a plan may be developed?

A. If adverse effects were detected through our routine monitoring during construction or post-construction, there would be an immediate further investigation of the marine environment to clarify the cause and effect of any adverse effects and steps taken to remedy them.

Q. Could a contingency plan not be developed prior to construction starting, using the baseline monitoring data that's available?

A. It's possibly a little bit difficult to predict what the cause could be and therefore what the response would be, it's best to develop these things as and when, there's fairly standard practices of widening your search if you find an adverse effect, to determine whether it's a widespread harbour-wide issue that's arisen from some other means or whether it's very focused and the cause can be clearly identified.

CROSS-EXAMINATION: MR MCCURDY

Q. Dr De Luca, a question I put originally to Mr Leersnyder and it comes back to condition M1 again, page 103. The monitoring of the marine habitat and ecology quality values, and my particular concern is

Oakley inlet. Is there any plan for direct monitoring of the health of the actual fauna that are in the creek, as opposed to the habitat itself?

A. At the mouth of the Oakley Creek in the tidal area, there are I think two or three monitoring sites that will be established. These will follow the same procedures as I used in my assessment, invertebrates will be collected, community composition will be analysed along with sediment quality and sediment grain size.

Q. What about the larger fauna, there's quite a population of mullets, flounder and crabs, invertebrates, , eels, the black shags, the heron and the (inaudible 16:09:12) and the ducks, are also in quite prolific through that area?

A. I can't comment on (16:09:14) fauna, that's outside my area of expertise. That's best directed to Mr Graham Don. Fish are difficult to sample in a marine reserve without having an adverse effect.

Q. But this is not a marine reserve, Oakley inlet is not under the reserve –

A. The mouth of the Oakley Creek is within the marine reserve.

Q. No, no, no. Between the culvert under the Great North Road and the causeway bridge, that's not part of the marine reserve.

A. Okay we're differing on our definition of the mouth of the Oakley Creek. Yes I agree with what you've just said, yes.

Q. I mentioned the Oakley inlet, not the mouth of the Oakley Creek and there has, through this process apparently become referred to as the Oakley inlet, with that total's stretched from the bridge up to the culvert. And -

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THE COURT: JUDGE NEWHOOK

You're talking – we're talking about the stretch beyond the marine reserve?

MR MCCURDY:

Upstream of the –

THE COURT: JUDGE NEWHOOK

Upstream, yes okay.

CROSS-EXAMINATION CONTINUES: MR MCCURDY

- A. I'm not aware of any monitoring of fish populations in the Oakley inlet.
- Q. Perhaps the question could be: should there be monitoring of the fish population?
- A. Perhaps again that might be best directed to Mr Sides, the freshwater ecologist. He has covered off fish –
- Q. But we're talking –
- A. – in his –
- Q. – saltwater here. This is the tidal part of the creek.
- A. Yes, but these fish are not just contained in the salt water, they do move up and down into the freshwater environment and fish has been covered by Mr Sides so he would be the better person to answer that question.
- Q. The eels certainly go into the freshwater, I'm not sure about the flounder and the mullet?
- A. They go a fair way up.
- Q. It does appear that there is a gap in the monitoring and the (inaudible 16:10:59) on this tidal stretch.

THE COURT: JUDGE NEWHOOK

All right, let's handle it this way. She says that Mr Sides is the person to ask and he will, he's on the hearing schedule for Friday, but I'm picking that he'll be here earlier than that. You ask him then. If he says, "No, I'm pointing the finger at Dr De Luca," we'll put them both in the witness box and (inaudible 16:11:25) them. So don't regard yourself as fobbed off. All is not lost, but the next step is to question Mr Sides when he comes later in the week.

MS DE LUCA:

Can I make one further comment on that?

THE COURT: JUDGE NEWHOOK

Please do.

MS DE LUCA:

NZTA are talking with DOC currently under the Marine Reserve's Act process, which is a separate process to this current Court session, and as part of our discussions we are talking about doing estuary-wide monitoring of fish as an option that DOC might like to take up. Nothing has been finalised on that.

MR MCCURDY:

Thank you for that, once again Oakley inlet is outside the marine reserve so unless it's brought into the marine reserve then that DOC arrangement won't cover it.

THE COURT: JUDGE NEWHOOK

Well fish move around. You've said so yourself Mr McCurdy, and I doubt that they're terribly aware of the marine reserve boundary. Anyway, little ray of sunshine perhaps for you Mr McCurdy, from what the witness has just said but let's see what Mr Sides has said and we'll follow up in the way that I've suggested if you're still not getting the information that you want subject to that of course being of interest to us. Right?

MR MCCURDY:

Certainly.

CROSS-EXAMINATION CONTINUES: MR MCCURDY

Q. The second question following the answers to Forest & Bird, can I clarify that pollutant levels will continue to increase in the part of the reserve behind the causeway?

A. Yes, contaminants will continue to accumulate in the Waterview estuary from a variety of sources, from treated road runoff, from untreated urban stormwater, probably a myriad of industrial discharges. Yes, that will continue, but through this project the road runoff is treated to a much higher level and the contaminants will be less that are derived from the road.

Q. So are you saying that the rate of increase of pollutants will slow down, it'll be a slower rate of increase?

- A. From the motorway yes, but I cannot comment on the other discharges into the estuary.
- Q. So nevertheless, it will increase. The question is there in your mind the decision's been made to write off the future of the Waterview estuary?

THE COURT: JUDGE NEWHOOK

That's not what she said Mr McCurdy.

MS DE LUCA:

I wouldn't say that.

THE COURT: JUDGE NEWHOOK

She has said that this waterway is surrounded by a heap of dirty discharges. There's an industrial zone, there are roads, and she says that the contaminants will increase on that account. She hasn't written the estuary off, but she has no present control – and neither does NZTA, as I sit here – on discharges out of Rosebank industrial area or the streets that surround that waterway extensively. Can we just choose our language a little bit more scientifically please than “write the estuary off” and confine our questions to what's relevant to this motorway.

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CROSS-EXAMINATION CONTINUES: MR MCCURDY

- Q. The motorway will be contributing to – perhaps if I say it will be contributing to the increase in pollutants in Waterview estuary?
- A. That's correct and that's stated in my evidence and my assessment.
- Q. And your view is that there should not be intervention to do anything about the, those increasing sediment levels, or the part that the motorway's responsible for?
- A. Well we have intervened and that we – NZTA are proposing to treat 80%, which is no small feat to move from 75% and move suspended sediment to go to 80.
- Q. Yes, I understand. This relates to my question earlier. I don't know whether you were here. There is historical degradation of the estuary,

intervention in the design of the modified causeway might help to remedy that?

- A. As far as the stormwater discharges are concerned I believe that NZTA have done a good job of going from 75 to 80%. It would be fantastic if Auckland Council and all of the industries surrounding the rest of the estuary could do the same.

THE COURT: JUDGE NEWHOOK

And Mr McCurdy, just in relation to that legal point that I raised, if indeed it is a legal point that I (inaudible 16:16:34), whatever the answer is if there is any case law on it my current feeling about it is that if the Waterview estuary is full of contaminants that have come from a zillion sources and that, and if the evidence, which I believe to be the case, before us is that it would be almost impossible to work out what the percentage of contaminants that came from the motorway as compared to the contaminants from all that other urban activity being carried on around the perimeters, we'd hardly be likely to direct NZTA to dig up the estuary and strip the contaminants out of the sediment. So don't get your hopes that high, I suggest.

MR MCCURDY:

I understand.

THE COURT: JUDGE NEWHOOK

And I've still got a row of "ifs" in front of the legal issue that I floated, even to the extent that I didn't do any more questioning (inaudible 16:17:42). Plus of course we've got the evidence of this witness, and I think others, about the sheer desirability, or as I think she sees, undesirability of digging up all the sediment to get the contaminants out and the risks that have been associated with an exercise like that. But you can question her about that if you wish.

MR MCCURDY:

I think I've taken it as far as I can at this point thank you.

QUESTIONS FROM THE BOARD: MS HARDIE – NIL

QUESTIONS FROM THE BOARD: MS JACKSON

- Q. Dr De Luca there's a word in here in your conditions and it's "benthic". By way of clarification can you just tell, explain that to me?
- A. It means bottom dwelling so the sediment on the bottom of the sea, is the benthic environment.
- Q. Bottom dwelling.
- A. Yes.
- Q. Thank you for that now I know.
- A. That's why I prefer benthic.
- Q. Just talking about mangroves, because I'm well aware of the fight with mangroves in Waiuku and Pa-hurihuri inlet where people fought for years to get resource consent to remove them, and were only given consent at the end of the day if they removed them by hand. Now I understand this is a large area that we're talking about here of removal, but why can I go in here and remove them with a machine whereas at Waiuku and Pa-hurihuri they had to be removed by hand? So what sort of extra damage is doing to be done in this case when you go in with a machine?
- A. I don't know what sort of machine they're proposing to use, so it would depend I suppose on the weight of that machine, its psi, how much it sinks into the sediment, how much damage it's going to do. The key thing though is to remove the mangrove material from that habitat and not leave it in situ. You might have heard in Tauranga where they have removed about 60 hectares of mangroves using a mulching machine and have left the debris in situ and it's smothered all of the organisms and they have all died. So the key is to remove the mangrove material so that it doesn't smother the sediment and cause it to go anoxic so that there is opportunity for re-colonisation of mangroves and invertebrates after the project has been completed.
- Q. So on something this big that would become increasingly important wouldn't it, because of the sheer volume of the material?
- A. Yeah, absolutely, you need to remove the mangrove material from the habitat.

THE COURT: JUDGE NEWHOOK

Perhaps being kind to the regional councils and their decision making in the past, that technology might have improved to allow removal of them by hand. Member Dunlop.

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP

Q. I have a question, a related question of Ms Janissen of the CDT. It's a significant part of the Agency's case that there's a positive effect coming from the retrofitting of the treatment of stormwater from the existing causeway. What's the consenting sort of regime in the air, land and water plan around discharge of contaminants and stormwater from the existing causeway? Is there a rule that regulates that and would at some stage that rule "catch", for want of a better word, the Agency independent of this project?

THE COURT: JUDGE NEWHOOK

If it's not capable of a reasonably succinct answer, it could come later, but Mr Burn has something to start us off with.

MR BURN:

It's not capable of a succinct answer right now, largely because of the state of the air, land and water plan and how the discharge from the existing causeway would fit into that. Perhaps I could make a more fulsome reply when I'm under examination.

THE COURT: JUDGE NEWHOOK

Yes, that would be helpful thank you.

QUESTIONS FROM THE BOARD: MR DORMER – NIL**QUESTIONS FROM THE COURT: JUDGE NEWHOOK – NIL****RE-EXAMINATION: MS JANISSEN – NIL**

WITNESS EXCUSED

MR LAW CALLS**TIMOTHY SIMON RICHMOND FISHER (SWORN)**

Q. Is your full name Timothy Simon Richmond Fisher.

A. Yes.

Q. And have you prepared evidence-in-chief dated 12 November?

A. Yes.

Q. Have you prepared rebuttal evidence dated the 2nd of February?

A. Yes.

Q. Are your qualifications as set out in that evidence-in-chief?

A. Yes.

Q. Do you have anything in your evidence-in-chief or rebuttal that you wish to correct at this point?

A. There's two corrections in my evidence-in-chief that I'd like to bring the Court's attention to. The first of those is on page 10 of my evidence-in-chief, table 1. If you've found that table, the seventh row, there's a number that should be changed. In the seventh row it's labelled "sub-total sectors 1 to 5" and as that intersects with the sixth column, titled, "percentage proposed treatment", the number that's currently there is 99%, the correct number is 100%. That's the sum of the numbers above. And on that same page, there's a second correction, to paragraph 35, line number 6. The number "124 grams", that should be "124 kilograms".

Q. Thank you Dr Fisher. Subject to those corrections, do you confirm that the contents of your evidence-in-chief and your rebuttal evidence are true and correct?

A. I do.

CROSS-EXAMINATION: MR MCNATTY

Q. In the section on environmental effects, you say there the design should best practically mimic the existing hydrological regime settings to deliver outcomes that remedy or mitigate adverse environmental effects. The design should also consider any measures to improve current flood issues in the catchment. In your methods, did you consider adverse

effects from contamination of Waterview Bay historically, that's going back into the time the reserve was gazetted?

A. I considered the mitigation of effects from the project using 2010 as a baseline from the existing situation to the changes proposed by the project, so that is the addition of State Highway 20 and the additional lanes to State Highway 16.

Q. So I'd be right in saying that there was no consideration of any historical data, other than your 2010 baseline?

A. That's correct.

Q. There's a little bit of an anomaly that occurred in numbers in the previous witness there. Can you confirm where or who supplied the baseline data for the traffic numbers in the areas under consideration?

A. No I'm afraid I can't, it is a matter for Mr Moores. Mr Moores undertook the contaminant load (inaudible 16:27:51).

Q. Dr Fisher, although the stormwater quality will be better than at present, won't the quantity of contaminants going into Waterview Bay and therefore the marine reserve continue to increase from the time that the devices go in?

A. The work done by Mr Moores under some scoping by myself, demonstrated that the contaminant loads from the combined project will decrease. As said by previous witnesses there will still be a load from the motorway to the Waterview estuary.

Q. And that load will continue to accrete?

A. I believe the previous witness answered that.

Q. Do you ever foresee a time there when the quantities of contaminants entering the Waterview Bay from the extended motorway system get back to the current untreated volume coming off the motorway is adjacent to the marine reserve?

A. Can you ask that question again?

Q. Do you ever see a time when the, as the traffic increases on the motorway system, that the quantity of contaminants entering the bay from the extended motorway system, and by "the bay" I mean the Waterview part of the marine reserve, that those volumes of

contaminants will get back to the current untreated volume coming off the motorway?

A. I'm sorry I think that's a question for Mr Moores, not myself.

Q. You made a statement in your evidence there, and I'm sorry I don't quite have the reference here, but while stormwater is not strictly required for existing impervious services, NZTA have taken the opportunity to provide treatment for these areas where practicable. Can you explain the basis that you come to that statement?

1630

A. Yes. From works that I've done in the Auckland region when existing impervious are worked around, it's common that only the adjacent and new impervious area that is being consented gets the treatment. In some retro fit situations, a level of treatment a lot lower than 75% is targeted, somewhere between 30 and 60%. In this particular case NZTA have taken the opportunity to treat all of State Highway 16, the additional lanes plus the existing impervious areas to a, to the higher level and not just the 75% but the 80%.

Q. Were you aware of planning instruments of the nature of a general authorisation back in the early transition days of the Resource Management Act?

A. No.

Q. Dr Fisher, I understand that your estimates of the volume of contaminants in paragraphs 33 and 34 of your evidence-in-chief show that 33% of the zinc and 30% of the copper entering the Waterview Bay will be coming from the treated stormwater motorway – from the motorway system, can you confirm that?

A. Can you give me those paragraph numbers again.

Q. Paragraphs 33 and 34 of your evidence. There's an indication of 33% of the zinc and 30% of the copper entering the system will be coming from the proposed project.

A. I'm sorry those paragraphs don't say that.

Q. I'll withdraw the question sir. I've obviously misled myself in that. Dr De Luca referred to other sources of contaminants entering the

Waterview Basin. Have you sampled any of the other sources or are you aware of the quantification of these sources?

- A. They haven't been sampled. The work done by Mr Moores quantified the contaminant loads from the motorway and those other catchments, so he would be in a position to answer that question.
- Q. In your opinion is the motorway the largest single source of the contaminants into Waterview Bay?
- A. From the information I've seen from Mr Moores, no. It is a smaller contributor than the rest of the catchment.

CROSS-EXAMINATION: MS DOCHERTY

- Q. This project runs a significant length of Oakley Creek and it could provide an opportunity for wider planning and management initiatives to be investigated and implemented. Are you familiar with the Oakley Creek Watercourse management plan that was produced in October 2010 for Metro Water and Auckland City Council?
- A. Yes I am.
- Q. How does the proposed monitoring and mitigation for this project co-ordinate with this wider catchment management plan?
- A. The, that plan was – the initial information from that plan was used to develop the Oakley Creek rehabilitation and realignment guidelines as input dated to that. We met with the authors of that report, Morphum – Environmental, and Metro Water who were their client, to try and interface with that plan. So I believe it's been taken into consideration.
- Q. And I return to a subject we touched on earlier this morning with regards to the stormwater caucusing statement, paragraph 10 page 6 of that caucusing statement, with regards to the wastewater services relocation.

THE COURT: JUDGE NEWHOOK

Sorry that paragraph number of the stormwater caucusing statement?

MS DOCHERTY:

Paragraph 10, page 6.

THE COURT: JUDGE NEWHOOK

Yes that one was tossed over to Dr Fisher wasn't it.

1635

CROSS-EXAMINATION CONTINUES: MS DOCHERTY

- Q. And Mr Fisher could you please outline where this issue is at for now?
- A. For the Court the issue is the concern raised by Mrs Rhynd, a witness for Friends of Oakley Creek, about service relocations. In the caucusing of the stormwater experts involving Ms Rhynd and Hayden Easton from Auckland Council, we agreed that the services in general were outside the scope of stormwater. So that's where it got to in the caucusing statement and it's been passed back to NZTA and Mr Walter to address. In general, oh in terms of stormwater the stormwater relocation activities and infrastructure of new stormwater services are included in the application and the management of those construction activities will be as outlined in the CEMP, and in particular the erosion and sediment control plans.
- Q. Now I'll just turn to some of the proposed conditions, page 96, proposed condition CL – excuse me, STW24. It stipulates the approval of works by a landscape architect or ecologist suitably qualified. Can you please explain the rationale behind using a landscape architect or ecologist, given it's to approve the streamworks given that the planting and the stream (inaudible 16:37:38) is primarily mitigation for ecological effects?
- A. The wording of that condition STW24 is specific to the riparian planting so that the sign off, as is proposed, is for a landscape architect or ecologist. There are other – there is another sign off condition I believe that requires sign off from an engineer and an ecologist, and that was specific to do with the streamworks and the inter streamworks.
- Q. In terms of the planting, the mitigation planting that compliments the streamworks is that something that an ecologist may be better qualified to approve rather than a landscape architect?
- A. I'm a stormwater engineer, I'll leave that to the ecologist and the landscape architect to decide, but I'll just bring your attention to condition STW15 which requires that a design engineer and the project

ecologist to sign off that the streamworks have been undertaken in accordance with the drawings for the – supplied with this application or otherwise amended, so there is a check and certification process for an ecologist, at that point.

- Q. Thank you for drawing my attention to that. And finally, the previous page, 95, the advice note for proposed condition STW20. I'm just a little unclear about the wording perhaps of the advice note, the intent is to include (inaudible 16:39:49) for setting mitigation and I note that it's also over the page, for STW21 there's an advice note that talks about the intention of mitigation. Can you – I'm just a little unclear of whether these are intentions or conditions that will be adhered to. Can you enlighten me on that please?
- A. Mr Sides I think would be the best person to answer that and I know he has a clear answer to that, but it's better coming from him, as the ecological expert, rather than myself.

THE COURT: JUDGE NEWHOOK

And I might just assist you in the process sense Ms Docherty. Advice notes are not conditions. We quite regularly see advice notes attaching to sets of conditions on consents granted by regulatory authorities and we sometimes set out advice notes in conditions attaching to consents that the Environment Court grants. So the nature of an advice note is to advise those who are undertaking the activities authorised by the consent and those who are supervising them or monitoring them or approving them, including the territory authority. Such that some reasonably important information doesn't escape there (inaudible 4:41:21) in doing those things, that's what an advice note is about. You can ask Mr Sides about the extent of content of these when he gives evidence later in the week.

QUESTIONS FROM THE BOARD: MS HARDIE

- Q. Mr Fisher, just with regards to item 42 in your rebuttal evidence, you note that the area within the Valonia Street area that is proposed for sports fields is also to be used for flood storage if this would be

necessary in an extreme flood event. Can you give us an indication of what “an extreme flood event” is?

A. Yes, the level of the sports field has been designed to flood for events that exceed a 10 year return period event. That flood level is a level that was chosen after some discussion with Metro Water and chosen on the basis that a number of other sports fields in the catchment, namely Keith Hay Park and Murray Halberg Park flood at that same return period.

Q. Just for clarification. With regards to the proposed conditions STW15 and also I think FW12, they refer to – it suggests that the design engineer and the project ecologist shall monitor the construction works. But then it goes on to say that the work shall be certified by an appropriately approved and experienced engineer. I’m assuming that the person that would be carrying out the monitoring would also be the person that would certify?

A. Yes that would be my expectation.

Q. And just one more question. There’s a reference there in SW3 and also I think there’s in the streamworks as well, that suggest that, “NZTA shall submit final design to Auckland Council, but any amendments to these designs will be submitted for approval in writing.” I’m just wondering why there was a difference there?

THE COURT: JUDGE NEWHOOK

It might be purely semantic, might be something that Ms Linzey can help us with or Mr Burn.

QUESTIONS FROM THE BOARD CONTINUES: MS HARDIE

A. Perhaps there’s a wording issue there, but they explain the intention is that – it’s certainly my intention in drafting these conditions that the final and detailed design of the streamworks be submitted for approval by Auckland Council. In my experience with similar projects that’s been the procedure. But if there’s a need for any amendments to the design, those amendments are approved and that amended design is supported by the appropriate calculations and (inaudible 16:45:15).

QUESTIONS FROM THE BOARD: MS JACKSON

- Q. Again on that SW3 on page 86 Mr Fisher, it says “stormwater treatment advice sizing”, and my concern is the tunnel. Stormwater is collected in a sump located at the low point. In the event of a flood or a blockage how confident are you that the stormwater would be suitably treated before it went into the receiving environment?
- A. In response that the only stormwater entering the tunnel is from the two portal areas. The stormwater at the two portal locations will be intercepted and it will be intercepted for the 100 year event with some allowance for a minor amount of spillage over the portal that can be managed by the drainage systems in the tunnel. So only events greater than the 100 year events, rainfall falling into the portal would enter and flow down to the low point in the tunnel. We definitely provide, only provide stormwater treatment for a much smaller event, the third or the two year event so that’s a, so that extra stormwater scenario is quite an extreme event, one that we wouldn’t normally design for for stormwater treatment. I’m not sure if that answers your question.
- Q. When you consider the volume you’ve allowed to capture in the tunnel, which is this 800 cubic metres, if you had that 100 year stormwater event how deep would the water be on the carriageway in the tunnel?
- A. For the 100 year rainfall event all of the runoff would be collected at the portals and there’ll be a small spillage of an amount that can be managed in the stormwater systems within the tunnel, the drainage systems in the tunnel, so for that 100 year event there wouldn’t be any surface water on the surface of the tunnel roadway.
- Q. You have sufficient capacity to catch it all?
- A. There will – yes there will be, yep. So that would be done with a pumping system at each of the portals and with sufficient underground storage to buffer the peak flows that come in that, those locations.
- Q. And in that storage system do you leave a residual amount of water that could be used at any time for fire fighting, for example?
- A. No the fire fighting systems are separate and dedicated and Mr Walter will address that, if he hasn’t already.

QUESTIONS FROM THE COURT: COMMISSIONER DUNLOP

- Q. Just a couple of queries verging on the pedantic. In SW6 on page 87, has drafted it reads “The Agency shall undertake regular inspections of all treatment devices installed during construction to ensure they are operating successfully.” “Successfully” seems a little bit loose to me. Is there some, you don’t have to answer this on the hoof, but it could be picked up somewhere if there’s merit seen in the query. Could that be linked to some sort of more specific performance standard or level or documentation?
- A. Yes, and to answer that and provide the Court with more confidence, during both the construction and the operation phases of the project, there will be stormwater operation and maintenance plans and though the draft plans are included in the appendices to the report G15, and so they detail, they provide a lot more detail in terms of maintenance frequencies and the types of activities that should be undertaken. So they would provide the detail.
- Q. Perhaps they could be useful and cross-referenced as the benchmark, for want of a better word, against which inspections are done?
- A. Yes I think that’s a good suggestion.
- Q. And in your rebuttal, around about paragraphs 10 through 11, you deal with Mr Easton’s point about ensuring that the planting that’s done around the wetlands is effective. And there’s some interchangeable use of sort of words there about whether those wetland designs are to be submitted to council for its approval or just to be submitted to council?
- A. Yes.
- Q. And you could sort of you know roll with that interchangeability unless there was some deeper importance attached in your mind to the question of whether the final design of the operational stormwater system is in fact to go to council for its approval or just to be submitted to it. And I really would like some comment from you as to which of those two scenarios you’re lending your support to, with reasons please?
- A. In reply, and the background to the issue, Mr Easton’s concern was that the right plants were selected that were most tolerant to dry periods and

that input from council staff in the selection of plants would be beneficial to ensure that the right plants were selected and that the wetlands would behave and mature as quickly and reach their design efficiencies as quickly as possible. So in response to that we included the change to SW12, condition SW12 where planting plans and schedules for all stormwater treatment devices were, well it was added to the list and that condition as you point out, only requires submission, that those details be submitted. I mean, I guess I feel that if all the other aspects of the design can be attended to and undertaken by competent and experienced engineers with support from the ecological members of the design and build team, there's no – then I see it as being a submit function, rather than a submit and approval.

- Q. I don't want to unnecessarily protract this Your Honour, but the point Mr Easton raised has really caused me to go back and look at the process for the final design of the operational stormwater system as a whole. I think you would agree that that is an extremely important matter, given the potential flooding issues that are attached to this. So what I'm coming back to is whether your opinion the council should be approving that plan, as it would in many situations, or whether you're comfortable, as a professional engineer going with the consenting "scheme", the Agency is bounding its case around.
- A. My experience with these types of project is that there is a requirement for any changes to the design to be, to have the additional approval process and that inevitably there is something that causes the design to change and so we – I've been the approval process. By the time you add extra detail there'll be a number of refinements that warrant those approvals. So it might be my expectation that there, that after the added detail design change with refinement that there would be approval by the council because the nature of changes – changes and refinements.
- Q. So you're saying in effect to the Board that it should have sufficient confidence in the documentation that's been submitted with the implications for it to be unnecessary for the council to give its approval to the design of the operational stormwater system and that it should

only assume an approval function in the event of there being any amendments? I don't want to put words in your mouth but –

A. Yes.

Q. – in summary, is that your case?

A. Yes.

Q. Your position I'm sorry?

A. Yes, that's my position.

QUESTIONS FROM THE BOARD: MR DORMER - NIL

QUESTIONS FROM THE COURT: JUDGE NEWHOOK

Q. At the risk of prolonging things, to again steal words off my colleague Dunlop, if – looking again at these conditions – if the initial design, or final design it's been called, were to be required to be submitted to the Auckland Council for approval, that is not just submitted, what, if any, additional difficulty, cost, delay or whatever would flow from that Dr Fisher? Is there any downside here or much of a downside?

A. No there's – the only issue is really the time to check and process that. To support the consent application full stormwater treatment calculations have been undertaken and they've been submitted as part of the application, and they've been reviewed by council and others so –

Q. So is it your position, again without needlessly putting words in your mouth and you'll correct me if I'm wrong, that it is the combined position of NZTA and Auckland Council, as you understand things right now, that for the reason you've just offered it's quite sufficient just to submit because of the design work that's gone into the application and any refinements that have been undertaken amongst the witnesses in caucusing?

A. Yes, yes that's what I'm saying.

Q. All right, well we'll check with the Auckland Council in due time as well.

RE-EXAMINATION: MS JANISSEN – NIL

WITNESS EXCUSED

THE COURT: JUDGE NEWHOOK - HOUSEKEEPING

COURT ADJOURNS: 5.01 PM