

WEEK 3 – DAY 9**COMMISSION RESUMES ON MONDAY 14 NOVEMBER 2011 AT 10.00 AM****5 PART 2 – EARTHQUAKE-PRONE POLICIES****MR MILLS:**

Now as the Commissioners are aware the programme for today and also for tomorrow really is focusing on the territorial authorities, a selected group of
10 them, and the earthquake prone policies. There's evidence being given today, evidence in submission I suppose it is and then tomorrow it's intended that there be a panel discussion which will then also include Department of Building and Housing and for that purpose I think probably councils will all dictate the front row here and we'll assemble the representatives from the
15 various authorities here and here and it's essentially intended to provide an opportunity for them to discuss with each other and for questions from the Commission itself.

JUSTICE COOPER TO MR MILLS – DISCUSSION RE TRANSCRIPTION

20

MR MILLS:

Now this morning the first council we're going to hear from is Gisborne.

JUSTICE COOPER:

25 Yes.

MR MILLS:

Gisborne was specifically asked by counsel to be heard because of the way that they had come at their policies post the Gisborne earthquake and we're
30 going to be hearing from Ian Petty the building services manager. They will be followed or he will be followed by the Napier City Council, again a specific request from counsel that we hear from Napier because of its highly significant art deco heritage buildings and you'll be hearing from Neil Taylor
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who's the Chief Executive of the Napier City Council. That will be followed after the break with a session that's entirely given over to the Christchurch City Council. The Commissioners will be hearing from the mayor and also from Peter Mitchell the general manager of the Regulation and Democracy Services and from Steve McCarthy the environmental policy and approvals manager. After lunch you'll be hearing from the Wellington City Council. As I understand it the mayor is coming in by videolink but I think I'm right that we'll have John Scott who's the manager of Building Consent and Licensing Services who will be hear. I think that's the way this is working. Following that the Auckland City Council.

JUSTICE COOPER:

Auckland Council you have to say these days.

MR MILLS:

Auckland Council. I was looking at this and thinking that's a misprint but it's obviously Auckland Council is right. So there we're going to be hearing from Mr Cumminskey the special projects officer for earthquake prone buildings, Bob DeLeur the building policy training and resolution officer and Dr Marion Irwin the manager of the hazards section, Civil Defence and Emergency Management. Then after the afternoon break the Commission will be hearing from the Dunedin City Council. Again a request from counsel that we hear from the Dunedin City Council so that's the programme for the day and if there's time as I understand it and it's not on here we're also going to give an opportunity for the New Zealand Society of Earthquake Engineers to be heard although we may have tucked that in tomorrow, yes tomorrow –

JUSTICE COOPER:

I think that's in the programme for tomorrow at four.

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MR MILLS:

This is as you know a result of a specific request from this society to be heard following some previous discussion about their policies in earlier hearings so on that basis I'll first call Mr Ian Petty.

IAN PETTY (AFFIRMED)

- 5 Q. Now Mr Petty I am going to sit down and let you speak to whatever point you want to make.

JUSTICE COOPER:

- 10 Good morning Mr Petty. I'm Justice Mark Cooper I'm chair of the Royal Commission. On my left is Richard Fenwick and on my right Sir Ron Carter and we're very grateful to you for coming.

EXAMINATION: MR MILLS

- 15 A. Thank you for the opportunity. I wasn't quite sure what I was meant to address so what I've done is prepare a PowerPoint presentation on the evolution on our earthquake prone buildings policy basically from 1988 to now.

JUSTICE COOPER:

Thank you.

20 **EXAMINATION CONTINUES: MR MILLS**

- A. Next slide please. Okay Gisborne's had a series of earthquakes. Basically we get a greater than magnitude six earthquake they've been on an average of every 18 years since 1932. The big ones doing damage to the city being 1932, the 1966 one which was very close to town and the 2007 6.8 which is the most recent. Also of note 1947 caused a tsunami on the coast north of Gisborne. Next slide please. So over the years buildings have changed quite a lot. Same building with a significant time gap almost 100 years. Most of that high gingerbread type ornate parapets and stuff came off after 1932. Next slide please. And the same kind of thing here this is the same building with 90 years difference. Next slide please.

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JUSTICE COOPER:

- Q. The verandas have gone there as well as the ornamental highest part of the building.
- 5 A. That buildings in a side street where there's no requirement to have a continuous veranda as part of the town / city approved plan.

EXAMINATION CONTINUES: MR MILLS

- 10 A. So there's been three main legislative requirements for earthquake strengthening that Gisborne has worked under. Section 64 of the Local Government Act, section 66 of the Building Act and 131 of the Building Act 2004 and Gisborne has had earthquake strengthening regimes under each Act. Next slide. The change in legislation changed the rules. In effect a seesaw of changes from reasonably strict under Local Government Act to a more lenient view under 91 Building Act. The
- 15 more measurable criteria than the 2004 Act. The Canterbury earthquake may precipitate another legislation change by the Government but following the magnitude 6.3 earthquake of 1966 that caused widespread damage in the city the Gisborne City Council got ministerial consent to invoke the emergency provisions of section 624 of
- 20 the Local Government Act to remove the severely damaged brick buildings in the city. The post office and the Gisborne Opera House were two of these buildings. In 1983 a survey identified 140 potential earthquake risk buildings in the city. It wasn't until March 1989 that the City Council invoked full powers of section 624 requiring the owners of
- 25 earthquake risk buildings to remove the danger by demolition or strengthening. Buildings with earthquake risk if they would suffer damage in a moderate earthquake likely to constitute a danger to persons. The wording is significantly different to that of the subsequent Building Act 1991 provision. The buildings were required to conduct
- 30 interim strengthening of the most at risk features with full strengthening by a later date and timeframes were based on the recommendation of the New Zealand Society of Earthquake Engineering.

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Recommendations in their guideline book. Strengthening was required to meet half NZS1900 Chapter 8 with a recommendation to try for two thirds, a very low strengthening level. So the buildings were scored on a structure and occupancy using check sheet forms from the book so I

5 guess this is a precursor to the current IEP method of determining building strength. In my view this system was fundamentally flawed as it was based on occupancy levels with an up to 30 year strengthening timeframe on current use. Next slide please. And the work was done by was ex council chief building inspector and the city design engineer

10 and a sample of 10 of these first assessments were peer reviewed as for methodology and end result by Opus. Buildings had to be able to withstand a moderate earthquake. A moderate earthquake was defined as an earthquake that would subject a buildings to seismic forces one half of those specified in NZS1900 chapter 8 1965. The scoring system

15 gave a result with two timeframes one for the most at risk features and one for the whole building so this example building which was in two parts, a two storey front part and a single storey rear part we have a 10/20 and 20/30 timeframe. There were also multiplication factors given for each part of the building, one for the structure as a whole, two for

20 infill panels and four for parapets. The part of this that is surprising is that the loading for NZS1900 was only 1.2 g therefore a structure $.5 \times 1.2 \times 1$ gives .06 g strengthening design level and the scary thing about all of this was the fact that the '66 earthquake that precipitated the use of section 64 had a ground acceleration spectra of .28 g, almost five

25 times the level we were strengthening our buildings to. The other issue that makes little sense was that the definition of a moderate earthquake was still based on NZS1900, a loading code that had already been redundant since 1976 when the much more robust NZS4203 came into force. NZS4203 has a design level of approximately four times greater

30 than NZS1900. The enactment of the '91 Building Act changed the rules for earthquake strengthening. Section 624 Local Government Act was repealed and Building Act '91 took over. Strengthening was also limited to unreinforced concrete or masonry buildings but the big change

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was the term catastrophic collapse causing bodily injury or death. Next slide please. So this is significantly different than to suffer damage in a moderate earthquake likely to constitute a danger to persons. Next slide please. Because of the change to the test many buildings evaluated as earthquake risk under the Local Government Act were not earthquake prone under the Building Act. Interim strengthening, that was a Local Government Act requirement, was also lost in our policies at this time. The now Gisborne District Council re-evaluated all the buildings that had been earthquake risk and notified some owners that their buildings, while assessed as earthquake risk were not earthquake prone. Thankfully all the records were retained. Somewhat out of context but worth a mention at this stage these buildings are now included in our earthquake-prone building policy as category 4 buildings. Category 4 buildings were given 10 years to strengthen from 2008 so were all due to be either strengthened or demolished by 2018. The definition of moderate earthquake was unchanged from the Local Government Act to the Building Act. Consequently the strengthening was still based on New Zealand Standard 1900, Structural Loading Code. As discussed this was a very low standard compared to the post '76 NZS4203 and the current NZS1170. The GDC still encouraged 66% while only legally being able to enforce 50%. The good thing that came out of the Building Act was section 46 which stipulated the changes that a building must undergo if it went from one use to another, ie retail shop to bar or restaurant. The change of use provisions required strengthening, improvement of fire protection, escape from fire, sanitary facilities and the big one for us, structural and that was as nearly as reasonably practical to the same extent as if it was a new building. The Gisborne District Council would accept at least 66% of the current code loading which was 4203 as meeting the near as reasonably practicable test. We therefore ended up with a dichotomy of design levels, .06 g for the buildings on the earthquake strengthening schedule and approximately .4 g for buildings undergoing a change of use. So a point to remember, strengthening works. All these buildings, these four

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buildings had been strengthened to two-thirds of 4203 through change of use. Provisions except for the one on the top left which was strengthened to 4203, that was set by negotiation. The building consent for that one came in to strengthen to just over 50% of NZS1900. We informed the owners that they may have to do the whole job again and they withdrew their building consent and redesigned and brought it into two-thirds of 4203. These buildings all suffered absolutely no damage in the 2007 earthquake, and even NZS1900 strengthening. This is a very high brick wall on one of our motor vehicle repair businesses in town and you can see the very thin railway iron type strengthening on that rear wall. The top parapet came off but the rest of the wall stayed up. The 2004 Building Act required all councils to prepare an earthquake-prone building policy. We based our policy closely on the model Quake Town Policy prepared by the Department of Building and Housing. The requirement was still that buildings must be able to withstand the forces of a moderate earthquake but, thankfully, moderate earthquake had been redefined and a moderate earthquake is defined as one-third, being able to withstand one-third of the shake strong as the earthquake on the same site, new building standard. So the big difference is that moderate is now tied to new building, to a new building and therefore the current loading code. There is no longer a reliance on a redundant standard and any changes automatically become the new criteria. Next slide please. The level of earthquake strengthening in Gisborne has always been to try and achieve two-thirds of the standard. Unfortunately this was not the current standard but NZS1900. While this is a fairly low requirement the two-thirds was embedded in the consciousness of our building owners. It was also the level recommended by the New Zealand Society for Earthquake Engineering and recommended by the Department of Building and Housing. Next slide. The proposed strengthening levels were therefore set at two-thirds of the current code to ensure the strengthening would be above any future Government policy changes and to future proof the buildings for any change of use. That was the level in the documents that went

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out for consultation, and this is the very first earthquake-prone building policy we produced and we expected that it would be accepted. Little else differed from the Quake Town Model Policy. The Quake Town Model was silent on interim strengthening. One point to remember.

5 While the Act required councils to have an earthquake-prone building policy and that the guideline recommended two-thirds new building standard there was no legal stipulation at what level buildings should be strengthened to. The Act merely states that councils must have a policy and that notices must require building owners to reduce or remove the

10 danger. This has resulted in a variety of policy levels throughout New Zealand. From just over 33%, so a building is no longer earthquake prone, or to as near as reasonably practicable to new building standard but not less than 67%. There were also a mixture of passive and active approaches. A passive approach is basically a do nothing option.

15 Earthquake strengthening is triggered by an application to do substantial building work. Substantial may be defined by dollar value or percentage of capital value. An active policy. Our type of policy. Buildings assessed for comparative risk and given timeframes of varying lengths. The general feeling among councils now is watch this space in

20 anticipation of an amendment to the Building Act to either raise the level of what is an earthquake-prone building or stipulate the level of strengthening that must be achieved. Hopefully the Gisborne 67% has future-proofed us to some of these changes. In my view the passive option may also disappear. Changes brought about by the 2007

25 Earthquake. The first policy revision. This is the ground acceleration spectra of the Gisborne earthquake. You can see that we had a very big initial jolt of over 1 g. The red line is the ultimate limit state for 4203 and the blue line at the bottom is sustainability limit state. So the earthquake had a big initial shock and then petered out to roughly .3.

30 So it's widely accepted in New Zealand that this earthquake was about the level of the definition of a moderate earthquake as defined in the Act.

JUSTICE COOPER:

Q. In the 2004 Act?

A. Yes 2004.

Q. And regulation?

5 A. Yes 2004 Building Act. Next slide please. So this is some of the damage that was sustained in this earthquake, mainly parapets and collateral damage to lower buildings next door. Next slide please. We'll just flick through these quickly. This parapet came off, the one on the bottom left and went through Whitcoulls next door. Next slide please.

10 This top little cornice came off this building and it was Hallensteins next door and went through the roof of that building. This was – next slide please. And this one here the whole side wall came off the building and went through a sewing centre next door. One thing that was very fortunate, this was late night, first night late night shopping before

15 Christmas in Gisborne but it was at five to nine and most people had vacated the CBD by that stage.

Q. Just pause on this slide, this is taken from the next door building is it, into which what we're looking at had collapsed, or part of what we're looking at had collapsed?

20 A. Yes.

Q. Were they attached buildings?

A. No, they are separate buildings, this one next door is a lower, a much lower building, and a two storey building next to it, of note this building had was due for earthquake strengthening, the one that collapsed. We had basically given everyone a moratorium what our policy was being –

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Q. Revised.

A. – going through its process, because we were requiring these buildings that were due to be strengthened to two-thirds of 4203, so they could either go and strengthen now or they could wait until a new policy came into force and then they would have to strengthen to two-thirds of 4203

30 and they'd have two years to do it. Unfortunately the earthquake beat the two year timeframe.

Q. Do you say that the policy in 2007 was for strengthening to two-thirds of NZS4203?

A. Yes.

5 Q. Okay. So this building anyway had been identified as earthquake prone but you had – the council had introduced this moratorium whilst the policy was being revised?

10 A. Yes this building had been identified in 1988 or 1989 as earthquake risk, then reaffirmed as earthquake prone in the early nineties, and was basically due for strengthening on about the cusp of when we were changing our policy, so rather than require it to strengthen to the low standard of NZS1900, there was a moratorium that we couldn't stop them strengthening if they'd wanted to do it, then they would have strengthened and they would have been, and then they would have been caught up later on so we had a moratorium that if they waited then
15 they would get two years to strengthen to two-thirds of 4203 once the policy came into force.

Q. Yes. Can you recall the address of this property?

A. Not off the top of my head, no.

EXAMINATION CONTINUES: MR MILLS

20 A. And this some photos of the inside of the building that we've just been talking about, the one that got damaged. Next slide please. This was the one that was all over the news, this building had actually been strengthened to two-thirds of – to 1900 but the parapets had been assessed as meeting that requirement. Unfortunately that was as a
25 brittle component and when the earthquake came along because we had that big spike those parapets flicked off and ended up on the ground. Next slide please. So much of the damage was due to parapet collapse, this either damaged the building the parapets were on or caused severe collateral damage to the neighbouring building. A lesson
30 for us was to try and prevent this happening again and in a short timeframe. Earthquake prone building policies must be reviewed within five years of adoption and then within – and then every five years. The

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- Act states that intervals of not more than five years. The GDC had noted some anomalies in its policy and determined to review that policy in light of the learnt lessons. Next slide please. The reinstatement of interim strengthening. The damage caused by parapets was avoidable.
- 5 Parapets are relatively easy to tie back and / or strengthen. The work can usually be done without any business interruption.

JUSTICE COOPER:

- 10 Q. Does the Gisborne District Council regard itself as having power to require parapets to be strengthened.
- A. That's an interesting question, we hadn't really applied my mind to it before I saw some of the submissions to this Commission, that it stated that some councils viewed that it was only the building that could have the notice applied to it and not part of the building.
- 15 Q. Yes.
- A. We've done it and we haven't had any legal challenges, so at the moment we view that yes we can.
- 20 Q. And a related question, you also as a council take the view that the Building Act authorises an earthquake prone building policy which requires strengthening to 67% of the current code, new building standard?
- 25 A. Yes, there was significant challenges over our 67% after the 2007 earthquake. Mainly from insurers, they were very vocal about whether 67% could be applied or not. One of the reasons for that was that many of their policies said that buildings would have to be repaired to council standards, and if our standard was two-thirds, then the insurers were paying for the earthquake strengthening. Our policy also says that when you're doing major alterations of a building of earthquake prone, it must be strengthened as part of those alterations. Of course repairs are
- 30 alterations under the Building Act and therefore the insurers ended up paying for strengthening of buildings which they didn't like very much. We took a legal opinion on whether we could enforce 67% and that legal opinion basically said that council's must decide how they're going to

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remove the danger and we had decided that removing the danger was by strengthening to 67% and it had been through the special consultative procedure as required by the Local Government Act, and therefore that earthquake prone building policy was legally constituted and therefore enforceable.

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Q. Can you tell us who gave you the legal opinion?

A. Brookfields.

Q. Right.

EXAMINATION CONTINUES: MR MILLS

10 A. Next slide please. So we put a new category of building has been inserted into our policy, this was buildings built prior to 1976 with parapets, two years to strengthen. This building category is a subset of all other earthquake prone building categories. These buildings have all had earthquake prone building notices that expire in February 2012.

15

JUSTICE COOPER:

Q. So just going back to that slide if we may, this requirement to strengthen parapets, you served notices in February 2010 did you?

A. 2010, yes.

20 Q. And has anybody – has that led to any challenge, or litigation?

A. No, we, our policy is written around potential earthquake prone buildings. Basically we – a lot of the work was done back in 1988 so we have identified most of our buildings except for these 1976 ones, so the reason that there was a reasonable time gap in between 2007 and when we issued the notices was the identification of the buildings and also – and then the issuing of the notices. There was a considerable amount of work to be done immediately after the earthquake and it took some time for us to be able to get the resources and the time to identify these buildings and then get the notices out. We've had very, very good response from the public. Basically we either get a report saying the parapet is not earthquake prone or the work is done and we get rid of them off the register either way.

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Q. I suppose the public of Gisborne is motivated by their experience and the comparatively recent earthquake.

A. Yes, most people in Gisborne can remember two good earthquakes, the '93 earthquake which was to the north-west of the city, didn't cause a lot of damage in the city, it caused quite a lot of damage in the hinterland with collapsed chimneys and stuff, it's you know moderately populated out there and so as I said most people can remember two good earthquakes. People who have lived in Gisborne longer than I have can remember three good earthquakes, I was speaking to our civil defence officer the other day, he said he was a boy of 16 during the 1966 earthquake and he can remember their lawn rippling like it was a sea, so earthquakes are very much to the forefront of people's minds in Gisborne.

1030

15 **EXAMINATION CONTINUES: MR MILLS**

A. Next slide please. Repairing damaged buildings. There is anomaly in the Building Act. Buildings are dangerous in the ordinary course of events and then there's the excluding earthquakes part. Thus if a building is substantially weakened by an earthquake but not at risk under wind or gravity or live loads you cannot issue a dangerous building notice. However this building may still be subject to damage in a very mild earthquake such as an aftershock. Next slide please. We have added a clause to our policy which allows for the reclassification of an earthquake prone building after an event for an example a building that may still have 15 years left before they must strengthen can have their timeframe adjusted to a much shorter timeframe. While it can be argued that the Act allows this a specific clause makes a change in timeframe easier. Rural churches. Rural churches have been given a separate building category. Many small churches are only used very sporadically maybe one Sunday a month. A full strengthening requirement would become disused and perhaps fall into disrepair. Nevertheless these buildings are an important part of the historic fabric

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of the district. So these are three of the small little brick churches we've got. The one in the bottom I can't remember if it appeared in the film but it's at Whangara where the Paikea movie was filmed. Next slide please.

5 The policy states that churches will be dealt with on a case by case basis considering earthquake risk, occupancy and historic and social importance. The level of work required will be agreed between the building consent authority and the building owners. Classifying ground conditions – the structural loading codes as defined in New Zealand Standard 1170 are dependent on the underlying ground conditions.

10 Buildings that are earthquake prone on Class D – deep or soft soils may not be on Class C soils which are firmer. We therefore classified the soils in the CBD as Class D soils as per a geological nuclear science assessment unless proved otherwise. So basically what our policy says that they're deep soft soils unless you want to do a full geotechnical

15 investigation and prove otherwise. Defending our policy and we've already spoken about this a little bit but the two thirds current code requirement has caused a great deal of dissension primarily from insurers. We obtained a legal opinion on our policy which stated it was defensible. Lessons from the Canterbury Earthquake – Revising our

20 policy yet again. The February Christchurch earthquake destroyed a large number of unreinforced masonry buildings as well as causing the collapse of some newer buildings and severe damage to others. The earthquake was well over the ultimate limit state curve with peak ground accelerations approaching two G. The event has been given a return

25 period of 2500 years. The ULS curve is based on a 500 year event. The fact that there were not more building collapses is a testament to our building design and our regulatory environment. Notwithstanding that comment there are buildings of similar construction to some of the newer damaged or collapsed buildings in Gisborne and by that I mean

30 concrete column and beam buildings. These buildings are currently classed Category 6 buildings in our policy. Category 6 buildings are buildings built prior to 1976 but not unreinforced masonry or partial unreinforced masonry and with an importance level less than three as

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defined in New Zealand Standard 1170. They must have a notice served on the owners by December 2011 and then have 25 years to either prove they are not earthquake prone or strengthen the building. If we can just explain that bottom paragraph. As I said our policy is based on a potential earthquake prone building policy so we say to people we believe your building may be earthquake prone. Either give us an IEP to say it's not or fix it and that has caused up to this date, up to date no major challenges have been made to that approach.

10 **JUSTICE COOPER:**

Q. Well have any been strengthened?

A. Lots of building have been strengthened.

Q. In this category?

A. No. yes we've got one building that which is our old chief post office. It hasn't been strengthened but the building consent is getting processed at the moment. The building had an IEP of and this is interesting for, it is, I haven't seen any of the IEPs but anecdotal evidence from the building manager has said the buildings had three IEPs, one at 42%, one at 58% and one at 67% which is very interesting and might be commentary on the IEP process. However the building owner has decided to bring the building to 100% of a new building standard. We're processing the building consent at the moment and they have told me that this is a building which has been partially occupied for a number of years since the post office moved out and that they, when the strengthening is finished they have already got tenants to have the building fully tenanted so it's a sign that if a building is strengthened it will be occupied.

EXAMINATION CONTINUES: MR MILLS

A. Next slide please. Twenty five years is a long time given the frequency of magnitude six earthquakes in our region. A timeframe of 10 to 15 years was proposed for these buildings. The Environment and Policy Committee approved 10 years in the consultation report. The other

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problematic buildings are the ones strengthened to 50% or 60% of New Zealand Standard 1900. This level may be as low as 0.6g. Possible changes could be a reassessment within a similar timeframe.

5 **JUSTICE COOPER:**

Q. This decision of your Environment and Policy Committee that's a decision made as part of the current review which is brought about by the Canterbury earthquake is that right?

A. Yes.

10 Q. At what stage is that policy revision at?

A. The policy has, we've had, been through the submission process.

Q. Yes.

A. The hearing's committee heard the submissions on the 2nd of November and approved the changes and it is now waiting for final ratification by the full council.

15

Q. And will it, is there a, so you have already been through a process of consultation?

A. Yes.

Q. Is that right?

20 A. Yes we notified roughly 200 people, every building owner on our register plus the number, a number of structural engineers who do work in the city plus the Insurance Council plus the Historic Places Trust and plus the heart of Gisborne and publicly notified it. We had four submissions, about half a dozen submissions.

25 Q. And were they, can you characterise those submissions in any way?

A. Yes. The Historic Places Trust basically said that they weren't making a submission but they supported the direction of the policy. One structural engineer replied and said that he applauded the efforts in shortening the timeframes and there were three building owners who objected to the shortening of the timeframes.

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EXAMINATION CONTINUES: MR MILLS

- A. Next slide please. So proposed changes to our policy in a way these are more than proposed because they just need final ratification by council now. Heritage buildings. At the moment they have a special category in our policy that allows a longer timeframe for strengthening than for other buildings of similar age and construction. And that timeframe was 20 years. It was proposed that this is removed. All buildings of similar age and construction should have identical earthquake strengthening criteria. The heritage brick is just as dangerous as a normal brick. Next slide please. Changes to an earthquake prone building policy must go through the special consultative procedure as required by the Local Government Act so all these people that we just spoke about were notified and most of them specifically notified. Next slide please. So in summary earthquake strengthening has been subject to three separate Acts. The Local Government Act are suffer damage tests and 50% of NZS1900 strengthening which could be in two parts. The 91 Building Act a catastrophic collapse test and then 50% of NZS1900 strengthening tempered by a change of use requirement that was more stringent and the 2004 Act 33% of new building standard tests silent on required level of strengthening up to each council to set a level. Next slide please. The event of December 2007 raised a number of issues in regard to building damage and strengthening. We resolved to review our policy as soon as workload allowed. Parapet damage had occurred in most of our older buildings. Even the earthquake risk ones that had been removed from the register in 1992. If I can just make a further point about that. These buildings that had the damage in 2007 had been through two earthquakes of similar magnitude, the '32 – '66 earthquake, '32, sorry 1932 and 1966 were the more moderate one that was further out of the city in 1993. We still had parapet collapse and one of the comments we frequently get from building owners is, our buildings have been through three earthquakes, we don't need to touch them. Our argument, of course, is that every earthquake is a unique event with
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shaking of different frequencies and from different directions and that doesn't cut it and I guess the 2007 earthquake really underlined that point because what happened is it came from a different direction than the other two and we had transverse parapet collapse rather than front parapets. Next slide please. The Christchurch event of February 2011 has raised more issues in regard to building damage and strengthening. Christchurch had a passive approach to strengthening. The Government cannot afford another Christchurch so it is expected that there will be significant legislative changes. However, as this journey through time has shown governments can sometimes make strange decisions and really I find the biggest one is the change from the test of the Local Government Act which was suffer damage to catastrophic collapse in the '91 Building Act. Next slide please. The overall rationale for the Gisborne District Council building, earthquake-prone building policy is basically that this city has suffered M6 or greater earthquakes at a average period, time period of 18 years since 1932 with the shortest time span being 14 years and the longest 27. The overall goal of this policy is to have a city resilient, resilient to this strength earthquake or higher before the occurrence of the next event. While the occurrence of earthquakes is sporadic the closeness of the average and shortest time spans indicates that there is a probability that the earthquake, that we will experience another earthquake before 2025 which is 2007 plus the 18 year average. It is therefore the intent of the council through the implementation of this policy to have all buildings that are earthquake prone as defined by the Building Act strengthened by the end of 2022. The main policy features – Our Main Policy Features. The policy revolves around the underpinning premise that a building is potentially earthquake prone. A building owner is required to either provide an IEP proving that it isn't or strengthen it. Because of the broadness or the inexactness of the IEP process one of the things we put into our policy in this iteration was to define, put in a clause that basically set how we would receive IEPs. So what the policy says, that any IEP that is in between 34% and 40% of new building standard will be subject to peer

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review at the owner's cost. So if, for example, and that's because of what happened with the Post Office building with the widely differing IEPs, so if for example we get an IEP of 34% we're not going to take the building off the earthquake-prone register. We're going to ask for a

5 second opinion before we do that. Relatively frequent earthquakes have made the implementation of Gisborne's Earthquake-Prone Building Policy easier. Most people can remember two significant earthquakes. The lack of response to policy changes from the building

10 owners has been surprising but is perhaps a reflection of the point above. If I can just expand on that a little bit too. We have one building owner who owns a number of buildings who was very, very proactive when the original notices were issued back in the early '90s and immediately strengthened their building to the 1900, NZS1900 standard. We've just supplied all our plans and records for those buildings to a

15 consulting firm in town who are looking at it for him again and he is, and they are going to re-strengthen those buildings to the requirement for the 2004 Act. We've got two building owners that are doing that. So, which is quite interesting for me because from my perspective getting those people to strengthen is one of, you know, one of the biggest asks that, you know, can be put on a TA, territorial authority. Next slide

20 please. So once again more policy features, attempt 100%, minimum of 67%. All buildings in the central business district built prior to 1976 have been identified. The policy makes no differentiation between single and multi-floored buildings. Once again we had a pharmacy that was a

25 brick, single storey building that almost collapsed in 2007. This whole side wall just about fell off so we just, any building is earthquake prone as far as we're concerned. All buildings of the same importance level, regardless of use are treated the same so we don't take occupancy or use into consideration at all. All unreinforced masonry and partial

30 unreinforced masonry buildings will be strengthened or demolished by 2018. Next slide please. No special timeframes for heritage buildings. We have retained the special consideration for heritage buildings which says that we will consult if there are strengthening works that would

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mask the heritage characteristics but Gisborne has very, very few protected interiors of buildings, mainly our exteriors are protected and most strengthening work goes on the inside of a building so we don't see this as a big issue. Timeframes has been shortened to 10 years from service of notice and building strengthened to NZS1900 have been added to the policy as another building category with a 10-year timeframe. Next slide please. My submissions on possible changes to the Act. Remove the passive option. I don't think the passive option is really a great idea, as long as we leave the territorial authority timeframe discretion alone. So rather than have a passive option there could possibly be long timeframes but still there. Stipulate the minimum level of strengthening in the Act. Change section 112 and section 121 of the Building Act. Section 112 is the, the, just the alterations and additional ones and section 121 is dangerous buildings. Don't take the building consent authority out of the process for building consent inspection processes of commercial buildings. Now I know that's a direction the Minister is taking at the moment and in my view we are there as an independent, not an independent but as an unbiased part of the process that can require peer reviews and checking of structural elements of building, of building consents during the process stage with no bias whatsoever. And I notice, I think it was Dr Mahe, Mahey was it who was presenting on the geotechnical aspects of, to this Commission who said that he, basically something the same, along the same lines that during the build process, during the processing application stage that building consent authorities, I may have the name wrong –

[Commission's response – Yes, I think you have].

A. One of the geotechnical people basically said that councils have got no vested in the process whatsoever. We don't care whether a peer review comes back in favour of and gives a designer tick or comes back and says more work needs to be done. It's just part of the process where I think his comment was that there's a potential of bias where if you're

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doing a peer review for a colleague that if you come back too harshly you may not get any further work and therefore there is the possibility of bias in the process. Next slide please. And, lastly, Strengthening Works. Some buildings with only rudimentary New Zealand Standard 1900 strengthening escaped major damage in Gisborne. The buildings strengthened to two-thirds of NZS4203 were essentially undamaged. We weren't prepared as we could be. There will be another earthquake in Gisborne. Our policy changes should remove most of the risk from a moderate earthquake and perhaps save lives in a more extreme event. Next slide please. Lastly, the Gisborne District Council would like to thank the Royal Commission for the opportunity to present at these hearings. The council has been attempting to pass on the learning from their own experience with earthquake damage since 2007. It sincerely hopes that some of their experience joined with the submissions from other councils and structural engineering professionals, result in changes to the Building Act that will clarify many of the issues that have been raised during these proceedings. Thank you.

COMMISSIONER CARTER:

Q. Thank you very much for a very comprehensive review Mr Petty. I certainly took a lot of notice of many of the things that you've said. Just, could you expand a little bit on the peer review, the selection of the peer reviewer, the role that the council and the owner have and how they come to agreement on that, and my second question I had was, I think I picked a point you were making that although buildings have been strengthened and performed reasonably well, or were undamaged even, that you thought this could be also a circumstantial related to the way the earthquake attacked the building rather than the effectiveness of the strengthening. Those two points, got any comment on those?

A. Firstly the peer review one, what we do is we're a small council so we haven't got engineering professionals on our staff so if we get a building consent for either strengthening works or for a new building we will consider whether we wish to have it peer reviewed and we have a peer

reviewer, we have to have a designated peer reviewer as part of our accreditation process and we would send out these documents, you know the plans and calculations off to a peer reviewer and then we get a PS2 back which says the buildings are you know – the original design's okay or not. One of the things that has arisen during our repair process, because the insurers are so heavily into the mix, is that while we have our certification process for engineers in New Zealand it appears that some of the time the design is more to a cost than to a standard and some of the peer reviews that we've had done of some work has shown that more needs to be done rather than less, so we've had designs that have come in for earthquake strengthening of buildings as part of the repair process that have been repair reviewed and the peer reviewer has been less than happy with some of the original design work, so I think – and that's my point I guess about how essential it is for councils to remain in the process because we're unbiased, I don't really care if the peer reviewer comes back and gives it a big tick or comes back and says extra work needs to be done, we're just interested in the efficiency or the robustness of the process. Sorry what was the second part of the question?

20 Q. The other one was you'd noted some buildings that had strengthened to old codes that wouldn't be what you'd require today and yet have satisfactorily performed, may have been as much due to the way the uniqueness of the earthquake rather than the effectiveness of the strengthening. I wondered if you could choose to expand a little bit on that?

25 A. I don't know if anybody has kind of, if any of the structural engineers, and I know you've had them last week, have done a resonance model for you or shown you a resonance model as part of this process, but basically if anyone's ever seen a resonance model, it's usually a block with little springs on it and a little block of wood on the top of different heights and if you shake it, different little blocks move depending on how you shake it and so you can shake it and the taller one will stay dead still while the shorter one shakes, so what I'm saying is that every

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5 earthquake is unique and the shaking is unique and the direction is
unique and therefore just because a building has stood up through one
earthquake, there's no guarantee that it'll stand up through the next
earthquake and our 2007 earthquake was a good example of that
because we've had substantial or significant earthquakes in the past
and buildings have had bits taken off them and I guess '66 was very
close to the city and caused a lot of damage and yet these buildings that
had been through that '66 earthquake had parapets over-topple from the
2007 earthquake which was in an entirely different direction from the
10 others.

COMMISSIONER FENWICK:

Q. Thank you for your submission, there's a lot of material in there that we
need to consider in some depth. Just at this stage though can you
15 describe to me a little bit more about the six categories of buildings you
have and the implications for each category, can you do that briefly?

A. Yes, okay category one buildings were the buildings overdue from the
old register which we gave two years, they were completely
unreinforced masonry buildings, I'm going to have to do part of this from
20 memory because I haven't got a policy in front of me, but, well if I can
just grab – I can grab one from my briefcase.

WITNESS REFERRED TO POLICY

A. I'll just keep on going, category – okay, category two buildings, buildings
with post disaster requirements, so we haven't got many of them, well
25 we have got the same amount as any other city but we've got mainly
new ones, you know fire stations, ambulance centres, hospitals are all
built under the current codes, and the other one of course of interest is
1A which is buildings with parapets which are a subset of all other
buildings, thinking of Venn diagrams that you learnt in school, category
30 three buildings that contain people in crowds and then just going back to
two I think, we've identified two or three essential bridges in town,
Gisborne is a city of rivers and separated, the northern part of the city is
separated from the southern part by two bridges. One of them carries

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all the essential infrastructure for the Kaiti area, fibre optic cables, sewer, water, everything. If that bridge collapsed we'd lose our links with the coast and certainly lose all the infrastructure to the northern part of the city which is important because I live over there. So number four, unreinforced masonry buildings, those were the earthquake risk ones and they were all done on those sheets we saw earlier in my power point presentation with – they're kind of earlier IEP process and then they were removed from the register when the catastrophic collapsed test of the Building Act came into force. Category five remove, that was 20 year timeframe for heritage buildings and then the big one I guess, is the importance level six buildings, sorry category six buildings which are importance level, less than importance level three which is just every other building, and they originally had 25 years and we've bought them back to 10 and then the rural church is one. Over the page the special clause for shortening timeframes for buildings that may be damaged in a seismic event and lastly, the buildings that have been strengthened under the previous governing legislations.

WITNESS EXCUSED

NEIL TAYLOR (AFFIRMED)

1100

- 5 A. I have prepared some brief notes which I didn't intend reading unless you required me to.

JUSTICE COOPER:

- 10 Q. It will be, we haven't seen these before have we so we're in your hands as to whether you want to read them or whether you just wish to speak to them is up to you.

A. I think probably it's easier just to speak to them and expand on them a little.

Q. Thank you, right.

EXAMINATION: MR MILLS

- 15 A. I have not tried to be expansive at all and I've come to the process relatively late and specifically dealt with issues that Napier City Council is experiencing or has experienced over the last four years with art deco buildings in particular in its heritage area in the CBD and the implications that the earthquake prone assessments have proven to the council and the concerns that the council has about its current policy and the application of that to these buildings. I'll just cover briefly the fact that Napier did have an earthquake in 1931 and was extensively damaged but of course it suffered a very large fire as part of that which meant the CBD was devastated. It's interesting that Napier residents who lived through the earthquake in 31 and other generations since have had the opinion almost I think hoisted on them that those buildings that survived the earthquake which were very few and those built after the earthquake were ultra strong and so there's this belief built up in the community that post earthquake buildings in Napier are strong. Now while foundations were of concrete in the main with significant quantities of steel the unit strength of the buildings has proven to be relatively weak. The art deco's precinct does enjoy national, local and

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international recognition and of course that's something that Napier would like to protect. We adopted our policy post the 2004 Act and I am not spending anytime at all prior to that policy in terms of development of other policies in the city. I'm focusing only on that developed after the

5 2004 Building Act. Our policy was adopted on the 13th of December, 2006 which seems to be two years after the Act. I understand just asking some questions in my own building department that in actual fact a number of councils were in fact for want of a better word lined up using the same consultants in that process of policy development and

10 that's why it seems to have taken us longer. I don't believe that we were dragging the chain on it. The council certainly debated the issue at length and spent a lot of time in the submission process. The council doesn't employ any structural engineering expertise on staff. After the adoption of the policy we took a sample of 68 buildings from

15 approximately 350 buildings and applied an IEP process by a panel of five approved structural engineers locally and any two or three of those five approved structural engineers were involved in each of those initial evaluation procedures but the IEPs were undertaken by the council not, it wasn't a process that was required to be undertaken by the building

20 owner. I think it's worth just noting that in our own policy as a council we had actually included the words that it may be that the number of buildings identified by this screening process which is the IEP process as potentially earthquake prone is so few as to allow sufficient time for the panel to undertake detailed assessment but this is not planned at

25 this stage. It is very clear from our own policy and certainly as the Chief Executive of the council I was strongly under the impression from 2006 that this would not be a big impact on Napier. We did make provision in the policy for the owners to undertake a more detailed assessment but the IEP was not acceptable or accepted by the owner in the first

30 instance. However I have to say again as the council's Chief Executive that has placed the council in a position of conflict. None of the structural engineers are employees. There is no, the comment was made previously that there's independence in the council and our

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council there is no independence to our consultants to the council so we're using consultants but the owner can use consultants and of course you can have differing assessments. That can be for all sorts of reasons. Both assessments can be right but they come from different approaches and the council's found that a little difficult. Following the assessment of the 68 buildings the council is absolutely surprised to say the least that 50% of the buildings were failing and there seemed to be and I have to use the word "seemed" carefully a weighting against art deco buildings. We had an art deco building reaching a score of 6%. So while we understood that the standard that we were applying was 33% not Gisborne's 67% we did include in the policy the statement that the New Zealand Society for Earthquake Engineering recommends that the building performance be improved to enable the building to sustain two thirds, the level of shaking as would be assumed for the design of a new building on the same site. Council may try to persuade owners to meet or better this recommendation but will not enforce it and that was the council's position in its policy. When we realised that there was extensive failure we engaged a consultant from Wellington to have a look at how the policy was being applied in the IEP and whether in fact there was any bias in the process against the particular type of building with the art deco buildings in mind. But it became very clear that the IEP was appropriate and it was being properly used in the Napier process. There was and I'm, can I just make the fact, make sure the fact is clear I'm not an engineer. My background is planning, economics and business but not engineering but the engineers have been particularly good in making it understandable and this Mr Park an engineer from Wellington made it quite clear that the IEP relied on critical structural weakness assessment within buildings and parts of those include irregularity of a floor plan, irregularity vertically in a building and short columns. Mr park concluded in a report to the council that one, two or three of these critical structural weakness factors were commonly encountered in Napier's art deco heritage buildings.

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JUSTICE COOPER:

Q. Mr Taylor, that report that Mr Park prepared would there be any issue in making that available to the Royal Commission?

5 A. No sir the council's been, we're in the process of reviewing our own policy and that report is part of that review. Unfortunately we're not as far along the process as Gisborne and ours hasn't been notified. In fact the council hasn't made a decision yet on the final chain but the council's been I asked the council is it okay for us to make that available
10 and they said yes absolutely even though it hasn't been through a public process and I feel absolutely sure. I don't have a copy on me today but I can certainly make it available.

Q. Would you?

A. Yes.

15 Q. I would be obliged thank you. Can I just ask when did he prepare that report?

A. July 2010 from memory and the council at that stage had a three month process in front of it to review the policy which of course took us into September 2010 and the council very, very quickly said hey hang on
20 whoa, whoa, whoa if we don't start applying different standards this could be incremental change. It would be very difficult for building owners so they're looking at an interim policy change that does not change the standard but it would signal very clearly that we expect the standard to change as a result of this Commission's work.

25 1110

Q. Yes. Mr Taylor what interests me in particular in view of discussion we've had already in these proceedings is the fact that that report's analysis proceeds on the basis of identifying critical structural weaknesses rather than talking about percentage of new building
30 standards. It may do both but that's significant in terms of some of the issues that have come before us anyway and that's why I'm, I'm sure we're all interested in seeing that, that report.

A. I know that the council would be more than happy to make it available.

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Q. So I think you're at paragraph 15.

A. In addition the, the art deco buildings, Mr Park found that the art deco buildings, many of them were built immediately to others. A lot of them did not have party walls which was a common building structure in previous buildings, one wall between two parties. These tended to have a wall each and being built that way they're subject to pounding, in other words the two walls moving separately from each other. They were found also to have very few cross-walls and they were built without ductility. Now I would just like to qualify that paragraph because this morning as I came down on the plane I happened to talk to one of our structural engineers from Hawkes Bay who's working for EQC in Christchurch and he said he's just reviewed two art deco buildings in Napier and both of them would meet more than 67% not 33% so it's, generalisations are really dangerous in this area I think. I have to say and I'll be quite frank about it as well, as a council's chief executive, supposedly educated I was shocked and I can tell you all of our council was shocked to understand from Mr Park 2010 that 33% of the new building standard actually meant a risk of 20 times a building built to 100%. That logarithmic relationship was completely, well it was just a void to me. I didn't understand and neither did the council. I would have guessed without knowledge that it would have been a factor of perhaps three but 20 was a surprise. I have done a very cursory desktop calculation of the cost of completed works for Napier to simple two-storeyed art deco building meeting 35 to 50% of the new buildings standard at about between 200 and \$300,000 per unit. That is a significant sum for Napier and I just go on to talk about the fact that often in earthquake assessments building owners have an opportunity to consider the end of economic life question and demolition can become an option for building owners. Of course for art deco heritage buildings in Napier that are protected that's not an option. Earthquake strengthening to those buildings, the art deco buildings, doesn't provide for improved rental propositions or an improved return on investment. In fact money spent on earthquake improvements quite often is lost. It's

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not money that gets a return. That becomes a deterrent. The council has been very concerned about the risk of heritage blight as a result of the earthquake strengthening work or pressure for earthquake strengthening work. It has been suggested by the Historic Places Trust that council should subsidise strengthening and the council has looked at that very carefully but, again, a simple desktop exercise that I undertook from previous work in terms of rough order of costs was that that would be in the vicinity of 50 to \$100 million and perhaps a rate subsidy of around 50% to be effective is unaffordable to a council where our total income last year from rates was \$46 million and I'm sorry I didn't put that in there but it is, that's why the relationship - Earthquake strengthening in Napier has continued in spite of what I've just said. My experience, just going through a number of files last week and, as I said, I'm late to this process and I apologise for that was that in particular earthquake strengthening occurs at times of new tenancies. That's not always a change of use but just new tenant requirements, sometimes with building consent requirements, sometimes not needing building consent requirements but then the owner decides to strengthen the building and that requires a consent in itself and the council has undertaken some strengthening of work on our own buildings, eight I think to date although five of those are in one complex in the art gallery and museum which is underway and just as an aside on that we, we did get a copy of your first –

Q. Interim report.

A. – recommendations and with a lot of help from our structural engineers and our architect we have actually changed prefabricated concrete walls which came out of your recommendations and we certainly thickened those and, dramatically actually from 120 millimetres from memory to 200 millimetres right through the building and changed the reinforcing from mesh to placed and tied steel and we've taken two floors of that building and gone to timber frame construction rather than prefabricated concrete.

Q. This is in work you're doing on your own building?

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A. I'm right in the middle of a contract now. Unfortunately I'm, I'm sure we'll be facing variations for that work but it, it was really following the interim recommendations immediately.

Q. Yes. Right well that's interesting. Thank you.

5 A. The question of blight remains a concern for the council overall. We are proposing a change of direction with the draft policy that we have provided to the Commission but it's an interim change of policy at the moment without changing the percentage from 33%. The proposed change has not yet gone to the public. I think the council has always
10 struggled with the statistical analysis used in earthquake event prediction. We are a high risk area but of course when you talk about return periods it's not immediate and that's always an issue. I think that's an issue for anybody who's human when you start talking about 500 years or 2000 years. People don't see it as immediate. But of
15 course when you see it on TV in a city in New Zealand with the tragedy at the level of Christchurch its immediate all right. It's right in your face. I think probably there was an element of seeing the first draft of the policy as dealing with theoretical issues rather than the real world even though Napier had been literally wiped out in its CBD in 1931. As I said
20 before the council was grappling with these quite significant issues about art deco buildings by 2010 and in a pre-election statement that I made to the public of Napier and I think I've provided a copy to the Commission but I made the statement, the council has completed an initial valuation of buildings in the CBD in terms of the current policy
25 established under s 131 of the Building Act. Some issues have been identified and a further review is planned in the next three months. That statement was made in July 2010. Particularly the council has focused attention on the risk of art deco buildings not meeting the earthquake standards and the conflict that that could cause for owners, occupiers
30 and the general community if these buildings are protected and difficult to strengthen. Clearly the Christchurch earthquakes of September 2010 and February 2011 were an immediate reminder to the council that statistical risk of earthquake event prediction is useful but the immediate

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TV coverage creates an urgency in itself. Of course this is now complicated by the fact that the construction industry and the council sincerely believe that as a result of the knowledge gained from the Christchurch earthquakes, New Zealand building standards are likely to be altered and we have some disquiet about making incremental changes to policy now, that will be overridden by national changes in the future and we hope in the immediate future. I am regularly asked by building owners as the council's chief executive what will happen as a result of the Christchurch earthquakes for changes to the Building Act and will these new standards apply immediately to all existing buildings, and of course that just states and adds to the uncertainty of the sector, the investment sector but also the development sector for the CBD. Further to receiving the hearings issues paper I have given consideration to whether there needs to be some national parameters set around earthquake standards for building and I apologise again having come late to this, I have had some days to reflect on that question and I discussed it generally with the Mayor of Napier. We believe that there is an apparent expectation from Government that certain standards must be met to ensure the future safety of people in buildings during earthquakes. I think that standard has more to do with saving lives than saving buildings. In other words a building may well need to be demolished after an earthquake but during the earthquake the lives of those people in and around the buildings are preserved as well as can be by proper construction methods. If this is the case then it is important that national rules apply. The proposal that two separate standards be developed, one for new build and another for existing buildings we find attractive and one of the problems with that is this confusion about 33% not being a factor of three and there may be some way in which engineers, not me, can think about two systems that are quite clear to people. Especially if these standards begin with an expectation of saving life first and foremost, the approaches for new and existing may be similar, but the engineering experts may have opinions that vary considerably if damage to a building that does not threaten

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lives becomes an acceptable base line. I also believe that the owner developer investor of buildings prefers certainty which helps them reduce risk. This includes risk associated with such things as insurance premiums and tenancy confidence. National standards would be better understood throughout the New Zealand community and hopefully owned by everyone rather than those who are just left with the task of applying them. I do not believe that we are able to legislate to retro engineer historic buildings with the promise of keeping them indefinitely. Earthquakes are a risk in this country, protection of life is the appropriate threshold for strengthening requirements. I believe that the concept of 100% earthquake proofed buildings resides in a fictional realm, but for cities such as Napier where specific historic precincts are woven into the local economy, it is important to align future standards with community and a well informed motivated building owner and investment pool. I just have a couple of small comments to add, I apologise that it is a very focused submission just on art deco buildings in Napier. I do believe there's a real opportunity to improve from where New Zealand is at the moment, and I think probably having a look at the history from Napier, there was a global change as a result of the 1931 earthquake in Napier, in fact a large amount of change for California came out of the Napier earthquake. I think we owe it to Christchurch to do much the same this time. I apologise for having to return to Napier today and not being available for that discussion tomorrow, I just unfortunately had made other arrangements at very short notice. I do believe there needs to be a better community understanding of what earthquake prone buildings assessments mean and the consequence of applying them. I think the public safety issue of saving lives in the event is the right standard to be applying. I don't believe anybody can guarantee buildings indefinitely. I do ask the question can new and old buildings have parallel but different standards. I think that is possible but I think that that needs considerable engineering thought. Is a different approach sensible, can older buildings begin from a premise of failure or partial collapse, so we plan it, but on the basis that safety for

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life in the building and exit from the building is the guarantee. I accept technical difficulty but I believe we need simpler and engaging processes and much better information in the future. Thank you.

5 **COMMISSIONER CARTER:**

Q. Yes, thank you. Once again we've heard a very useful and might say practical view that you've presented in how your council's considering these matters. I take note of your expectation that engineering community may be able to do more to clarify standards and to identify risk levels but you've also taken some trouble to point out that it's the community finally that has to understand and decide what to do about these things. I'm interested particularly having heard these last two presentations to know where things stand with local Government agency, the local Government arrangements for communicating amongst your fellow authorities. Has there been any processes starting and I might say from you as representative of the community in talking about what your expectations might be across the country as a whole.

A. I would say that I think local Government New Zealand certainly has a sharp awareness of the requirements, the impact and the consequences of the requirements, the impact and the consequences of the current process and I believe they're involved in this process and represented tomorrow in the debate. And in the local position in Napier we're certainly engaging with organisations such as structural engineers, the building owners, the occupiers as a separate group, because there is – it's easy to forget about the people who actually occupy the building rather than the owners, they're not all owner occupied of course in the CBD. The Art Deco Society in Napier, which is a strong historical building and precinct and event focused organisation, and we've had a strong debate since the 2006 policy, but – and I know it sounds quite strongly against me as a chief executive, but if the chief executive can't understand the impact of a standard, how can you expect the community to. I mean that's why I sort of see a fundamental flaw, I was under the impression for four years that a 30% factor was sort of

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equated to a third. But how could I then turn round and say well, why wasn't my community well informed about that, if I wasn't well informed about it. I do see that as quite, you know, a significant matter for me not to have known that. How could I advise the council, I couldn't. When
 5 somebody talked about it general conversation I would have easily said, "Oh yes, well that's probably a factor of three." I didn't know but I didn't know that I was wrong either. I just think that that's the level of awareness that needs to be in our community and I think we've failed, I think we failed in Napier in getting that awareness in the community.

10 1130

COMMISSIONER FENWICK:

Q. Yes, well one of the premises of the idea that each council will have its earthquake-prone policy is the legislature doffing its hat as it were to
 15 local decision making and I think the comments you make are very apt because local decision making can only be so good as the local community is informed about the issues including potential for loss of life. I take it you'd agree with that observation?

A. Yes I would, very definitely.

20 Q. Yes.

A. And strongly. I do believe that the concept of national standards is, I wouldn't disagree with the last submitter but I certainly believe that national standards are critical in this area. National comprehension is critical in this area.

25 Q. Yes.

A. The risk in New Zealand is real. It's not imaginary and it doesn't happen, you know, once every 100 years. It's regular.

JUSTICE COOPER:

30 Q. Well Mr Taylor we're very grateful that you've taken the trouble to participate in our process and you have addressed particular circumstances in, in Napier which, which are obviously quite difficult, having regard to the importance of your art deco building stock and what

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you've told us about its seismic strength so I think it would be very important and valuable for us to be aware of Napier's position and the views that you've expressed will be very helpful to us in our ongoing deliberations so thank you very much for your contribution.

5 A. And I will make sure that that report from Mr Park comes to you.

Q. We'd be grateful for that, yes, thank you.

COMMISSION ADJOURNS: 11.32 AM

COMMISSION RESUMES: 11.47 AM

JUSTICE COOPER ADDRESSES MR MILLS – CHRISTCHURCH CITY COUNCIL SUBMISSION

5 **BOB PARKER (AFFIRMED)**

PETER MITCHELL (AFFIRMED)

STEVE MCCARTHY (AFFIRMED)

10 **JUSTICE COOPER:**

Mr Mayor, Mr Mitchell and Mr McCarthy, welcome. I don't need to introduce the Commission. I think we've all met before so the floor is yours to proceed as you would wish to. We have read your submission and you don't need to take us through that if you don't want to. It will be sufficient if you speak to it so over to you.

15

MR PARKER:

Well good morning gentlemen and thank you for the opportunity to speak this morning. Indeed we won't run through the submission which you already have but I have Mr McCarthy and Mr Mitchell here to answer any specific questions that might have arisen for you out of that. I just thought that I would note at the beginning of this process that these are the sorts of things that always happen somewhere else and what has happened here in Christchurch and to a degree New Zealand is that for us the issue has changed completely and whereas it was to a large degree when we sat down to look at our policies around earthquake-prone buildings, to a large degree an academic exercise, the perspective from the city now and as we've heard from previous submitters this morning is that we are in a window of opportunity to make some appropriate changes. We would just initially just very quickly run through some of the key changes that have taken place in recent years since

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the Act in 2004 required us to provide within a fairly short timeframe an earthquake-prone buildings policy for the city and, indeed, that policy was put into place in 2006 and as has already been described this morning it could be called a relatively passive approach in that the bringing of earthquake-prone

5 buildings up to the standard that was proposed at that time of 33% of the new design compliant buildings was really only initiated at the point at which there was a major rebuild or renewal, renovation on a building or a change of use. That obviously with the benefit of hindsight seems to be entirely inadequate but that was based on the clarity of understanding which we had of both the

10 legislation and of the seismic environment that we existed in at that time. Again, it's interesting to note that there is a huge tension which often doesn't get talked about at these levels but is reality at the local government level between the responsibility and the duty of care that local government have when applying different aspects of legislation that is given to us to apply to our

15 communities and the need also to recognise the impost of costs upon your community. So for anybody who's been on the governance side of local government and no doubt most of the staff as well whenever these things come up for discussion we are faced with a long list of persuasive arguments that surround the fact that buildings, as we've heard already actually, that

20 have been standing for 100 years and have withstood many events already will be here in another 100 years time thank you very much without the interference of the bureaucrats who inevitably seem from a certain perspective to be bent only in creating more costs for our communities and for our businesses and, again, we have seen in very real and horrific terms in our

25 city what the cost of that can be. So the policy was already under review and, indeed, a consultation had taken place to review the 2006 policy in 2010. A desktop exercise had identified more than 7000 buildings in Christchurch City which were regarded as earthquake prone and those owners and businesses were asked for their input on the proposed policy in 2010. Interesting enough,

30 similar to the experiences of some of the other TLA's we I think got 26 responses to that request. Interestingly they were relatively evenly divided around whether it was a good idea to go with what was being proposed in the policy which at that time was that we should move to the active model. That

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is, that all buildings identified as earthquake prone would need to be brought up to at that stage 33% of code and there would be timeframes given for this. So it was a shift away from that earlier policy. It was actually in the middle of the final stages of the preparation of bringing that policy to council that the 4th of September earthquake struck and so within the space of six days, it may have even been less, but around six days we were able to put this new policy in front of council and in the process of consultation some submitters had suggested that the policy actually should be struck at 67% of code not 33. So this enabled staff to actually present to us a policy which prior to the 4th of September was going to be active on the 33% and actually suggest a policy that should move to 67% based on the events of the previous week. We needed to get this policy struck and in place quickly because of at that point what appeared to be a significant need to rebuild, reconstruct and repair buildings and we sought to give the Christchurch local authority area real clarity on what the standards we were expecting would be. We don't separate out heritage buildings and based on the various categories there were three timeframes applied in that policy. The shortest timeframe for the most at risk and important buildings was to be 15 years, the second category around 20 years and 30 years and Mr Mitchell or Mr McCarthy can give you the details but I know that you have those already of the particular buildings in those categories and that is the position that we are currently in. Of course post that 4th of September event arrived the tragedy of the 22nd of February and, again, a similar sized earthquake, a pair of quakes, a 6 and a 6.3 on the 13th of June, they are the most significant events in a list of seismic activity which has now passed, I believe, 7000 earthquakes and aftershocks with the original earthquake now being described as not one earthquake followed by a series of significant aftershocks but indeed a new scientific proposal that says we have actually had three separate major earthquakes and their consequent aftershocks and again one can only go back to the comments that were made earlier this morning and that each quake has come from a different direction with a different set of unique physical parameters, the ground movement of 2.2g max I think horizontal and vertical surrounding the 22nd of February is something which is unrecorded and quite extraordinary so we are here to help

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with any other information that we can around the information that we've put in front of you.

JUSTICE COOPER:

5 Do you wish to add to that Mr Mitchell?

PETER MITCHELL:

Just a couple of points Mr Chair the person from Gisborne this morning came up a 33 and 67 and the Brookfields' opinion. The position of Christchurch
10 City has been relying on separate legal advice from Simpson Greerson that a council can only require a maximum of 33 which of course is based on the 2005 regulations and for that reason the council's current policy refers to effectively the 67 as being a target. At the end of the day the council sees that that's what a community should aspire to for earthquake prone buildings
15 and other buildings because what the mayor referred to when we consulted on the policy was the 7000 buildings pre 1976 so they'll include unreinforced masonry buildings but also include other non what reinforced buildings of a type so from that perspective I think it clearly will be an issue for the Commission in terms of this differing legal advice around what councils can
20 require to be a level of strengthening from that point of view. I think the other comment I'd make is that also in Christchurch we do employ structural engineers on staff and Mr McCarthy can speak to that in terms of their role and the other unique feature we have in at least with the three councils in Canterbury at the moment is the role of the Canterbury Earthquake Recovery
25 Authority. Because of course they are active in this area and the Commission will be aware that there is provision in their empowering Act which they have a statutory power to require structural reports for building at the moment which they are working through so I will hand you to Mr McCarthy to speak as well sir.

30

MR MCCARTHY:

Thank you sir. Our structural engineers peer review all of the building consent documents from an engineering point of view and we do accept a PS2, a –
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JUSTICE COOPER:

Q. That's producer statement

A. Producer statement.

5 MR MCCARTHY

A certified engineer can peer review another engineer's design and we would not then go through the same level of review ourselves but our structural engineers are engaged in reviewing all of the structural engineering information that we get. We are in a situation where the Canterbury
10 Earthquake Recovery Agency has its own engineers who are requiring detailed engineering evaluations of each of the commercial buildings in Christchurch. They're doing that progressively. That is a situation that is of advantage to us with regards to our earthquake prone policy. It gives us a very full and detailed engineering evaluation of each of the buildings and that
15 has commenced. CERA can do that under section 29 and 51 of their Act and that enables them to make a decision about whether a building can be reoccupied or not so that is quite a mark of difference for us in Christchurch as opposed to where other councils would be at this point in time.

20 JUSTICE COOPER TO MR MITCHELL:

Q. This issue Mr Mitchell about the extent of the council's powers under the Building Act I think your submission summarises the rival argument and what you're telling us I think is that having considered the position and taken advice Christchurch City's view was that the power to require
25 seismic strengthening took you up to 33% standard but once it could be said that it was 33.1% that was as far as you could go?

A. That's correct sir and I think and this is again one of the assumptions that a position that's probably with most councils in New Zealand. I couldn't be certain around that but that's my sense of it from that point of
30 view.

Q. Yes.

A. From the Christchurch City's point of view with the council having last year set the 67% as a target from a staff point of view it is then in a situation of discussion influence cajoling individual building owners when particular applications come before the council to get them to increase the level of strengthening because I think the comment from the Chief Executive of Napier City is quite true it's as it is with magnitudes of earthquakes sixes and sevens they are expedient from that point of view and again it's a question of having to persuade the building owner of the benefits and often for small costs there can be quite marked differences depending on a particular building and the type of work to be done. Ten thousand dollars or \$20,000 may get you a substantial percentage increase. On another occasion it can be very expensive to get even small gains from that point of view.

EXAMINATION: MR MILLS

Q. I spent the weekend buried in council files and I do have some issues coming out of that that I'd like to go through with you really to help me any rate to understand I suppose some of the underlying drivers for the policy decisions that the council have made. Not just the current council but the council has made over a number of years and because we are relatively short of time I thought that unless the Commission stops me or you object at some point that rather than taking you through each of the documents that I've looked at and then pulled out as being ones that I'd like to have some comment on because I think most of them won't involve issues that at all factually contentious I'm going to just put some propositions to you and if there is disagreement or if you want to see the documents then with the exception I am told of two which for technological reasons can't be put up there they can then be put up on the screen and you can have a look at them. I will for the sake of the Commission in particular just give you the document references as I go through when I'm referring to a document so you can look at them later if you wish to but I'm just really to move through this. The, and I suppose the other preliminary question I just had from you Mr Mitchell is

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to know how long have you been at the council just to know what time span you're likely to have some familiarity with.

A. 28 years sir.

5 Q. Well that is certainly a good long time. Now the first issue that I'm interested in going through with you is the unreinforced masonry buildings this category that we've heard quite a bit about, we know quite a lot about from what happened in Christchurch. Heard Gisborne on this this morning about how they've dealt with these issues and so the first point that I want to go through with you is the way in which the council dealt with in the past unreinforced masonry buildings and ultimately what I'm interested in is the reasons really to the extent that within any of your contemporary knowledge about why certain decisions were made.

1207

15 A. I think reading the files the council's provided the submission a lot of the, key decisions were made in the 1970s and early '80s from that point of view and there was a focus around parapets which seemed to come through from the record. From my own time in, I started at the council in 1983, through the '80s and into the '90s there wasn't a great deal of focus that I can recall around the unreinforced masonry buildings and I think the record reflects that from that point of view. I think the Government saw that it was happening across New Zealand as a whole which I think was one of the reasons why it put in the, the requirement for the policy in 2000 – for the first policy in 1996. In effect to encourage territorial authorities to look at this issue in some detail from that point of view.

20 Q. Just let me put a couple of points to you, see if you agree with this. Of course we heard from Gisborne that as far as they were concerned they first regarded themselves as having some authority to deal with unreinforced masonry buildings under the Local Government Act in 30 1972, 1974 but I think the, the fact is that that was preceded as you're probably aware by the Municipal –

A. Mmm.

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Q. – Corporations Act which had essentially the same provisions in it from 1968. So I think we're in agreement then that from 1968 onwards all territorial authorities have been given a power only in relation to unreinforced masonry buildings.

5 A. Yep.

Q. Now so that I think puts us in a position where from 1968 through to 2003 when the current Building Act came in that there was a power with the Christchurch –

10 **JUSTICE COOPER TO MR MILLS:**

Q. 2004 Mr Mills.

A. I'm thinking about the date before it came in, so 2004, before it came in.

EXAMINATION CONTINUES: MR MILLS

15 Q. That there was a power which Christchurch City Council had along with all others to address issues with earthquake, with unreinforced masonry buildings and I assume that you'd agree with me that the reason that that was the sole focus of that earlier legislation was because it was identified as the type of building that was most at risk of collapse in an earthquake?

20 A. Yes.

Q. So my first question in coming off the back of that is did Christchurch do anything during that period, 1968 through to the enactment of the 1994 Act, 2004 Act sorry to deal in any way with unreinforced masonry buildings?

25 A. There was as I mentioned the work that was done around the 1970s and with a focus around the parapets on the buildings. I can recall in terms of, in the early '90s there was one building where the council served what was the old 6/24 notice I think under the Local Government Act requiring work to be done on that building because I think at the end
30 of the day in terms of, from a practical point of view how did these start, how are these triggered. Essentially it would be the council typically, and that continues even today, receiving engineering advice of some

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sort to say to the council, or to say to the officers, I am concerned about this particular building and that has, that happened with an example in the early '90s. There was a building on, in Hereford Street and there's a lane that runs down to Cathedral Square and I can recall the building control manager at the time, Mr Brian Bluck, who you'll be, who's now deceased but I think you've seen the video and he was very concerned about that, that building at that stage and so we went through the formal process and from memory the end result is the building owner upon receiving notice from the council I think demolished the building and built the building that is still there today to my knowledge. I think, and the other example I'd use is that last year, and it's coming after the time period that you refer to but my point about initiative from engineers was around the Manchester Courts building in Christchurch last year where again engineering advice to the council, the council took formal steps to have that building demolished.

Q. Now I assume from what I'm hearing from you that to the extent that the council did take steps in relation to unreinforced masonry buildings prior to the current Building Act these were relative to the number of unreinforced masonry buildings, these were very small steps?

A. Yes that'd be fair comment.

Q. Did the council during that period take any steps towards developing an inventory of all of the unreinforced masonry buildings in the CBD?

A. I would, I would say yes to that but I can't recall the detail. I think there was, there was certainly an inventory developed in the, in the middle to late '80s in terms of unreinforced masonry buildings.

Q. How far did that progress do you know?

A. No, I couldn't answer that question.

Q. I ask that partly because some of the documents that I looked at later on as I was doing my walk through the history of all of this indicate that even now the council is just beginning that inventory process.

A. The council, the council's had that inventory from then, it's also got what I refer to as the list of the 7000 buildings that it communicated with around, because I think from the council's point of view today it's looking

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at all those pre-1976 building as essentially earthquake prone, whether they're unreinforced masonry or they're not and therefore need to be dealt with essentially on the same basis.

5 Q. So do you agree with me or am I right in concluding that at least prior to the current Building Act if there was an inventory done at all on the URM buildings it would not have been comprehensive?

A. It, it, I wouldn't have, I would say it wouldn't, you wouldn't be able to rely upon it that that was 100% of all the buildings in the, in the city at that time.

10 Q. Are you telling me that the council did know from some time ago prior to the 2004 Act what URM buildings it had?

A. It, no, all I'm, what I'm referring to is what I've read in terms of the files that council's produced for the Commission, the fact that there were, there was a list compiled in the middle '80s. I wouldn't say there was one that was then developed or updated since that date.

15 Q. The issue of the knowledge the council had about the earthquake risk in Christchurch was mentioned by His Honour when he was making his initial statement –

20 **JUSTICE COOPER:**

Not by me I don't think.

EXAMINATION CONTINUES: MR MILLS

25 Q. Sorry, His Worship. There are in the course of reading the documents there are a couple of places where I saw reference to information that had been conveyed to the council about earthquake risk and I just again want to see if there's any dispute over this. The first one and the document reference is CCC in our numbering system, 0017.5 is a part of a report to the council, it's for the council agenda of the 15th of December 2005 and I see it's gone up so you'll have it there on your screen and you'll see there under that heading, Earthquake Risk for

30 Christchurch City that there is a quoting from a report that's been given by GNS and two aspects of that I found interesting when I read it. The

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first one was what GNS apparently had said about seismic hazards prior to 2003 when this report is dated and it said, "Early studies of the seismic hazards affecting Christchurch indicated a relatively high seismic hazard level only marginally lower than that of Wellington." Let me just pause there. Prior to this apparent revisiting of that issue had that been the view within the council about the earthquake risk in Christchurch?

1217

A. No, not to my knowledge. In my view the view that was taken is that, would have been that Christchurch was certainly not to be compared to Wellington from that point of view, that clearly the risk to the city was from the Alpine fault, you had smaller fault lines on the Canterbury side of the Southern Alps which could have been triggered but to the extent of marginally lower than Wellington, no I wouldn't have seen it that was a view known to council or shared from that point of view, albeit it's in the report at that stage.

Q. Yes.

A. But then qualified by the subsequent sentence.

Q. So you have no knowledge, and I suppose it is directed to you, as the most long serving member of the staff that's here at any rate, of that view from GNS being fed into the council?

A. No.

Q. How about the second limb of it, which is it says more recent studies indicate a lower level of hazard that is more in keeping with the location and activity of all earthquake sources, and then it goes on at the end there and says, during its 160 year recorded history, Christchurch has not experienced a magnitude 8 shaking, and only occasionally have spot intensities of magnitude 7 been observed. Were you aware of that kind of information?

30

JUSTICE COOPER TO MR MILLS:

Q. I take it the MM is modified mercalli.

A. I think it is, yes, yes.

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EXAMINATION CONTINUES: MR MILLS

Q. Were you aware of that information (overtalking 12:18:41)?

A. I think, given the fact that starting off anywhere in New Zealand is subject to seismic risk, again coming back to the point, it's for
 5 Christchurch in my view, and I think that would be shared amongst the staff, it was at the lower end of the scale but they could happen because if you read the history of Christchurch you read about the previous earthquakes, particularly the one that sticks in my mind is the spire of the cathedral toppling, I think in the 19th Century earthquake, so it was
 10 possible from that perspective and of course I was born in this city and you would, every, what, it felt like every few years you could feel a small earthquake, it would probably what today would be around a 3 or something like that enough to – and I used to have an aquarium before February, the water would shake, move, so it was like a measure, you
 15 could tell that there had been an earthquake from that point of view, but again it was very low but that was the extent of it.

Q. Yes, this is a new scale for – for determining earthquake intensity.

JUSTICE COOPER:

20 Q. We call it the modified Mitchell scale.

EXAMINATION CONTINUES: MR MILLS

Q. Well if you go over, in fact if you can just scroll that down to the next paragraph which is on the hard copy is the next page, I don't know
 25 whether you've got that – well rather than just holding it up, I just do observe that again this is a council document, can you just enlarge paragraph 44. They're – it's saying there, this indicates that Christchurch lies in an intermediate seismicity zone, it identifies three particular fault zones and it says that they're large enough and close
 30 enough to cause significant damage throughout the city. Now again in relation to how the council policy's developed, was that a view that the council would have held and been aware of for some time?

A. I would say no, not before receipt of that advice at that time.

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Q. But certainly from the receipt of that advice council was aware of that?

A. Well that report I think was the one – in fact it was part of the 2006 earthquake-prone policy.

5 Q. That is correct and I was about to actually to take you to that specific document and again just for the sake of completeness and to let the Commission know, if, as Mr Mitchell just said, in the 2006 policy which at least in my numbering is CCC0008B.1, then on the second page of that under paragraph 1.3 it picks up exactly that point as being the earthquake-prone building underpinning about the risk of seismicity, we
10 agree with that don't we?

A. Mmm.

15 Q. Now when we get the 2004 Building Act, again I don't think there will be any dispute about this, it does of course expand the category of earthquake-prone buildings, so it's not just un-reinforced masonry anymore, but there'd be no suggestion in there would there that the focus which had been solely on unreinforced masonry buildings prior to this Act, because they were dangerous, had somehow changed, it had just expanded the class?

A. Mmm, yes.

20 Q. Now I don't know quite who this directed to, but whoever it is can respond, you agree with me that unless the unreinforced masonry buildings are strengthened in some way then under the 2004 Act they would inevitably be earthquake-prone within the definition. That's right?

25 **MR MCCARTHY:**

A. Yes.

MR MILLS TO MR MITCHELL:

30 Q. So when we get then to the council's earthquake-prone policy in 2006, the council knows it's got hundreds of unreinforced masonry buildings in the city, they're all earthquake-prone unless they've been strengthened, and they are at risk of collapse in a moderate earthquake, is that – would we agree on that?

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MR MITCHELL AND MR MCCARTHY:

A. Mmm, yep.

5 JUSTICE COOPER:

Q. Sorry was there an answer?

MR MILLS:

Yes, the answer was yes.

10

MR MILLS:

Q. I looked at the submission that the council had received on the 2006 draft earthquake-prone policy, and one of the ones that I looked at and found interesting was from Mr Grant Wilkinson, as you probably know is with
15 Holmes Consulting Group, and he made a submission and unfortunately this isn't loaded into our system so I'll just have to summarise this for you, but it's dated February 2006 and one of the issues that he got, obviously felt pretty strongly about, was the failure to deal properly with unreinforced masonry buildings going way back to 1968, to say look,
20 there's been all these years and nothing's happened with them, and his complaint was that at least under the draft policy in 2006, that most of the buildings would be put into what the council had described as category D which was the bottom of the hierarchy for attending to earthquake-prone buildings, so that was his complaint, and then he
25 complained pretty strongly about how long it would take to strengthen or demolish them under the draft policy, he said it won't happen until 2041 on the policy the council's thinking about adopting, and then pointed out that would be 74 years since the original Municipal Corporation's Act with which he wasn't very impressed. Now what he wanted was for
30 council to make unreinforced masonry buildings the priority building and at least said put it in category A along with the post-earthquake important buildings which I think in broad terms was category A. So that was put pretty forcefully during the hearings process. I think it's already

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been agreed and the Gisborne City Council evidence also referred to this, that the policy which the council ultimately adopted in 2006 was a passive policy. You agree with that, using that terminology and the way in which we've become used to it being used.

5

MR MITCHELL:

A. The primary focus of the policy – the primary focus of the policy in 2006 was around instructing the staff to carry out a desk top exercise to better inform the following policies, so from that perspective, although I think technically the Department of Building and Housing classified it as active but it could be seen as passive in that point of view.

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1227

MR MILLS:

Right well I thought it was passive because again I'm looking at a council document and this is CCC0021.11 which is dated 25 March 2010 so it's in the subsequent review but it's a report from council offices laying out options for the council for its new policy and it describes under option two one option is to retain the policy in its present form in effect this is a passive approach and the reason for that is that there were no timeframes at all were there. I think you've already referred to that in 2006 so from at least from the view of whoever wrote this report it was seen to be a passive policy. The other thing that I noted with some interest in relation to the choices that were made here is a document that is numbered CCC.0013.1 and this is a report back from the hearing committee which had dealt obviously with the submissions that came in and you Mr Mitchell were in attendance and you were asked whether if timeframes for the strengthening different categories of buildings are removed will the policy still comply with Building Act requirements? So there seems to have been a focus on this question of could we get rid of the timelines for compliance and the answer you gave suitably expressed I think is that although the council was required to adopt a policy on this issue by 31 May 2006 it was entirely up to the council to decide how far its policy should go. Now I don't know whether you recall saying that but I've taken that to really be

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saying and I think it bears out what later happened that yes the policy would comply even though it had no timelines agree with that?

MR MCCARTHY:

5 Could I add that that's based on the DBH guidelines that came out in 2005 so that is why it would be consistent with the guidance material that we had.

MR MILLS:

10 So you think that this view was really based on what DBH had told you in its guidance document?

MR MCCARTHY:

15 Guidance document gave you, the first question you needed to consider was whether you were going to take an active or a passive policy. That was the first step in determining your earthquake prone policy.

MR MITCHELL:

20 And I think that's to simply compliment what I said a number of years ago. I think the question would have been asked of me from a legal perspective. In other words would the policy be lawful from that point of view and the answer would have been what you've just read out.

MR MILLS:

25 I understand. I'm not criticising you at all. I think what you said is absolutely, it's not surprising but what I'm interested in is as I said at the start is really trying to see how the council got to where it got to in the decisions that were made and this seemed to me as I read through it to be part of that history that helped to explain it at least to me. So that's confirmed and that's what ultimately happens in the 2006 policy no timelines and it's only triggered isn't it
30 by the alterations or change of use provisions in the Building Act that's correct?

MR MITCHELL:

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Or if the comment I made before if there had been information come to the council about a particular building then the council could have clearly exercised the powers it has in terms of 124 to serve notice and that sort of stuff.

5

MR MILLS:

We've agreed though haven't we that the council knew at the time this policy was put in place that it had a significant number of unreinforced masonry buildings in the city?

10

MR MITCHELL:

Yes.

MR MILLS:

15 That if they hadn't been strengthened they'd be likely to collapse in a moderate earthquake.

MR MITCHELL:

Yes.

20

MR MILLS:

And they could have been treated as earthquake prone buildings?

MR MITCHELL:

25 Yes.

JUSTICE COOPER:

So what sort of circumstance would have required the council to serve a notice on a section 124?

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MR MITCHELL:

It would have been sir again and I use the example of Manchester Court or that's a recent one from last year, the council would have received RCI - Canterbury Earthquakes - DAY 9 [14 November 2011]

engineering advice to say, well in that one last year of course it was imminent danger of collapse on the building but again there was some risk to public safety of a particular building and steps need to be taken to address that.

5 **MR MCCARTHY:**

Because those statutory powers are there, are always there in the background.

JUSTICE COOPER:

10 To avoid immediate danger?

MR MITCHELL:

In terms of 129 to avoid immediate danger.

15 **JUSTICE COOPER:**

Which isn't, I mean those powers are in a different category aren't they?

MR MITCHELL:

20 Yes although the way the Building Act is worded now I think Parliament's intention was that the councils developed a policy so the community and building owners clearly understood how the council was going to exercise those powers from that perspective.

JUSTICE COOPER:

25 The section 129 powers?

MR MITCHELL:

30 The 129 yes. Well the 124 and the 129 because the policies refer to both sections because there are some areas of local Government activity where Parliament has said to councils please develop a policy as to how you are going to exercise your powers. The other example that comes to mind is a dog control policy for example and the council's supposed to or has to report annually on that and again here we have an earthquake prone policy so in RCI - Canterbury Earthquakes - DAY 9 [14 November 2011]

terms of what is the framework for how the councils go about dealing with earthquake prone buildings.

JUSTICE COOPER:

5 Yes well but in terms of the various powers that you had a situation such as what you've just been describing about something coming to the attention of the council it seems to me what you're describing is a circumstance in which the council historically would have exercised a section 129 power rather than section 124.

10

MR MITCHELL:

That's correct.

EXAMINATION CONTINUES: MR MILLS

15 Q. Another piece of factual information which I found interesting reading through the submissions on the 2006 policy was from the Christchurch Heritage Trust and again this isn't a document loaded in the system. It's dated 24 February 2006 and they said to the hearings committee that there are 372 heritage buildings in Christchurch and a large number of the heritage buildings have not been strengthened or if they have been
20 strengthened they have not been up to a sufficient level of code to enable them to withstand a major earthquake not if but when it happens in Christchurch. Now, and then they go on and give a lot more information about the costs of retrofitting and so on and so forth but of course that again makes me ask you collectively or to whoever wishes
25 to deal with this. In light of the facts we've already agreed on and that sort of information going to the hearings committee it does seem surprising to me that you ended up with a passive policy in 2006 and I'm interested to know if anyone can tell the Commission, tell me why that choice was made in 2006 to have a policy that was passive, no timeline
30 with that sort of information known by the council.

MR MCCARTHY:

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I was involved at that time and my recollection is that the council was concerned that they didn't have full economic impact statement. They didn't know what the true cost of requiring that on the city was. They were also interested in knowing exactly how many buildings they were dealing with so they directed council offices to go away and assess that information. They set a shorter timeframe for our review so you'll note that we reviewed after four years. They said we want you to come back after four years, not five years. We want you come back after four years so that we can make a decision. I think it was always council's intention to set timeframes and to be active in this space but they, they didn't feel they had sufficient information at that point in time so hence the desktop study and further information from structural engineers was gathered prior to us going back in 2010.

Q. The 2006 policy didn't set a timeline for doing the desktop surveys did it, not in the policy?

A. No not in the policy but they certainly set, in the resolution of council they said we want to review this policy in 2010. That prompted us to do a lot of work in 2007, 2008 because we started to need to prepare the policy document in 2009 –

Q. Am I wrong, are you going to tell me I'm wrong on that because I might be?

MR MITCHELL:

No, no. I was just going to say the council minutes from the May 2006 minute, that staff report about the council, "In June 2007 and annually thereafter the policy being subject to full review no later than 2010."

MR MILLS TO MR MCCARTHY:

Q. Yes now I was aware of that but what I'm hearing from Mr McCarthy is interpolating into that, that that was the timeline for doing desktop surveys which isn't precisely what it says but I take it you're telling me that's what you understood you were given direction to do?

A. Correct.

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Q. Has, I ask again, I know I've asked this before but has that desktop survey now been completed for every earthquake-prone building in the city?

A. Yes it has.

5 Q. And when was it completed?

A. It was completed I think late 2009, early 2010.

Q. Under the processes which a number of territorial authorities are following that's usually followed by this initial evaluation process isn't it using the NZSEE Guidelines?

10 A. That's correct.

Q. Has the council got that underway?

A. The resolution of council in 2010 was that that would be commenced in 2012, July 2012 and the reason for the council making that decision as I understand is that (1) they wanted to apply full resource to it, there wasn't anything in the long-term council community plan to fund that activity so they wanted to resource for that. They also wanted to consider a seismic strengthening fund which would be created to help to strengthen heritage buildings at that time. So that was all consistent with our long-term council community plans and the timeframes associated with that.

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JUSTICE COOPER:

Q. This is, you're talking about the resolution made I think on the, on the 10th of September. Is that right?

25 A. Correct.

EXAMINATION CONTINUES: MR MILLS

Q. I did also note with some interest, and this goes back to Mr Wilkinson's urging about how URM buildings were treated, that the 2006 policy did ultimately put URMs in category A as he had asked but, of course, the policy had no timelines so he didn't get what he really wanted and the other point I noticed with interest was, there are some figures in the council's files and this I think is for the Commission at CCC .0020.1 that

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between May 2006 and November 2008 the council had processed only 19 building consents for seismic work. Now it doesn't divide it between URM's and other earthquake-prone buildings but 19 was all that had been achieved under the passive policy that the council had in place and I noted also that against that the council files had some numbers on what you were dealing with and this is 0020.2, sorry 0022.7 and this again is taken from the processing of the 2010 review of the earthquake-prone policy, the document I've got in front of me is the red line copy as the council and the committee are working through, there it is up there and you'll see there under priorities that it says, "The identification process is now complete for studies carried out by the council since 2006. There are 7600 earthquake-prone buildings in Christchurch, the highest risk amongst these buildings are the 958 unreinforced masonry buildings which are likely to fail in a moderate earthquake. There are around 490 heritage buildings which are earthquake prone, the majority are unreinforced masonry. Now when we come to this pre 4 September review of the earthquake-prone policy, again, and I imagine you're all familiar with this, there were the familiar three options set out by the officers as to how things should be dealt with and if I understand correctly what was done here now there were timelines proposed weren't there?"

A. Yes.

Q. And again if I followed this the initial proposal that went out I think for public comment said they would run from 1 July 2012, does that sound familiar?

A. Yes, correct.

Q. And at that point because this was the way it was under the 2006 policy the URM's were still in category A at the point at which it went out for public comment. Does that sound right?

A. Yes.

Q. When it went through the hearing's panel process my reading of this is that it recommended that, recommended two things relevant to what I've been asking you about, first, that the specific date from which these

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policies would bite, being 1 July 2012 would be dropped. Is that consistent with your memory?

A. Mmm.

5 Q. And the second was that the URMs would be dropped from category A to category B. I can take you to the document -

A. Yes.

10 Q. – it you want. Do you want to see the document. That's 0025.1 and the reason as I understand it for dropping the finite date, 1 July 2012, was because of the delays that would be involved in carrying out the notification issues and the work that would have to be done prior to that. Is that again consistent with your understanding?

A. Yep, yes.

15 Q. Now then we get to the policies actually adopted and at least the document I've got for that is 0008.13 and that says, "Time begins to run from notification," which is the point I was really just putting to you in another form. So it runs from notification and as I understand the way that this was to be dealt with, you would start with category A and then you'd go to category B, then C, then D. That would be right wouldn't it?

A. Mmm.

20 Q. So the URM buildings, first of all there's no specific trigger date for them and secondly that down the list they're category B. That's right?

A. Correct.

Q. And so the timelines that had now been introduced, there was no certainty about when that deadline would be reached was there?

25 A. I, I think the change was made because the hearings panel recognised that having just a 1 July date there would be time to actually gather information of specific buildings together, inform the owner, it was probably unfair to the particular building owner, there'd be variable timeframes.

30 Q. Yes.

A. Which is why they shifted to the date, the owners notified the building potentially earthquake prone.

JUSTICE COOPER TO MR MITCHELL:

Q. So, just can I – I'm probably not understanding this as well as I should, but was there a programme pursuant to which the council was going to notify people of the required work that needed to be done on these buildings?

5

A. Yes.

Q. In other words to say that the date would apply from notification I assume means from the date of receipt by the relevant party of a notice under section 124 of the Building Act.

10

A. Not a notice under section 124 Sir, I think in terms of the policy stage 1 talks about identification of potentially earthquake-prone buildings.

Q. Yes.

A. Council use information as files to identify buildings, owners will be advised they have 60 days from the date of the letter to provide evidence the building is not earthquake-prone.

15

Q. Yes.

A. That's what I would take as the date of that letter would be the date referred to in the category A.

Q. I see, so we're still then at the stage of identifying and recording status?

20

A. Yes.

Q. As opposed to requiring anything to be done about it?

A. Yes, well you're at stage 1 of a – or three stage process from that point of view in the policy.

Q. Yes.

25

A. And I think The Mayor's just drawn to the attention I think, the reference to the policy that around the classes in the categories, of course you'll see that buildings that are more than one category will go up to the next level, so that may be there will be some unreinforced masonry buildings that would have shifted from B to A in the circumstances.

30

MR MILLS TO MR MITCHELL:

Q. Yes, I accept that but I was just looked at the council agenda for 23 September 2010 which is CCC0025.1 which sets out an executive RCI - Canterbury Earthquakes - DAY 9 [14 November 2011]

summary of the position which as I understand it is setting out an executive summary of what the council has now decided to do post the September earthquake. Would that be right.

A. Probably be in the minutes of the 10th September meeting.

5 Q. It's going on the council agenda for 23 September?

A. Yes.

10 Q. And it says, whether that can be brought up, but at the point I was interested in here is the timeline for these category B buildings which includes the URM's, and you will see that under paragraph 4 this is the panel recommendations, because I understand it this is how it was adopted, all unreinforced masonry buildings that are not in category A which was your point Mr Mitchell, have been placed in category B meaning that they will have a maximum of 20 years to upgrade.

A. Mmm.

15

MR MILLS TO MR PARKER:

Q. This is in response to submissions highlighting the danger posed by these buildings and the fact that they have been known to be in an earthquake risk for some decades, but they're still being given 20 years.

20 Now I don't need to labour this further, the issue really is, what got the council to have a policy of the kind that it had in 2006 against the backdrop of some facts we've all agreed, and again here even after September, 20 years on the URM buildings, and I am hearing from you Mr Mayor that this is really the economic pressure from the – from some parts of the community to not put more pressure on this?

25

A. I think if we looked at some work we had done and the heritage buildings for example the ones that have been identified here, I think we were looking at \$200,000,000 –

Q. Mhm.

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A. - and the issue around cost is an issue that is repeatedly brought to council by those who are most concerned about the implications of strengthening their buildings to comply with the code. The other relevant point possibly is that this preceded the 4th of September event,

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this was in many people's minds the big one, much bigger than had been forecast and another good check on that is looking at the insurance tables for Canterbury at that time, I think we were probably looking at something around the 4.5. No lives had been lost at that point and so as our thinking has changed and grown so too would be the level of interest that we would now hold in the timeframes that are so identified but cost is a very real issue for many people and it's one of the dangers and one of the difficulties in public policy, balancing the joint requirements.

5

10 Q. The council, as I understand it, and I'm now looking at the extraordinary meeting of the council on Friday the 10th of September and it's – the page I'm looking at is –

JUSTICE COOPER TO MR MILLS:

15 Q. Well are you going onto a different –

A. No, no.

JUSTICE COOPER TO MR MITCHELL

20 Q. Well just before we leave this document that is displayed if I may Mr Mills, just ask Mr Mitchell just to help me understand the way this works, URM buildings that have been placed in category B, meaning that they will have a maximum of 20 years to upgrade and this is the second bullet point in the page displayed and that is said to be in response to submissions highlighting the danger posed by these buildings, and the fact that they have been known to be an earthquake risk for some decades, and in the next bullet point it said that the timeframe will run from the date that the building owner is notified, that the council considers their building to be potentially earthquake-prone rather than from 1 July 2012. Now was – I'm just wondering how that was going to work, in fact if an owner ignored this resolution in the end there'd have to be some sort of regulatory compulsion mechanisms and would that be section – would that then be a notice under section 124 -

25

30

A. Yes.

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Q. – at that stage.

A. Yes Sir, I think the council would have provided the resourcing Mr McCarthy referred to, because of course it was also particularly, well I think the paragraph says there, there's a number – there's not
5 necessarily the URM'S but a number of those will be heritage buildings.

Q. Yes.

A. Which is always a concern in Christchurch.

Q. Yes.

A. But effectively if you look at the stages set out in the policy, the staff
10 have been directed by the council, work through the stages and stage 3, you get to the situation that if we end up with an assessment that shows it to be below 33% and the owner does nothing, which will be a good number of those 7000 buildings, then the council will have to be in the position of issuing the 124 notices.

15 Q. Yes.

A. And that of course as you often find in these situations, people don't meet council's requirements because one, they don't want to, or two they cannot afford to and we found this last year after the September earthquake, there were some buildings around town where council were
20 saying to people, for example, carry out bracing work to stop – to be able to allow the footpath to be used, and the owner was uninsured, and I think it goes back to the point the Mayor made before, that the economics of these issues are always central to how earthquake-prone buildings are dealt with, it's simply a fact of life.

25

JUSTICE COOPER TO MR MCCARTHY:

Q. Did you have an estimate when this policy was adopted as to how long it might take to review over 7000 property files and contact the owners, as is mentioned in the third bullet point, because, I mean that in itself
30 might take some time mightn't it?

A. The project planning we'd done had suggested that it would take approximately two years.

Q. Yes.

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A. Depending on how much resource we deployed into it.

Q. Yes, so then would the notices or would the advice be given to the affected owners successively throughout that period, in other words you giving me the timeframe you've just mentioned, was that a timeframe to completion or a timeframe to getting ready to advise people?

5

A. That's a timeframe to advise people.

Q. Yes, I see.

1257

A. Perhaps I could just add if I might, that the category 1 or category A buildings, and there is a relatively small number of those, because they're the ambulance station, supply stations and the like, so we'd very quickly have got through the category A and got onto category B. Category B would have been prioritised according to the risk and one would expect that URMs would be the first to be evaluated and for the owners to be notified.

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JUSTICE COOPER:

Well once the suitable steps have been taken to commence the running of this 20 year period in the case of those buildings in respect of which no action was taken the system was dependent on there being a bring up at that point in the council's system and notices would then have been issued and it might have ended up at the District Court in some cases presumably with the notices being challenged. That was all factored in so it might be some years – two or three anyway beyond the 20 year timeframe before the policy in the case of particular buildings really had effect. That was all understood.

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MR PARKER:

If I might Your Honour just to have a quick comment again around the LTP in this issue of cost. Again this was aligning it with council's long term plan as well as recognising the time taken to do the study because one of the issues that council wanted to try to address was some additional funding for those who had these affected buildings and again the scale of the issue if one looked at the fact that there were in excess almost 8000 of these buildings

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identified we had estimated that a relatively shallow analysis but nonetheless indicative. The heritage buildings around 500 would be somewhere in the region of 200 million dollars. It's not hard to see that the overall total potentially facing our city would have been in excess of a billion dollars and indeed this is the very same problem that this day faces our whole country in terms of this risk.

EXAMINATION CONTINUES: MR MILLS

All I wanted to do was really just to close off the record on what happened here by giving the reference to the formal adoption of the policy we've been talking about which is document 0008.1 which is the extraordinary meeting of Friday 10th of September and .13 under that enumeration Your Honour will see the reference to category B buildings. It does what we've just been talking about. It says that they must be strengthened within 20 years from the date the owner is notified that their building is potentially earthquake prone so I just wanted to put that on the record so we could actually see that.

COMMISSION ADJOURNS: 1.03 PM

COMMISSION RESUMES: 1.46 PM

EXAMINATION CONTINUES: MR MILLS

Q. Just a couple more points to wrap this up first really to just make sure that I've captured the essence of what I think I've been hearing and that
5 is that between 1968 and 2010 there were no active steps of any significance taken by the council to deal with URM buildings that's a fair proposition is it?

A. I think perhaps Mr Mills that's a bit broadly stated and what I'll get Mr McCarthy to do now since over the lunch break we've come across a
10 map that we're happy to table here today which I think just gives some idea of there was some earthquake strengthening work. Now I can't tell you from the map if it was all URM buildings or even any but I expect they would be in the mix somewhere so perhaps if we can see if we can explain from that.

15

STEVE MCCARTHY:

A. With regards to this map that I'm presenting to the Commission what we've got is a list of 349 buildings that have undergone a degree of earthquake strengthening. That represents 264 properties in the central
20 area and those are designated with a red dot and the properties with a pink, with a pink designation so there was through the seventies, eighties and nineties a degree of earthquake strengthening underway.

EXAMINATION CONTINUES: MR MILLS:

Q. I take it you don't have more precise dates.

25 A. Not at this stage. I think certainly if the Commission was interested we could look at providing those dates for that work.

MR MILLS:

I think it would be of some interest wouldn't it?

30

JUSTICE COOPER:

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Yes.

EXAMINATION CONTINUES: MR MILLS

Q. And I take it also that when you use that term degree of strengthening you don't know with anymore detail than that what was found.

5 A. That could range and if I made the comment around URM buildings we'd need to find out exactly which are URM buildings. There may have been parapets in there just the parapet not the rest of the building and there may be partial strengthening up to full strengthening again whatever may mean.

10 Q. Well I think it would be of interest to know what you did and what powers you thought you were, the council thought it was doing them under and what it was done to what standard.

A. I think and please correct me if I'm wrong my understanding would be that over all of those years the topic of earthquake strengthening would
15 have been, come up in and I used the phrase before lunch around influencing and cajoling and again it was where applications would come in you would have a conversation between a building consent officer and the applicant and again trying to cajole influence them to get the building particularly above the 33% mark. That happens quite often
20 because we don't have any legal power in our view to be able to get better than that and again I would expect that probably that would not be uncommon for most councils if not all of them in New Zealand in terms of, in this situation.

Q. And because one of the reasons that the date is of interest is because
25 33% of what becomes the relevant question.

A. Agree and I think you heard this morning from the gentleman from Gisborne that one of the real issues that councils are facing is this where the bar keeps getting raised and of course people legitimately strengthen in 1970 for example X and then they're being told 10 years
30 later strengthen to Y and then 30 years to Z and I think from the community's point of view I can see the day coming where building owners are saying well when is this going to stop. When are we finally

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going to get to the stage where we can spend the money and be sure that for a lifetime say 50 years I will not have to be faced with this additional spending again and that may never be the case.

- 5 Q. Do you think that the data the council have on this 264 CBD buildings will distinguish between those where it was being done as a result of council policy and requirements and those where somebody just simply decided for themselves that they wanted to strengthen.

STEVE MCCARTHY:

- 10 A. Perhaps I can answer that. The situation was through the seventies that the building department was identifying buildings that were most at risk and that occurred. That carried on through the eighties as well. They wrote to the building owners and explained to them that they may not meet the standards from the Municipal Corporations Act at that time and
15 they encouraged the building owners to contact the building department and talk about what strengthening methods were most applicable so, and a lot of the focus at that time was on the moving and strengthening parapets.

20 **MR MILLS:**

- Q. And there will be record within the council's files I take it.

STEVE MCCARTHY:

- A. Correct.

25 **EXAMINATION CONTINUES: MR MILLS**

- Q. Two other questions first is the really picking up what you heard from Mr Taylor, the CEO or the Chief Executive of Napier City Council about the surprise it was to him to learn about the progression in the resilience of buildings if you move from one third to 100 of new building standards
30 and also his I think acknowledged confusion about return periods for earthquakes and what they mean and you will recall his comments that if he didn't understand it how could the community understand it. I'm

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interested to know whether when the council has engaged with the community as opposed to building owners when they've engaged with the community on the choices that have been made here about how safe to make buildings whether the council did engage in a way that would have enabled an understanding that Mr Taylor at least didn't feel he had.

5

A. When you're referring to the community if you're talking to the person in the street I would share Mr Taylor's view I don't think the person in the street does the expedient increases in the same way as well certainly pre-September 2010 most people in Christchurch did not know about the expedient increases with the earthquake measurements in the same way. I think that the advice given to council when they were dealing with the policies from memory I've seen reference there to the fact about the 20 times increase and that sort of thing so the hearings part in particular would have been a place of that but no I share the view around the average person in the street probably would not be understanding and I think at the end of the day a lot of times people they don't want to. They're not interested in that. They expect other people such as councils, engineering fraternities, a central Government department to think about that stuff for them.

10

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20

Q. Although it is a fact isn't it that with the URM buildings the principal people at risk of death and injury are the people in the strength.

A. Fully agree, fully agree.

Q. One final question this relates to that aspect of the current and I think also the 2006 policy that related to the post NZS 1976 buildings – you with me on that? The policy said that certain categories of buildings would not be included in the earthquake prone assessment process and one of those categories was buildings built post New Zealand standards 1976. Now there was a caveat on that as I read it which is unless there was a critical structural weakness in the building and what I'm interested to know and as you're aware the CTV building comes within this category, how the council intended to identify whether buildings did have a critical structural weakness.

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A. I would expect the council would again and I made the comment before lunch if there was advice that was brought to the council about concerns regarding the building.

Q. So it's reactive rather than proactive?

5 A. Yes because at the end of the day identifying structural concerns about a building and I'm not an engineer just to make that clear to the Commission as well again so I'm getting out the outer limits here of engineering knowledge but identifying structural issues around the buildings can be quite difficult and even for a competent engineer to
10 make a judgement on.

Q. So what I was interested in is whether council had a policy around how they were going to deal with this issue that identified and I think what you've said to me is it would be a matter of somebody coming to the council and raising the issue?

15 A. In the same way as for any other building not covered by the, like residential houses, where occasionally we get issues are brought to the council around concerns from people about some issue with a house. Now that's nothing to do with the earthquake prone building policy but again the council needs to be to be able to respond to that sort of issue
20 and it would do so.

STEVE MCCARTHY:

A. Sorry can I add to that. There is an assumption by the council that buildings built post 1976 met the new standards, were modern in
25 construction methodology and would meet the standards of the time and would exceed any earthquake prone trigger.

MR MILLS

Q. Yes no again I understand that. My interest is in a caveat that was in the policy about critical structural weaknesses and how was that going
30 to be dealt with and I'm being told reactive not proactive.

[Messrs McCarthy and Mitchell confirm].

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QUESTIONS FROM MR ZARIFEH: NIL

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CROSS-EXAMINATION: MR ELLIOTT TO MR MITCHELL

5 Q. Correct me if I'm wrong but the Mayor earlier described the 2006 earthquake-prone policy in hindsight as entirely inadequate.

A. Mmm.

10 Q. I'm just going to invite you to illustrate this inadequacy by reference to one particular building – I'm referring Your Honour to ENG CCC 0029 and I have copies of the document here. This is a document relating to 605 Colombo Street which was produced to the Royal Commission by the Christchurch City Council. It's a letter dated 20 October 2005 addressed to the owner of that building at that time. 605 Colombo Street was otherwise known as the Austral Building and the
15 Commission will hear evidence in a couple of weeks that that was the building that appears to have collapsed onto the bus killing eight people. The letter says that a building consent is currently being processed for an alteration at that address, "Council considers that due to its age and construction type the building is likely to be earthquake prone in terms of
20 the Act. Under this provision council may require the hazard to be removed by demolishing or strengthening the building. Council appreciates that the exercise of their powers under the section of the Act would have significant cost implications that you may not have anticipated." It is also noted that the proposed alteration to the building
25 would not significantly affect the structure of the building and that no change of use of the premises is proposed. "Council will therefore not require you to take action on this matter at this time. However, you're advised that any future building consent applications for the premises or any formal change to council's policy under the Act may initiate a
30 request for an engineering report on the structure. Subject to the report's findings a commitment by you as building owner to an acceptable programme of strengthening." So do you accept that, firstly,

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this letter which is dated 28 October 2005 and pre-dates the Christchurch City Council's 2006 policy appears to indicate that the passive policy in the 2006 version pre-dated 2006 and that such a policy was in place in 2005?

- 5 A. The, my initial reaction to that is the, the four, third paragraph in terms of the reference to alteration and no change of use is being proposed, I'm just, the thought in my head is that the writer was of a view that he could not require a change, sorry, an earthquake upgrade to it, which is still an issue I think which is still on the table today from that point of view.

10

MR MCCARTHY:

- A. Might I add that at the time, 2005, minor alterations inside a building still required a building consent. That's not the case now. In 2005 I can only imagine that these were so minor in the context of the whole building that it didn't trigger, it wasn't a structural upgrade, it didn't trigger a structural upgrade of the whole building so that is the decision that would have been made by the building engineer at the time. That's not to say that that, if there had been more extensive works that it might well have triggered a need to upgrade the whole building.

20

MR ELLIOTT TO MR MCCARTHY:

- Q. If the building after that process had been identified as earthquake prone that would have meant the council could have taken action couldn't it to require the strengthening of the building?
- 25 A. I, as I stated I can only assume that this is a minor alteration to the building that wasn't substantial enough to trigger that complete upgrade of the building.

MR ELLIOTT TO MR MITCHELL:

- 30 Q. But it doesn't need that to be the case does it for the earthquake-prone provisions of the Act to be triggered Mr Mitchell?
- A. No.

Q. Do you accept that the letter also illustrates that there was no need for any initial desktop assessment to identify this particular building as potentially earthquake prone –

A. Mmm.

5 Q. – because the council already knew in 2005 that it was potentially earthquake-prone?

A. Well it formed the view, well the officer formed the view at that date, yes, that it was likely to be earthquake prone, yeah.

10 Q. So there was no need to take four years and initial desktop evaluations of all files to know that that particular building was earthquake prone potentially and that would be an example of one of the inadequacies of the policy in 2006?

15 A. Well I think at the end of the day what it clearly shows is that the officer formed the view as at October 2005 the building was likely to be earthquake prone. The question was, why wasn't the next step taken, which is your point, around the trigger under s 124.

Q. And under the 2006 policy no further step would have been taken would it?

20 A. Under the policy no further step would have been taken in terms of that time, that's correct.

Q. And you gave evidence earlier on about the possibility of building owners being influenced or cajoled so as to voluntarily participate in some sort of upgrade but this letter doesn't demonstrate any evidence of that does it?

25 A. No it does not and when I, I use that phrase before, I use it in the context of, in the conversations or discussions with building owners at the counter sort of situation, it's not the sort of discussion that would normally be, necessarily end up on the record.

30 Q. But it doesn't appear from the face of it that that conversation took place here at all because the letter's being sent saying -

A. Agreed.

Q. – we appreciate costs may be an issue?

A. Agreed, I accept that.

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Q. And the letter demonstrates the council's position that it will not, it would not even engage with an owner about whether costs may have been an issue.

5 A. Yep because the last paragraph clearly says, "Council are not required to take action on this matter at this time." Yes.

Q. So do you accept that if the council's policy in 2006 was to actually use the Building Act to initiate action about earthquake-prone buildings owners such as these could have been required to strengthen those buildings well before the Canterbury earthquakes?

10 A. That's a possibility but given the, what Mr McCarthy referred to before around the timeframe going forward, even if the 2010 policy being in place in 2006 and the buildings, it's, it's a possibility. I'll accept that, yes.

15 Q. If for example a two year timeframe was required as we've seen another council do then –

A. In that case if that was the policy for a timeframe at the time that could have been done.

20 Q. The Commission has heard some evidence today about what the council did or did not know in 2006 and I'm going to refer you to another of the submissions that was made to the council as part of the consultation process in 2006, these submissions being on the council website. This is document ENG WAR 111.1, a letter from Sir Miles Warren dated the 22nd of February 2006 and the record reflects that Sir Miles Warren also made verbal submissions to the hearings panel which
25 was made up of city councillors. What Sir Miles Warren says, firstly on the first page of that letter, is that one of the broad categories of buildings in Christchurch is buildings built, .4, "Buildings built before the Napier earthquake mostly with walls of old masonry, brick and stone or unreinforced concrete with timber floors and roof framing. These are
30 the buildings that are the most vulnerable to collapse in small to moderate earthquakes. After the 1968 Building Act they should at least have been identified and given a time limit within which to be strengthened." And then over the page, at the top of the page, he says,

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within this fourth category, the one we've just mentioned, there is a building type that is inherently dangerous in an earthquake. These are the two or three-storey old brick shops with street show windows. I'm just going to read out what Sir Miles Warren had to say about those buildings. "The whole building falls killing or injuring the occupants, shoppers and staff, pedestrians in the street, wrecking the parked cars. If councillors want to see examples of these dangerous buildings walk to the nearby corner of Tuam Street and Manchester Street, across the road to east side imagine the two storey brick facade on the ground. Count the number of pedestrians and shoppers dead and injured and the number of smashed cars. Walk to the corner of Manchester and Lichfield Street, the next two buildings are equally dangerous. Similar shops on both sides of High Street, Colombo and Manchester Street south of Lichfield Street and Colombo Street, north of Kilmore Street are in the same category. Surely these most dangerous buildings should be identified and strengthened or demolished as soon as possible. If they are only required to be strengthened and if a building consent is required for a significant alteration, nothing will be done for 35 years. So it cannot be said that the Christchurch City Council was not aware in 2006 of the risk of collapse of buildings like these and their consequences can it?"

MR MITCHELL:

- A. No.
- 25 Q. Over the page Sir Miles Warren says, "I urge the council, I strongly recommend to the council that these dangerous buildings be identified, easily done. The buildings are glaringly obvious, the owners be advised, the owners be required to notify their tenants and a programme be developed for their collective earthquake strengthening." And then
- 30 down the bottom, "The 35 year programme for the worst D buildings is absurdly long. The council plays Russian Roulette with its citizens." Now the Mayor isn't with us any longer today but earlier on he described

the process of forming earthquake-prone policy as an academic exercise.

A. I think he made that comment in the sense of, and again the comment was made earlier this morning around the having to get people into the position where this is a real issue for them now, not something that's going to happen 100 years from now, so I think he made that comment in the context of Christchurch and low, or I think is it subsequently was medium seismic activity, and the risk in the city, clearly not an academic exercise today in Christchurch from that point of view.

10 Q. Well I'm asking a question about what the council knew back then and we've just heard what – one of the things the council knew back then.

A. Mmm.

15 Q. We also know that 41 people died and hundreds or even thousands were injured around town due to unreinforced masonry buildings, so my question is was Sir Miles Warren right in failing to address the immediate danger posed by unreinforced masonry buildings in its 2006 policy, did the Christchurch City Council play Russian Roulette with its citizens?

20 A. I – I – as an officer of the council I won't make comment on that phrase, I think at the end of the day the council, and you've shown here submissions from people who were putting a particular point of view to the council, there were also other submissions which put a opposite point of view in terms of whether they thought the policy was too long and at the end of the day the council as a governance body, after listening to all of those people, reached a decision, so I would, no, I'll decline the invitation to comment on that phrase thank you.

COMMISSIONER FENWICK TO MR MITCHELL:

30 Q. I would be interested knowing just how widely you, when you were setting up this policy, how widely you approached the public for their views, you certainly, if it stated you approached the owners of buildings, did you approach the clients in the buildings, did you approach anyone else or did you just leave it up to the people to approach you.

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A. Normally in terms of the special consultant procedure the council, there was a document prepared, a pamphlet prepared about what was the background of the policy, I think at that stage the council had a draft to go out and show to people, this is what we're looking at developing, the council puts adds in the paper which I think, not the public notices but clearly somewhere a bit more prominent and the council also has a council newsletter where all its special consultative procedures are highlighted there, and also to the effect that the copy of the documentation is available at council, libraries and service centres in Christchurch, so you're looking at something like 15 to 20 locations across the city including the peninsula, oh sorry not 2006, because it wasn't with us then, but that's the sort of – without going into specifics about this particular matter.

15 **MR MCCARTHY:**

A. Perhaps I can just add to that council's required to identify all affected parties and that included each of the property owners with potentially earthquake-prone buildings so six and a half thousand owners, the Historic Places Trust, engineering societies, major builders, fire service, there was individual letters sent to each of those identifying the fact that we were reviewing our policy, so that occurred in, prior to March 2010.

JUSTICE COOPER TO MR MCCARTHY:

Q. Mr McCarthy, would the notification have gone to occupants of buildings as well or perhaps occupants under leases for more than 12 months?

A. I don't believe we got to that point.

Q. If – I would be interested to know whether the council considered incentives, like financial incentives as part of its development of earthquake-prone buildings policies, and if so, what incentives did it consider?

A. The council, the short answer to that is yes, I think you heard the Mayor say that in terms of the 2010 policy, one of the linkages to the 2012 long

term council community plan which for the record has now been postponed 12 months in any event, for this council –

Q. Yes.

5 A. Was to look at the issue of funding for heritage buildings, the council has for a number of years provided funding for heritage buildings and two that stick in my mind are the two cathedrals. I think the council with the Catholic Cathedral three-quarters of a million dollars, the Anglican Cathedral round figures a million, Warners Hotel not far away in the square now demolished, again half a million dollars from that point of view, so there had been for some heritage buildings a significant amount of public money, going into specifically for earthquake strengthening purposes, and I think the council when developing the 10 2010 policy was anticipating an increased demand from building owners of – and they were only talking about heritage buildings, or assistance from the council. You've then got, obviously from in Christchurch and in terms of 7000 buildings many thousands no heritage listing, and how are they going to be funded and I think that's one of the – the Mayor made the comment before one of the realities of this and it comes through in terms of the, for example Mr Turner's peer review to 20 Mr Ingham's report, is the funding and the complexity around how you get the money, how you strengthen, and I think at the end of the day that's still going to be a massive challenge for this country going forward.

Q. Well in the Christchurch seating, was consideration given to rates relief?

25 A. To my knowledge not yet but that would be one of the issues I think, would be – which would have been in front of the council as part of the 2012, if you're talking about where is the money going to come from and grants, then rates relief tends to go alongside that from that point of view –

30 Q. Yes.

A. - but effectively it's the same money, the grants come out of rates. If you give the land owner rates relief then they can also get it through that channel, I think at the end of the day the council's preference is for

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grants because it's more transparent, you have a - they're a matter of public record about who is getting what, what rates relief can be not necessarily transparent. It depends on the process the particular council sets up. If it goes to a public meeting then the community can see who is getting money for what.

5

1416

Q. But you could make it transparent if you wanted to?

A. If you wanted to certainly you could do by council's decision.

Q. What about things such as bonuses for seismic strengthening in terms of development rights that might then accrue things like that or transferable development rights which we see in some district plans is there anything like that in Christchurch?

10

A. There are in terms of the city plans, the transparent development rights but not in the context of earthquake strengthening but again and that's why 2012 the three yearly cycle that councils go through you have your long term council community plans for your strategic objectives and your funding. You would typically have your development contributions policy. That's a three yearly policy so again if you like it's a package and I think that was behind the council's thinking in 2010.

15

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STEVE MCCARTHY:

A. Can I just in terms of total package one of the things that the council I think is considering or will consider is the concept of if an earthquake prone building is redeveloped into a residential apartment block for example in the central city that they would give some breaks in terms of the development contribution to policy so that has a twofold effect. One the building gets upgraded to 100% of the NBS and the second thing is that it encourages people into the centre of the city so it has a multi-benefit for the council.

25

30

JUSTICE COOPER:

Q. We haven't dwelt on this today but the submission Mr Mitchell in a number of respects has sought the ability to make submissions on these RCI - Canterbury Earthquakes - DAY 9 [14 November 2011]

matters at a later stage in our proceeding and I think reading between the lines you've been telling us that you're having to concentrate on other things at the moment. You will have understood I think from what we published and provided to interested parties that we've got a pretty tight schedule in terms of hearings so I'm obviously we would consider anything further that you wish to put before us that is relevant to the subject of earthquake prone building policies and seismic strengthening but I'm not sure that we will be able to hear you again on those subjects in a public hearing. Would you prefer to be heard again on these matters?

A. I don't think sir. Not necessarily at this stage to say be heard again. I think all we're trying to flag is that and as we said in submissions the councillors for the last month have been fully occupied around the central city plan which I think they've now got to be almost to the end of.

Q. Yes.

A. From a staff point of view there are a number of issues here and which are one for the elected members rather than staff and it's just an opportunity for us as staff to and in the one today for example about 67%, does the council as a Government body support that that's the sort of issue I wouldn't dare put forward as a staff submission at all. Very, very sensitive from that point of view and there are also a number of other things that I think are, other ideas or changes we would like to suggest – so what I suggest sir is that perhaps I have been thinking that at least just writing a submission and saying the council has met. These are the council's views on these topics.

Q. On these topics that you've identified as matters for later submissions.

A. Yes sir.

Q. Well would you like to name a date?

A. To the Commission by the 20th of February sir.

Q. 20th of February. All right well we look forward to that. We have our own deadline which I am sure you are conscious of and so if we could, we do want to hear the view of the Christchurch City Council on what standard buildings should be strengthened to in the future and over

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what period because although we're thinking of the rest of the country as well I think you'll agree it would be unfortunate if we had to report on the absence of opinion of Christchurch City Council on those important matters. So we look forward to receiving those further submissions by 20th of February.

5

A. Not later than.

Q. Not later than the 20th of February.

A. Hopefully earlier than that.

Q. All right well I can endorse that as well. Yes thank you both very much.

10

COMMISSION ADJOURNS: 2.23 PM

COMMISSION RESUMES: 2.27 PM**MR MILLS :**

We have an addition to the Wellington City Council line-up so just let me go
 5 through it again. On the left here we've got Mr John Scott who's the manager
 of the Building Consent and Licensing Services, then of course we have the
 Mayor and then on the right we have George Skimming who is the Director of
 Sector Projects at the Wellington City Council and to give that context I'm told
 10 formerly he held Mr Scott's role at the council so he brings, among other
 things, a lot of historical memory I think going back into that role.

CELIA WADE-BROWN (AFFIRMED)**JOHN SCOTT (AFFIRMED)****GEORGE SKIMMING (AFFIRMED)**

15

**JUSTICE COOPER ADDRESSES WELLINGTON MAYOR – TITLE
 AGREED ON OF MAYOR WADE-BROWN**

**JUSTICE COOPER WELCOMES PANEL AND INTRODUCES
 20 COMMISSION**

MAYOR WADE-BROWN GREETES COMMISSION IN TE REO**MAYOR WADE-BROWN:**

25 Good afternoon Commissioners and attendees, my name's Mayor
 Wade-Brown and I was elected as Mayor only in 2010 but I've been on the
 council in the '90s for four and a half years and then for the previous nine
 years as a councillor and I've also got staff with me who have got more
 detailed building knowledge and institutional memory and Mr Skimming is in
 30 his 38th year. First of all I'd like to say that we thank you for the opportunity to
 present. We will be speaking to the submission rather than reading it aloud
 but first of all we bring the sympathies and support of the capital to
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Christchurch and to Canterbury and note what an extremely unfortunate event it was and coming down both to the memorial service and then I was privileged to have a red zone tour and again seeing the pictures here make us all think very seriously about the role, important role we have. What

5 happened in Christchurch which has transformed Christchurch has given the rest of New Zealand a real wake-up call regarding earthquake preparedness and I'd like to acknowledge the suffering and the continuing uncertainty for people in Christchurch. We've already been able to learn a huge amount both

10 about how buildings performed but also about how volunteers and organisation happened in the wake of such an event and I'm sure we will learn more from your findings. However, we've been living in Wellington with the knowledge of being the most seismically active area for a long time and we have a number of fault lines running through the city. Now your focus at the moment is on the earthquake-prone buildings but of course we have a very

15 wide range of responsibilities in reduction of risk, readiness, response and recovery and I decided to take the emergency management portfolio on as part of my mayoral duties given that I would have significant responsibilities in that sort of event anyway. We have been proactively addressing earthquake-prone buildings since the 1970s and started doing some assessments in 1972

20 and of course part of our recent work has been transferring some of those paper records onto computer records. In the '90s we adopted a building safety policy and under that policy between six and 700 buildings were strengthened to two-thirds, 67% of the 1965 code for new buildings or to 100% of the 1965 code for heritage buildings or they were demolished and

25 many of those were of unreinforced masonry construction. We estimate that between 150 to 200 of those buildings now have to be strengthened again as 100% of the 1965 code is roughly 25 to 35% of the current building code. Some buildings were completely removed during the 1970s to 1990s due to council's continuing pro-active approach and at the end I will table some

30 photographs which show some of the changes. In 2006 council introduced a new earthquake-prone building policy, began the modern IEP assessment process and we revised that policy in 2009 after the Gisborne earthquakes and, again, we have always tried to balance the risks to public safety against

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the ability of building owners to pay for the costs of strengthening. In 2009 we introduced the ability for building owners to carry out staged or targeted strengthening and also if they've got a wide portfolio of buildings to actually bring some fully up to code earlier and delay others as long as the overall strengthening of the portfolio was not compromised by that. We've always taken an active approach to our assessment and we haven't been waiting passively for consents to come in for building strengthening. I've got a little bit of an update from our submission here where we said how many buildings, about 4400 buildings need assessment and we've now got up to, just over 3000 buildings have been assessed, 3062 and of those buildings 205 are earthquake prone definitely, 684 are potentially earthquake prone and 2173 are deemed unlikely to be earthquake prone.

JUSTICE COOPER:

- 15 Q. What's the set of buildings that those figures relate to, are you talking about all buildings in your central area or all buildings of a particular type or?
- A. We're talking about buildings that were built before, generally before 1976 and excluding single dwelling residential.
- 20 Q. Right.
- A. Was there anything I need to add?
- Q. No. Thank you.

MAYOR WADE-BROWN CONTINUES:

- 25 And we're also taking the strengthening of our own buildings very seriously and have assessed our major buildings and strengthening has happened to some of them already or is in the process of being planned.

JUSTICE COOPER:

- 30 Q. By our buildings you mean buildings owned by the city council?
- A. That's right and we've got two main areas of those. One would be our social housing buildings and I've got some details of which ones have and haven't been strengthened.

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Q. These are rental properties that the council makes available?

A. Yes, that's right because we're the second biggest, a lot of people don't realise that Wellington City Council is the second biggest social landlord in the country after Housing New Zealand so places like the Newtown Park Flats, the Hanson Street Court buildings and in fact we have taken steps to demolish one of the Newtown Park flat complex buildings. So at the same time we're insulating, improving safety and access but one of the big drivers has been to do the earthquake strengthening. I think we've got about five years more to go before they will all be strengthened but we're about, just under half-way through –

[Confirmed by Panel]

MAYOR WADE-BROWN CONTINUES:

We've also got the civic buildings and the town hall for example which was strengthened in the '90s but now needs more strengthening.

JUSTICE COOPER:

Q. This is a new one or the old one?

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A. No the Michael Fowler Centre's fine. We actually only have one town hall but it always gets called the old town hall, yes.

MAYOR WADE-BROWN CONTINUES:

We've also, again and I've got a picture towards the end, done some strengthening of buildings that we own in the, what you'd generally call the entertainment sector, the Embassy Theatre, the St James, things that are both heritage and related to our strategic direction for the city and they're therefore doubly important, and they're in areas that are busy public areas and the City Art Gallery when we did an extension and put in an auditorium, that was also fully strengthened to full code then. So we've also, because of our seismicity, we've also got every business unit has a business continuity plan and one of the issues about of course the Town Hall is that we have to work out where we're going to have our council meetings while that

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strengthening is done and there's some opportunities to take those out to the community. We also have office buildings for staff that need strengthening and the process for which staff go where is quite a complex piece of project management that has been begun though. We're also pleased to say that

5 when, by no means the only major property owner being pro-active. Victoria University's strengthening a number of their buildings and they've got 100 or so buildings that have been looked at already and the building in the Kirkcaldies and Stains building, their tenants have demanded that it be strengthened to 100% of code and that's exactly what they're doing. Just in

10 July this year we're having a review, I've done a scoping study of that review of our building, of our earthquake-prone policy and we had a number of focus groups including property owners, financial institutions, construction sector, architects and engineers, heritage and users and residential, so it might be tenants and it might be residential, because we do have a large number, I

15 mean compared to most New Zealand towns and cities, we do have a large number of people actually living in multi-storey apartment buildings which when they're unit titled, to have some difficulties in getting the body corporate to get those things organised. So we have been working for a considerable time and I just want to make some further points about city resilience, cost

20 versus benefits, some clarity about definitions that we would like and the role of councils. We're putting a lot of emphasis on city resilience and believe that we can't wait until an earthquake happens and then pick up the pieces, we want to carry out preventative, or we want to encourage building owners to carry out preventative work now to save lives, but also to save costs in the

25 long term and I think there were footnotes in our submission that note the research that shows that a relatively small amount of cost spent up front can save billions later. However there real affordability issues involved here and there's a disparity between who pays the costs and who receives the benefits, so prior to an event, and who knows when one might be, the building owner is

30 the one that pays for the strengthening, but after an event it's the community and the country that pays, as well as the loss to the building owner. So we're very keen to see that the Government facilitates and encourages the preventative work. It could be either through incentives like the eco-system

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for insulation and heating or it could be through tax deductibility by widening the definition of repairs and maintenance. At the moment that's operational expenditure only, maybe there should be some consideration of capax in return, and repairs and maintenance that was involved in, sorry in the strengthening. We also would like to see yourselves consider under what circumstances there should be public contributions because obviously we can't keep every single building there is in the country exactly preserved in aspect, now, and the heritage preservation for the public good is important for a couple of reasons, one for the individual histories of the building, but also for the sense of place. For example in Wellington we have a number of category one buildings, for example the Town Hall or Plimmer House, but we have also just put in half a dozen different heritage areas saying that that is a really important feel to the city, now some of those are in residential areas but then we have areas like Cuba Street which is iconic for our capital city. With moving just to the clarity over thresholds and definitions, we believe there is some confusion between different council's advice as to whether the threshold of 33% is just a threshold where you can ask for anything to happen, or whether it's a maximum level that can be enforced. We are – we think there are good reasons to make it higher than 33% but our legal opinion I believe is a 33% maximum we can require, whereas the engineering sector recommends that we raise the threshold and the enforcement level to 67%.

JUSTICE COOPER:

Q. Does that – you say in your submission and I infer from what you've just said that Wellington city – well let me start again, in your submission you note that the council notes that engineers would prefer to see 67%. Does the council, Wellington city have a policy on that, I mean is that what the council would like to see happen?

A. Well in our seismic, we believe that increasing the threshold although it imposes higher costs, we do feel positive that the cost benefit is well worth increasing it, because I also think there's a lack of clarity in the public, that it sounds like 33% is only half as strong as 67% whereas it's much less strong, in fact I might just pass to John for that, Mr Scott.

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MR SCOTT:

A. In our earthquake-prone policy we do say the limit, the threshold is 33, but we actually actively encourage strengthening to 67% and beyond.

5 Q. Yes.

A. So in that way you would say the council does support the 67% threshold.

JUSTICE COOPER TO MAYOR WADE-BROWN:

10 Q. Yes. Well what I suppose, just suppose for the sake of argument that, or for the sake of this question, that the Royal Commission were to recommend that the Government changed the law to make upgrading seismic strengthening of buildings mandatory, and that 67% should be the minimum standard achieved, should we take it from your
15 submissions that Wellington city would endorse such an approach.

A. I think it would be an approach that would be made much more helpful if there were some financial support to the building owners to be able to enable them to do that but in general we would prefer buildings to be stronger rather than – we think that 33% is not really sufficient but we
20 don't feel that we can enforce the 67% given the current law.

Q. Yes, I understand that, that the – it's, you've perceived there's a limitation on your powers but as a policy point of view I'm just wondering what your – what the position of the City Council is and as I now understand what you're telling me it is that a 67% of new building
25 standard would be appropriate provided means were found whereby those who might have to shoulder the cost were assisted in meeting that cost. Is that your position?

A. Yes and we believe that over time that would be the more cost effective approach as well as long as you look at the costs incurred in times of
30 human life and suffering as well as the economic costs of not being able to do business in the city.

Q. Yes, well there are economic consequences of not being able to business in the city.

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Q. Yes well there are economic consequences of maintaining the status quo but let me just ask you another question which is if the policy position that the Government adopted were that there should be, there couldn't be any further money provided to private owners or building owners to seismically strengthen their buildings would you say well that would be regrettable but that nevertheless the rule should be that if 60% standard should be achieved would you perhaps reluctantly but would you accept that that is something that should occur?

5

10 A. I think we would accept that as a response if that was –

Q. The best you could do?

A. Yes. I think that's also, I mean it would be a significant cost. We would again ask that the Government looked at priority areas. I mean there are some buildings that that may not be economically sensible to work on and it may be that there may be able to be made exceptions particularly if something is a building where there are very few people using it. We've already got a range of time scales depending on whether a building is necessary after an earthquake and whether the public use it whether it's a school and so forth so there maybe some way that you could look at different categories.

15

20

MR SCOTT:

A. Some feedback that we've got back from our focus groups is that building owners aren't looking for a dollar for dollar payment of the strengthening. They're really looking for incentives so some of the words they used to us was even something small would just demonstrate the council is supporting us in this regard so I think the same sort of approach from Government and that's why we're recommending maybe productability because then the Government is not paying 100% of the strengthening costs but it's making some contribution recognising that the long term benefits from that investment do accrue to the whole community.

25

30

JUSTICE COOPER TO MAYOR WADE-BROWN

Q. And do you have things like development bonuses, heritage protection in your district plan?

5 A. What we have is at the moment the 129,000 in heritage grants per annum and that's been focused at the moment very much on earthquake assessments and you know more detailed engineering assessment. We don't have rates reductions for heritage buildings.

Q. Or development bonuses? No development bonuses? Transferrable development rights anything like that?

10 A. Well really under the RMA we think it's questionable whether you can have transferable development rights because if you were going to do something that was not going to have unpleasant effect somewhere else then you'd have been able to do it anyway so it's not like the Town and Country Planning Act. Well that's my understanding.

15 Q. No planners on the panel.

A. We also wanted to look at now the residential sector which is the single and the two household units while we don't think that it should be mandatory to have strengthening we did think there needed to be an ability for us to be able to focus on some particular elements so
20 unreinforced masonry chimneys, concrete tile roofs, substandard foundations and there's been one report that looks at if there was a major earthquake in Wellington the total cost of failures and that's the cost being dwelling, contents and indirect costs if it was just from the substandard foundations with over five billion were it would only cost
25 291 million for remedying those foundations so again seeing it as some way that we can take preventative action and –

Q. Is that a report that you recently received is it?

MR SCOTT:

30 A. That's a report from Professor Andy Buchanan and the title of the report was Time right for Innovative Engineers and that was published in The Press on the 14th of July, 2011. It was an article.

MAYOR WADE-BROWN

And that same study estimated that if the foundations were remedied deaths in private dwellings would fall from a projected 120 in a major earthquake to 24. Now that's the outlying suburbs not the inner city and we're just working

5 on a plan for communicating the non-legislative side of things, working to encourage home owners to fix their foundations. I mean most people never look at their foundations. They might when they buy the building but they might not so and the number of people needing emergency accommodation would fall from almost 43,000 to about 16,000 so again the cost, stress,

10 disruptions would be a lot less so there are also, we would like to be able to enforce remediation of some high risk components even if the building is a whole is not earthquake risk and this is again whether it's private residential or a commercial building. If most of the buildings fine but it's got a chimney or masonry additions then we think we should be able to take action there to

15 require an enforce action particularly ones that overhang or rest on public space so again you've got the veranda issue. Are verandas, are they actually going to prevent things landing on you or are they more of a problem than not. We firmly think that territorial local councils should continue to be the principal bodies responsible for ensuring that the earthquake performance of the

20 existing building stock is improved but we need central Government legislation to give us that ability and we do think that there needs to be locally appropriate responses recognising local conditions which might be ground conditions, seismicity and also community priorities to some extent and we do feel that building owners should be required to provide publicly available

25 information on what the assessed earthquake performance is of individual buildings and whether or not they're earthquake prone buildings. We think that that would be an additional way of helping the market put pressure on. We already display the, if it's an earthquake prone building we require that that is displayed in that, somewhere that is visible when people walk in

30 although of course only recently have people started looking for those.

JUSTICE COOPER:

Q. What does the notice say do you know, can you recall?
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A. No but I'm sure Mr Scott will. I mean I've walked past it as I go into the town hall every day and think yes, yes we will be moving out of here.

Q. Because I suppose that is one of the issues with that notice is whether or not people do just take it for granted.

5 A. Well I don't think they do take it for granted altogether. Also we put all of the buildings deemed to be earthquake prone we've got a list on the website and I can leave a copy of that.

Q. I think we've got it actually.

A. Good.

10 Q. I think we've printed it off.

A. And with those columns about 60 of the heritage whether the district considers to be heritage and –

Q. Yes Historic Places Trust category and Wellington City Council heritage.

A. And that's always been available on request but we made sure that it actually went up on the website as well and found that people were very interested.

Q. Have you checked the number of hits?

A. It provides a tool to push their landlords but we have also gone to the stage of putting the red notice up that actually says the building can't be used in a few instances. One building in the suburb I lived in has subsequently been demolished. It wasn't a heritage building and a new building's been put up there and there was some others in the central city.

25 **MR SCOTT:**

A. We currently have seven buildings with final red notices on which say they can't be used and there are a few others that are coming up literally in the next month or two.

1457

30 Q. Now are those buildings which you've required to be upgraded and they haven't been upgraded. Is that correct?

A. Correct.

MAYOR WADE-BROWN:

A. That's right.

JUSTICE COOPER TO MAYOR WADE-BROWN:

5 Q. This list of earthquake-prone buildings is that kept up to date on a rolling basis, each month?

MR SCOTT:

A. Each month.

10

MAYOR WADE-BROWN:

A. It's updated every month but we do advise at the top of it that there may have been an updated since, you know, somebody's looking at a particular building they should actually enquire from council about that particular building to see if it has been changed.

15

JUSTICE COOPER TO MAYOR WADE-BROWN:

Q. It says here in, the status of buildings, this can change on a day-to-day basis and the information was current on the date the list was published and then at the top of the page in large figures it tells me that the list is as at the 2nd of November 2011. So how long have you been publishing this?

20

A. We brought that, it's been available if anyone wanted to find out about a particular building –

25

Q. Yes, I understand that.

A. That went up fairly soon after, and I was just trying to remember on the way down on the plane whether it was after the first Canterbury earthquake or the second one but there was a lot of demand – it was the second – and I was pushing for it to be up as soon as possible but we just had to make sure that it was accurate and that we did have those provisos at the beginning because if somebody's just finished their strengthening work it probably won't say so until it's been inspected for example.

30

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Q. And this list has been compiled as a result of the study that you told us about at the outset has it and then as more information comes to hand you add it?

A. That's right.

5

MR SCOTT:

A. The 207 or so on that list are the ones that have gone through the IEP process –

10 **JUSTICE COOPER:**

Yes.

MR SCOTT:

A. We've provided that, results of that IEP through to the building owner to confirm and if they disagree they often take out a more detailed assessment and after that process their engineers, our engineers agree and at that point they then go on the list. So if they're deemed potentially earthquake-prone we don't put them on the list in case they end up not being earthquake-prone but that's gone right through our full IEP assessment process.

15

20

JUSTICE COOPER TO MAYOR WADE-BROWN:

Q. Yes.

A. So that was the publicly available information. We thoroughly agree that councils need to have a policy on earthquake-prone buildings but we would welcome more guidance as to the appropriate minimum requirements. All policies should actively identify earthquake-prone buildings, publish the information and require remedial action to be taken although the timeframes and priorities may differ from place to place and we don't think that passive policies are appropriate. We also note that strengthening work could be, that's triggered by the threshold of the buildings standards would also trigger the requirements for the upgrade of fire protection and access for people with disabilities. While

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we strongly support both of those objectives we're not sure whether, maybe it could take a staged process so that people don't get all the layers of additional costs at one time so, again that may be a case by case matter and we are also, on the changes of design standards, we're

5 very interested in looking at damage resistant design so that buildings are designed both to protect human life and be functional. We note that there were a number of buildings in Christchurch which did the job of protecting their inhabitants perfectly well but now need to be demolished and that that is a huge cost to the community that if the standards had

10 been different it might have been different. We've just built a very large indoor stadium down in Kilbirnie which is an area that has some issues about the soil but because the building was absolutely designed for that we feel confident that in an earthquake it will stand up well.

Q. Is that the one you pass on the way to the airport?

15 A. That's right, fondly called the limpet by some.

Q. I see, right.

A. We also, so we've got the list of earthquake buildings, may I table – if you'd be kind enough to take them up, those photographs, there we are. We can provide these on-line but we don't have them at the moment

20 on-line.

Q. You're just giving us one set I think, aren't you.

A. Yeah that's one set.

Q. One each.

A. Sorry.

25 Q. That's all right.

A. We can provide a second one for the moment and we can leave you with a third one.

Q. Okay.

A. We've all filed them slightly differently. So if I can just speak to them

30 and then I can pass – the first picture shows the buildings on the Te Aro area which is largely reclamation about the early 1940s and if you look at the inlet to the extreme left that's around about where Te Papa is built – water in those days.

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Q. Yes.

A. And then if you now look at the second picture there's been a huge change in the buildings. Many of the Lambton Quay old ones which were unreinforced masonry have been removed and there are many modern high-rise buildings which should be to sufficient code. We're not saying anything about their architectural merit though and the building that's sticking out on the wharf, they're the overseas passenger terminal. There's been resource consent for that to be turned into apartments though still with public access on the pier and, again, the ground conditions, the wharf piles and so on, have all taken into account the seismic risk in Wellington.

Q. How old's the wharf there?

A. How?

Q. Old?

A. I think it was built in the '60s or something. It was just about the last gasp of people coming by liner rather than by plane and it's now, it's not deep enough for the modern cruise ships. Then we've got an old picture of the Wellington Town Hall and it's got the portico and the clock tower and those were removed after the Wairarapa earthquake in I think the late '30s.

Q. When was the town hall built?

A. 1906-ish. Around about then. That's the general era. I might have it sort of five years wrong one way or the other and apparently it took rather a lot to demolish the clock tower in the end. So, you know, work's been done even going back that far as to make it safer. Then the following page is taken, you can pretty much line up the same, the building there and that was actually strengthened when the civic – it was strengthened in the 1980s to two-thirds of what was then chapter 8 but we now need to redo it because of the changes and we're going to have to be very careful about how we do it, partly because it's category 1 Historic Places, partly because it's one of the top 10 acoustic venues in the world for recordings as well for concerts so you don't want to be putting in beams that are going to make the sound waves bounce

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differently so we're looking at, that's likely to be base isolation. That was in the long term plans, some money was set aside but we're bringing that forward earlier and again that's an example of wanting to lead by example. We can't push other building owners if we're not

5 doing that job ourselves. And the final pair, the final pair, there's another one after that, is in Courtenay Place and many of those buildings are unreinforced masonry and the second picture shows how I can point to some that have been really, the facades have been, well the whole buildings have been done and again let's not talk about the

10 aesthetics of that pink building on the left but that, the façade has been strengthened and tied back and then there's a modern apartment building behind it. The Reading Cinemas is a new building. The Embassy at the end, this is the Lord of the Rings Premier, the Embassy at the end has been strengthened. St James on the right has been

15 strengthened. The Embassy, we started in the year 2000 and I think it's been completely finished now and the two little cinemas below are about to be opened. So it's, fortunately we're not starting from scratch but there is still a way to do and those buildings have all been, sorry the Embassy and the St James and our Civic Buildings have been at cost to

20 the ratepayer, whereas the Reading, new building and the façade of that unfortunately pink building have been done by the building owners and then we finish with Te Papa, which many people with have seen the base isolators, you can actually go in and see how it all works, just the same as at parliament and some people who live in Wellington nearby

25 will remember that ongoing cone consolidation otherwise known as 'the thumping' going on for a considerable time to create good foundations for that. So it can be done and we've just also, we have been carrying out as many other civil defence areas have been exercises over the years but, until recently, they didn't involve, for example, the elected

30 members. So last Thursday we stopped our committee meeting for the Pacific wave where we had the warning of a distant earthquake and tsunami and talked about what we do and who would take what responsibility and so forth so we're not saying oh it happened in

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Christchurch it probably won't happen here for hundreds of years. We're saying let's use that awareness both of elected members, officials and, of course, the wider public to make our city safer. Thank you very much and we're happy to answer questions.

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QUESTIONS FROM COMMISSIONER CARTER – NIL

COMMISSIONER FENWICK:

10 Q. Well I have had seven questions and you've managed to answer all of them on the way through but just one point in Christchurch, of course, we get very infrequent earthquakes and they're of a magnitude unexpected and we've found that there was a lot of damage due to slips forming on the hills or cracks opening up and movement. Do you have a sort of similar problem in Wellington, it's sort of a steeper terrain but
15 perhaps previous earthquakes have already taken it out for you, I don't know?

A. Well we've certainly, I haven't really covered the infrastructure side of things but we've got quite a big programme for making sure that seawalls, retaining walls are strengthened. We are just going to
20 incredibly annoy the people of Karori by shutting the tunnel for some while while the portal is strengthened there. I think that's shut for 11 weeks or something like that and we've also been working with utility providers as well as our own infrastructure to strengthen the lifelines of gas, water, electricity and, of course, the modern necessity – fibre optics
25 - and we've worked, and again I can table, we did a report in June that looks at those wider issues of resilience and it's a pretty honest assessment of where we're at in terms of, for example, water. We have got seismic shut-off valves for, I think, pretty much all of our reservoirs now but not all of the reservoirs are at modern code that would
30 necessarily retain the water in the first place. We're just working through a big new reservoir near the hospital so that they've got more than a week's water. We're fortunate that the new hospital is a recent build. We're also encouraging community preparedness and people to

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get to know their neighbours because those are the people that are going to help, as we saw here, in the first instance but also to find out who's got a garden water tank, who's got what equipment, who are the people that are frailer in your street that will need a bit of extra help and also something that's closely related to earthquake, the tsunami for us, we have a number of different initiatives including, some people may have seen the blue lines painted at basically 35 metres up from the coast or a little lower if it's further inland, and that's encouraged people to make their plans for what happens if. So we've got a lot of background to those other areas that you may not be looking at at the moment but we'd be happy to share.

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Q. Thank you we could have done with that in Christchurch couldn't we?

A. Well, and I think the thing that we're facing in Wellington is that when you say the word 'emergency' everyone immediately thinks earthquake but there could be other things, whether it's fires or whether it's tsunami or a whole range of things and we're working quite closely with other councils in the area. We've got a regional civil defence approach and oh I've got the information about the, yes, the housing complexes and so on is all in here but we're also not just worrying about what we're statutorily liable for we're also looking at business continuity and talking to other businesses about whether we could have a joint approach in some cases because one of the really important things was having the records available and we're looking at the use of technology that would also show for a particular building you'd be able to identify what it was made of, who the contacts were, those sorts of things, it could be really really useful in an emergency.

JUSTICE COOPER:

Q. That document that you have in front of you is that the report you referred to?

A. Civil Defence Preparedness that went to our committee on the 23rd of June 2011 and it's on our website again available but I'm happy to table

Q. Well if it's on your website we can get it. Just give us the precise title.

A. It's called, it's 'Civil Defence Preparedness' and you find it under the Strategy and Policy Committee Agenda, 23rd of June 2011.

5 Q. Thank you very much. Well thank you, all of you, for your presentation to us and for giving us a most interesting submission which we have all found to be greatly of assistance to us already and I do appreciate the time and trouble that you have taken over this and thank you all for coming to Christchurch today. It shows the importance of these issues for your own community as well as the rest of the country.

10 A. Well thank you very much Your Honour and what Wellington City Council can do to help at a national scale we certainly will.

Q. Thank you very much.

COMMISSION ADJOURNS: 3.15 PM

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COMMISSION RESUMES: 3.20 PM

MR MILLS ADDRESSES JUSTICE COOPER – BRIEF DISCUSSION

20 **MR MILLS CALLS**

BOB DELEUR (AFFIRMED)

JUSTICE COOPER ADDRESSES AUCKLAND PANEL TO INTRODUCE COMMISSION

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MR DELEUR:

30 Well firstly I'd like to introduce two panel members with me. On my left is Marion Irwin, or Dr Marion Irwin who works in our civil defence team and is also very much involved in soils and hazards information across the Auckland region currently. On my right is Patrick Cumminskey and Patrick reports to me and is very much involved in the earthquake-prone building policy RCI - Canterbury Earthquakes - DAY 9 [14 November 2011]

development and implementation of in the Auckland council area. So, firstly, we work for the Auckland Council, not Auckland City.

JUSTICE COOPER TO MR DELEUR:

5 Q. Yes. No I picked Mr Mills up on that earlier in the day.

A. Firstly, look thank you very much to the Royal Commission for actually inviting. Our submission indicated that in fact we were content to let the Royal Commission read our submission –

Q. Yes.

10 A. – but we do thank you very much for the opportunity to appear here today and speak to you collectively.

Q. Thank you.

A. The format of our submission will be partly reading to a submission that we've made and also giving you some context about what we're currently doing in the Auckland Council area region in terms of our earthquake-prone building policy and I make mention of that Commissioners because effectively we are in the infancy of actually implementing this policy. One has to remember that it was previously prior to November 1 last year seven Auckland council areas so we had the North Shore, Waitakere, Manukau, Papakura, Franklin and the Auckland City Council all working across the region. We are now – and Rodney – we are now one council. So effectively we have inherited seven different policies from across the region, we have combined them into one policy to date and we started that work proactively in about November of last year. So our first step was to amalgamate the policies, the read true to policies, bring out the commonalities in those policies and then produce a proposed draft Auckland Council policy which is currently going through its consultation phase. We've arrived at the other end of the consultation phase and are now in the process of actually implementing that. As part of that, as well, what we have done is that we have implemented an IEP assessment programme of works. So part of our initial work for the Auckland Council was assessing the number of buildings that we actually had right across the Auckland

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region and then implementing an assessment, an IEP recording of those buildings. We've assessed to date some 1200 buildings, we've covered all of our importance level 5s, 4s, 3s and 2s with particular focus on 2s in the central business district area where the highest risk for the Auckland Council would be in terms of the number of people that would aggregate in that area during the day and at night. We've been, we've been with keen interest following the recommendations coming out of the Royal Commission to date and have been proactively engaging with people like Jason Ingham from Auckland University and others and basically trying to glean as much information as we possibly can. Of course for us this phase is a particularly important phase so comments, for instance, about the percentage of upgrade requirements for buildings which are currently under s 115 of the Building Code or Building Act are of particular interest to us. We certainly consider that raising it from 33% to more than that needs to be based on very solid foundation. It needs to be based on research so information that for instance that we have for the Auckland region via GNS is that the area is one of low seismicity. It is more likely to be subject to a volcanic eruption or a tsunami rather than an earthquake. So you can appreciate that our policy needs to consider that in fact research is the underlying tone that needs to happen for us to be sure of where we move to in the future with our community and the cost of upgrading buildings beyond that specific 33%. What we've also gleaned from the information that's come to date is that 33%, certainly, in the words of Jason Ingham, is that one might as well not upgrade the building to 33% because effectively in doing so you are not accomplishing a lot when a reasonable earthquake occurs. Again, we've been conscious of that. We've got a rolling programme of work in the Auckland Council area over the next four years to basically assess all our importance level 2 buildings and the importance level 2 buildings were typically the types of buildings that we saw collapse in the Christchurch region. Typically those two-storied unreinforced masonry buildings. In looking at the outcomes or the recommendations of some of the Royal Commission to

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date I note that parapets, verandas, foundations and chimneys have certainly been highlighted as areas where in fact we need to pay attention at the present time. We certainly consider that there are great opportunities to actually forestall some or the risks, particularly in terms of residential dwellings which are not covered by the earthquake prone building policy but in fact we note from Christchurch that some 4000 chimneys collapsed in the Christchurch area after the first shake. It is therefore I believe there is some or we believe that there in fact there is some opportunity there in terms of addressing those particular issues for residential home dwellers or home owners in a fact if a shake did occur and in fact we don't see the dramatic effects that we saw in Christchurch happening for residential property owners. Likewise with foundations we consider there are opportunities for the future to make sure that all our future building stock including some of our existing building stock are protected against the mitigation assessed for liquefaction occurring in areas. Now Marion Irwin might elude a little bit later on to the fact the work that we're potentially doing and it is assessing soil hazards across the Auckland region.

20 **MS IRWIN:**

Yes one of the concerns we have in Auckland is that while we've been recognised as an area of low seismic hazards there actually has not been significant work done to identify exactly what our seismic hazard or seismic risk is. If you take the seismicity as its quoted it's usually on known active faults and observed seismicity on for example the geonet system. Now in our area we have one recognised active fault. That's the Wairoa North fault. We have one that might be active. That's the Drury fault and we have one outside the region which is Kerepehi fault which might affect if it went off.

30 **JUSTICE COOPER:**

Can you spell that?

MS IRWIN:

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Kerepehi.

JUSTICE COOPER:

Yes.

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MS IRWIN:

K-E-R-E-P-E-H-I.

JUSTICE COOPER:

10 Where's that?

MS IRWIN:

It's just at the end of the Hauraki Gulf. It's actually one of the, the Hauraki Gulf and the Hauraki Plains are actually an active risk so that's the flat lands that lie south of the Hauraki Gulf. It's an active risk that there's active faulting in there. There's not very much work being done on that risk and it's active and that means faulting. Back in 2007 we had three small earthquakes up to magnitude 4.5 off Orewa and EQC has thousands of dollars worth of claims off those earthquakes. We've not actually had very much work done to seriously define our seismic rationale. I'm not saying that it is any worse than it's been couched to be but really we've not had enough study. For example this area back in the eighties there were two known active faults. Jared Pettinger joined the university and started up a whole programme to go and look for them and before this range of quakes, this recent, there were well over 100 just because somebody looked for them and I don't anticipate we'd have as many as Christchurch but the one active fault that we've got is because somebody happened to put a masters student on that fault in 2000, in 1999 so you know what I think we need is a real proactive look at we've got so that we can define our seismic hazard and the other side of this as well is what are the ground conditions. Because Auckland City is built on a volcanic field unfortunately that means that the volcanics hid what's underneath. You don't actually know how deep it is to the basement because not only have we got volcanics there we've actually built a city on top which is a lot of noise so

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try running seismic across that and it's very difficult to see what's down there so I believe that what we need is a concerted effort to have a look at what our seismic risk is. You know we've got other risks as well. We've got volcanoes and tsunamis and things. We've also got the lower risk higher frequency things like flooding, cyclones, tornadoes these days too but yes so it needs to be done in that context as well and not alarm us because as I say I'm not saying that we have got a higher risk but especially given that 75% of earthquakes happen on faults that we didn't even know were there, blind faults, and that's true of all the major aftershocks in Christchurch as well. None of them break surface now so if it weren't for the earthquakes you wouldn't know they were there so it's not just a case of identifying the active faults it's how active is the region and so we have a big programme of research going on with the DEVORA programme which looks into our volcanics. I would like to see something similar around the Hauraki Gulf particularly and its flanks.

JUSTICE COOPER TO MS IRWIN:

Q. Have you advised the council to that effect?

A. I have I'm talking to them. It's and I actually think it's something that needs doing nationwide. It's not just Auckland. Auckland has a high risk because we've got a big population base. We've got this you know so yes I mean but we would certainly be looking for partnership as we have with the DEVORA project. We've got EQC in there. We've got the Auckland University, Massey University is very involved with that and the Nestle Hazards Research Platform. Really we think that I mean what we're talking about would be quite expensive. You're talking about geophysics onshore, offshore seismic tomography this sort of thing which doesn't come cheap and yes we have been looking into that. We put to the council about putting in some deep bore holes with seismometers at the bottom. That was actually deemed a little too experimental to warrant the expense so we are looking into it but we actually think that given the, I mean if what happened in Christchurch happened in Auckland the country would be bankrupt. I mean look what

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it's done with Christchurch so and actually offshore the insurance reinsurers are seeing Auckland as the big risk because of the effects if it did happen and bearing in mind as well that our seismic code is lower, it's at lower standard than Canterbury if it happened in Auckland it could be worse so, but again coming back the evidence we have so far says we're not under the same risk so again it's the balancing, the cost versus the hazards and but given that Auckland is nationally, that is where the reinsurers are seeing the risk. I think that it should be I think it's of national significance and I think some of the funding for that could come from a national level and I also think that it may be that there are other areas that need a similar approach that actually aren't even as wealthy as Auckland. I'm sort of looking sort of nationally at the whole hazard. We don't want this sort of thing in Christchurch to happen anywhere else.

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15 Q. Doctor Irwin, what's your, I'm not wanting to appear to be doubting you but you've told us that the reinsurance industry is concerned about risk in Auckland what's your, what's the basis for that observation?

A. That's through conversation with Earthquake Commission members Sue Cowin specifically.

20 Q. Sorry.

A. Sue Cowin of the Earthquake Commission specifically.

MR CUMMUNSKY:

Yes so the main point that I just wish to bring up is the fact that while we're focused a lot on the issues of regulation how much we're upgrading to and other such matters the two other points that really go with that are the issues of information and communication of how we're handling this process and the information that we do have so Marion talked about the issues particularly in Auckland around the geological information we have. Also there is the issue of cost which has been talked about quite a fair amount but it seems to be that there is rather a lack of any adequate information on what the cost of upgrading buildings actually is so before we can start properly advising the public on what they're going to be faced with we'll start putting in place RCI - Canterbury Earthquakes - DAY 9 [14 November 2011]

incentive packages. We really need to understand what this, what the implications of us putting these notices on buildings is going to have. Then there is also the information actually gathering. So going ahead with the implementation of the earthquake-prone building projects, particularly in Auckland the major issue that we had was trying to gather that data on ages of buildings, the sort of building stock that we had, so there have been a lot of questions asked about sort of what are the earthquake-prone buildings in our region but a lot of that has been hindered by the fact that we don't have the base information to begin with. And then communication. What I've noted in my time working on this project is that there have been quite a number of areas where we seem to be talking about different things but in a similar manner, for instance, the percentage upgrade. We've heard today the talk of a threshold. Now I question whether we are talking about the minimum standard of what defines an earthquake-prone building or what the minimum level of strengthening is because there have been those of us who have been talking about raising the minimum standard of strengthening to 67 but still keeping the definition of a building that is earthquake-prone at 34 percent and then there are those that have been talking about raising that definition to 67 percent so that is one area of clarity and a number more like that.

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JUSTICE COOPER TO MR DELEUR:

Q. Yes, all right, thank you. Mr DeLeur was there anything further that you wished to add?

A. No I was going to just elaborate a wee bit to Your Honour, just the work that the Auckland Council and previously the Auckland City Council were engaged on. So a survey was undertaken in the 1970s, mid 1970s, in the Auckland City Council's CBD area. That survey was based on reviewing unreinforced masonry buildings and we had reports, in fact a fairly comprehensive dossiery of reports for most buildings that were in the CBD area within the Auckland City Council area at that time. Subsequent to that bylaws were invoked which required the lowering of parapets below a metre and that bylaw was enacted over a period of some 50 years. In terms of the current process realistically s 115 of the RCI - Canterbury Earthquakes - DAY 9 [14 November 2011]

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Building Act has been the guiding document or section of the Building Act which has really driven the way in which Auckland Council and the previous councils really enacted their responsibilities in terms of upgrading of buildings.

5 Q. This is the change of use.....

A. This is the change of use provision. Now the interesting thing about that is it is always cost motivated in terms of so every owner we certainly speak to about upgrading their building will say to us well look we have tenants on the other five floors, however, we can upgrade the first floor
 10 of the building at this particularly time. So we've had progressive upgrades happening in the Auckland area over a period of time but by no means have we seen in a lot of instances where buildings have been privately owned had full upgrades have in all cases been in fact constructed. Also though, in terms of heritage buildings, the Auckland
 15 City Council and other councils in the area have been quite proactive in upgrading their heritage buildings. So the most major buildings in the Auckland city area have certainly been upgraded and, namely the Town Hall, the Art Gallery, I mean the more formative –

Q. The museum is that in that category?

20 A. The museum's had an upgrade. So the major buildings in the Auckland area have had an upgrade. So the Council has been proactive in terms of assuring property owners and, of course, their own property department in upgrading those buildings.

Q. Yes. All right thank you. Now Commissioner Fenwick do you have
 25 questions?

QUESTIONS FROM COMMISSIONER FENWICK – NIL

COMMISSIONER CARTER TO MR DELEUR:

30 Q. Yes I understand from your opening remarks that you have produced a draft policy and you've sent it out for consultation and now you're in the process of implementing it. Does that policy cover the various issues

that we heard described by the other councils this morning? Is it in the form or is this a policy to get at a policy?

A. No look this policy really shows very little change from the previous policies that were implemented across the Auckland region. It still provides for 34 percent in terms of upgrading, primarily because the legislation provides a very clear indication that, in fact, that is the level that we can actually require property owners to upgrade their buildings to. In saying so the comment I made previously really applies. We need to do this on a research basis. It would be inappropriate, we consider, to require a higher level upgrading to be undertaken when, in fact, for instance, we now know that even upgrading to 34 percent primarily would not have had the results that we're really looking for in terms of making buildings secure against an earthquake. So that money may well have been wasted. So in terms of what Marion Irwin was saying before as well it needs to be founded upon geological analysis of what the real risk is in Auckland and certainly the information that we have at the moment in terms of a risk is we sit at .13 and Dunedin sits at .13 and a requirement in terms of, for instance, fastening mid-floor to external walls comes about when the risk is classified as .15. So even at the present time we are still really no further than what we were previously so we really are looking at the Royal Commission and certainly the Department of Building and Housing at this particularly instance to provide us with some clear direction in which to really, what the future is going to look for, like for us in our community.

25 Q. That comment about the 0.15 is that based on the NZS1170 0.5. So that obligation to do strengthening work like that would only apply at 0.1, where the Z factor is 0.15 and above.

A. Correct.

Q. Mmm.

30 A. Hence we're very very keen to see research undertaken to make absolutely sure of our facts.

Q. Yes.

COMMISSIONER CARTER TO MR DELEUR:

Q. Have you taken that question about further research to the point where you made the specific recommendations of the information you're seeking others to provide for u.?

5 A. We've certainly, we've made it very clear in our submission to the Royal Commission that that's what we would be looking for as an outcome, one of the outcomes. But I also believe there's an awful lot of very proactive things which can also be initiated coming out of the Royal Commission's findings and I mentioned those before. Certainly a look
10 at the effect that 4000 chimneys had in Christchurch on the residents of Christchurch, both in collapsing through rooves, the disruption that caused, the foundations where they were sited on liquefaction areas. I think there's some really proactive things we can actually do in the Auckland area to make sure that doesn't happen for us in the future. So
15 I think there's some initiatives there which we can act on but, primarily, we still need that underlying research as well to take us forward to the future.

Q. Thank you.

20 JUSTICE COOPER:

Yes well we've heard from Professor Pettinga about potential advantages of developing better understanding of the faults, potentially active faults in an area, and the cost and methodologies that are available to do that. It's been interesting to hear that Auckland Council, well their advisors anyway, are
25 aware of the desirability of increasing knowledge in that area. so thank you all for your contribution and I take it we'll be hearing from you again tomorrow in the discussion that we're going to have so we look forward to hearing you again then. Thank you very much.

COURT ADJOURNS: 3.46 PM

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COMMISSION RESUMES: 4.02 PM**MR MILLS:**

The final session for today is the Dunedin City Council and we have got Neil
5 McLeod, who is the chief building officer, and Glen Hazelton who is the policy
planner for heritage.

NEIL McLEOD (AFFIRMED)**GLEN HAZELTON (AFFIRMED)**

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JUSTICE COOPER:

We were going to be joined by a city councillor I think.

MR MILLS:

15 Not any more, no, she was going to come in on a video link I am told that
she's been detained in some way at any rate.

JUSTICE COOPER:

We are grateful to you for coming to our hearing and the floor is yours.

20

MR HAZELTON:

First off, yes it was apologies from councillor Kate Wilson who did want to be
here but unfortunately she's been withheld with some budget scrutiny over
annual plan and long term budgets, but she did ask me to deliver a quick
25 message to start with and that was that she said that the Dunedin City Council
is very keen to work with the Royal Commission and any subsequent
discussions around reviews because of the strong impact these will have on
Dunedin City Council, and particularly given our very old building stock which
we'll detail in this presentation here.

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JUSTICE COOPER:

Thank you.

EXAMINATION: MR MILLS

- A. So for the next slide. Today I thought what we'd talk – we didn't put in a submission from Dunedin City Council but what we wanted to talk through was the background to our current policy review which has just
5 been completed in Dunedin and give some background and some clues to some of the issues we're dealing with down there. So in 2009 prior to anything happening in Christchurch, building control and city development committed to an early joint review of our policy. You know sir that our policy, original 2007 policy was slightly later than most other
10 councils who initiated there's in 2006. In – it took us a year however to convince council that that was the right path and needless to say after the first Canterbury earthquake council decided that it was now an appropriate time to review the policy, and I'll talk through the reasons why we looked at reviewing the policy early in the next slide. In May
15 2011 we released our draft policy for consultation and then in July had the hearings and this year, in October two weeks ago adopted a new policy by the council. Next slide please. The Dunedin context that we're looking at is that Dunedin's building stock reflects its Victorian growth. We have a very, very large number of unreinforced masonry
20 buildings, particularly in our CBD, but actually throughout our city. We also have a broad heritage protections, both in terms of specific protections over individual buildings but also over the facades of practically all buildings within the central city. Dunedin also faces a situation where we've had limited development and redevelopment.
25 That's part of the reason why we still have so many unreinforced masonry buildings, it's because over the past they haven't been knocked down and replaced and today still minus economic growth which has some impacts on our ability to upgrade all of those buildings in short timeframes. It's also in Dunedin very low levels of investment in
30 buildings and low levels of return on buildings for building owners. However despite everything that's occurred so far there remains very strong public support for retaining the city's unique heritage buildings, as I said, even after the Canterbury earthquakes. Next slide please. This,
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by way of context here, what I wanted to demonstrate, is this just an overview, the large white worm that runs through the middle of the city there is a reserve, the other buildings here that we have, basically anything colour coded in reds, maroons or browns is pre-1900, anything

5 in a purple is between 1900 and 1930, blues between 1940 and 1960, and the greens post 1970. So as you can see from that just overview or snapshot of the city, is that we haven't had a great deal of replacement over time. The interesting thing to probably note is that most of the green buildings built post 1970 are actually also still on land subject to

10 liquefaction as well. Next slide please. That takes – this shot is just another shot looking down, this is really just a block of the central city to show this in more detail, so again the pre-1900 buildings in the reds and maroons there, the purples between 1900 and 1930. In that shot there most of the white blocks are pre-1900 as well because they are

15 buildings for which there is no recorded date and we can pretty safely say that most of those are pre-1900. Next slide please, and this is just a shot looking back at the central city. One of the big things that is noticeable with Dunedin is just not only how many unreinforced masonry buildings we have, but the scale of those buildings, and the fact that

20 they go across a number of different sectors, we haven't just got small two level shops that are unreinforced masonry buildings, we have very, very large industrial buildings, schools, priories, commercial buildings that are between four and six storeys high, as well as most of the municipal buildings.

25

JUSTICE COOPER:

- Q. What are we looking at?
- A. Sorry what was that.
- Q. What are we looking at here?
- 30 A. That's just looking down on the main – the bottom left-hand side moving to the top right is the main pedestrian thoroughfare through the city and the Octagon is almost in your top right there with the row of trees, so

really that's just a – you know, in detail you can see from that shop how many older buildings there are.

Q. Yes.

A. All of which are unreinforced masonry, and many very big buildings.

5 Q. I'm just trying to find George Street.

A. George Street would be to the top right of that leaving out through the Octagon.

Q. Oh I see, yes, okay, there's the two rows of trees together. Correct?

A. Yes.

10

MR McLEOD

A. The building in the very top centre sir is Moana Pool, that's up the hill.

Q. So if I look at those two lines of trees that you're referring me to, that's the city council building.

15

(Mr Hazelton and Mr McLeod both agree).

MR HAZELTON CONTINUES:

A. Next slide please. We also have a problem in Dunedin that's resulted from the history of low levels of redevelopment in the city. This is a side of being one of the most unattractive buildings in the city and most would look at it and think maybe a 1960's, perhaps 1970's building and our building records have it as 1976, if you flick to the next slide, that actually still remains this building in terms of its structure in 1862, unreinforced brick hotel. Basically, and the next two buildings in this shot are also still remaining on site with new facades but still with the same pre-1900 structures, and for many building owners who will shortly be receiving letters from us it will come as some surprise to them that they have a building that's an unreinforced masonry building. Next slide please.

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JUSTICE COOPER:

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Q. Could we just see the previous slide again before moving on, because it's rather surprising.

A. As I said it wasn't one of the best architectural designs in the city.

5 **MR McLEOD**

A. It's not uncommon sir to have some very old buildings in the centre of the city that have had multiple new facades fitted over the decades.

JUSTICE COOPER TO MR HAZELTON:

10 Q. This is before your time Mr Hazelton, obviously, I would say.

A. Oh well, it was re-facaded the same year I was born so I'm not entirely sure of – (overtalking 16:11:32).

COMMISSIONER CARTER TO MR McLEOD:

15 Q. Have these buildings largely got wooden floors?

A. Yes, these ones will have wooden floors.

Q. Thank you.

JUSTICE COOPER TO MR HAZELTON:

20 Q. And the building just to the right is rather different in its modern aspect isn't it?

A. And unfortunately that one too also has a pre-1900 structure behind the facade.

Q. Yes, if we could just go onto the next –

25

MR HAZELTON CONTINUES:

1612

A. That's the one with the large peaked roof there. Next slide please. Another problem we have in Dunedin is that in recent months we haven't actually required earthquakes to bring down our buildings, as a result of a lack of maintenance. This happened in January this year when a parapet and the side of the building collapsed. There is still debate on exactly what caused that to occur but certainly, I have to be

30

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careful about what I say otherwise the owner will have us on that. But, certainly it's an agreed fact -

Q. In fact just to put your mind at rest, providing you're telling us the truth anything you say here is privileged in the sense that it can't, it can't have any consequences –

5

A. Well I'd say in this case the fact that there was trees growing out of the parapet and the building –

COMMISSIONER CARTER:

10 Q. Did you say trees?

A. Trees, small trees growing out of the parapet although I was reassured that was not on the side that collapsed but there was certainly, that and the building next door have had a long period with little or no maintenance.

15 Q. Did this collapse occur inwards, into the building?

A. Thankfully it did occur inwards but then as they, initially inwards then as they started bit by bit deconstructing the building part of the parapet also fell outwards and you can see in the bottom of that picture the veranda has collapsed as part of the parapet has also collapsed outward.

20

JUSTICE COOPER:

Q. Was that, this is the red, the red structure, was that actually a solid parapet there, a veranda there?

25

A. Yes, that's correct. Next slide. I apologise for the quality of these. I just took these off the internet recently and this was not the first of Dunedin's buildings to suffer a parapet collapse within the last 18 months. This one here was a side parapet to the building which collapsed into the neighbouring building. As you can see here, thankfully, the building was not occupied at the first floor but you can also see from these photos the challenge we have with the amount of maintenance and upgrade that has not occurred on these buildings over time and I think this one was the result of wind, it was after one of the larger wind storms that we had in Dunedin but, certainly, an ongoing problem with parapets. Next slide.

30

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MR MCLEOD:

Significantly sir when we actually got up to fix that problem the engineers involved found three other parapets that were in imminent danger of collapse
5 so we ended up deconstructing quite a lot of the parapets around those buildings at the same time. It is not an isolated case.

JUSTICE COOPER TO MR MCLEOD:

Q. Did you, did the council have to do it?

10 A. No in this case the owner paid for the work sir.

COMMISSIONER CARTER TO MR MCLEOD:

Q. Can I ask if these parapets that occur on walls that separate two buildings have also had a requirement for fire protection. I seem to
15 recall there was a requirement to build a wall higher than the neighbouring roof in order to protect the spread of fire between buildings.

A. Indeed that would have been one of their original purposes, yes.

Q. So that was done away with, that provision, by allowing the projected
20 wall to be reduced in height?

A. Indeed it's, we've actually compared what we've got left with modern requirements and believe that it's still perfectly safe to reduce some of those parapet heights in terms of fire protection anyway.

25 MR HAZELTON CONTINUES:

A. Next slide please. So problems that we'd identified prior to the Canterbury earthquakes with our own policies that spurred us to look at reviewing earlier than the five years was a lack of clarity around where our priorities lay, an unclear process both for our own council staff and
30 for the building owners, the suitability of the timeframes that were detailed in our policy, a lack of integration with other council policies and strategies, the appropriateness of a passive approach and perceptions of a lower level of implementation. Next slide please. So we released
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our draft policy this year in May and the key proposed amendments that we put forward at the time were to basically clarify the process and move it into a more active process for implementation. We reviewed our definition of a significant alteration, there was also a reviewed definition of heritage and historic buildings in there. The date from the timeframes commencing also was clarified and the timeframes for providing the initial assessments and also the timeframes for strengthening work to be completed were also revised. Next slide please. Also we, like Wellington, adopted a portfolio process, particularly, or looked at, this was one of the amendments. We looked at that particularly because we have a small number of building owners who own a very large number of buildings in the city particularly the University of Otago was one of the key interests and they also, because of their holdings have a very large number of heritage buildings and also non-protect but unreinforced masonry buildings. We also looked at, we proposed at that time an extension of time for a façade, sorry, an extension of time for the overall length that someone has to strengthen the building if they did façade and roof level strengthening first. So basically if they did that within the first five years we would extend the timeframe for the strengthening for the rest of the building and this was a proposal that didn't end up being adopted. It went out for consultation. We also added provisions for buildings damaged in an earthquake. We clarified our policy towards heritage buildings but there is no separate section for heritage buildings, they're considered just like every other building, and we also took one of the proposals from the Gisborne policy as well around rural churches but we also included rural halls. Next slide please. We also looked at detailing more clearly our financial assistance within the policy, reviewing the process for dangerous and insanitary buildings, dangerous buildings obviously because of the recent experiences we'd had there with parapet collapses and we looked in our proposed policy to remain at one-third of new building standard but for council to encourage building owners to strengthen to two-thirds or more but change of use remained as in our previous policy at two-thirds of new

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building standard, at least two-thirds. Next slide please. The public consultation was run as previously councils have asked through the Local Government Acts, a special consultative procedure and we had a total of 23 submitters and only six of those presented at the hearing.

5 The main areas that we had that probably drew the most amount of debate were around strangely enough the need for a policy review and also whether the intent of the policy was right. Also we looked at the level of strengthening required, the timeframes, the processes for identifying and taking action, the definition of a significant alteration

10 probably had the most amount of debate along with the interaction of with the Building Act including change of use. Next slide please. So the policy as adopted retained one-third as a minimum for the same reasons as discussed by other councils around the legal opinion but with a recommendation to achieve two-thirds or more. Building owners,

15 because we don't have engineers on staff, it is the building owners responsibility to provide their initial assessment and they have two years to provide this assessment to us. The timeframes range from 15 to 30 years to complete the work and that depends on the current assessment. So, unlike other councils we haven't done it based on

20 building categorisation, basically the lower their current assessment the shorter timeframe they have to correct that and it acts as a sliding scale so it also enables building owners to move from, as they do, staged work to actually allow themselves more time to complete further work down the track. I should also note that the two years to provide initial

25 assessment, the timeframe to start the work doesn't start once that two years is up, the timeframe actually starts at the same time we issue their letter. One of the problems we had in the past was that people had a long time to provide the information back to us and they kept stalling and stalling and stalling and in the meantime it wasn't actually clocking

30 down the time to improve the building. This hopefully provides a disincentive for them to do that. We actually, one of the things that came out of the hearings is we actually took a more permissive approach to significant alterations than we initially proposed. We'd

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initially proposed something that would require people to undertake strengthening work at quite a low dollar value and percentage of building value but were convinced, the hearings panel, sorry, were convinced by the submissions of building owners and by a couple of the
5 engineers in the city that actually by doing that we were going to be discouraging types of maintenance and work on the building that would actually contribute to building safety in the long term and that we would actually be doing something counter-productive by setting the standard too low. We also included new policy in there for party wall notification
10 where if a building is being strengthened that we will notify all of the other neighbouring buildings that share party walls that now is the time that you should also be thinking about joining in and doing this cooperatively. Also noted in there an approach to staging so that we do allow staging within the policy and that's also with the time-frames
15 allows people to do a bit of work now and maybe buy themselves more time to do other work that will take them higher but really we're trying to target the key areas of risk first, and also the portfolio approach was retained. Next slide please. Outside of the policy we feel that the policy's only one part of the equation, particularly for Dunedin, where, in
20 the past, we haven't probably enjoyed the same amount of attention to the policy as somewhere like Wellington has. So we've been working quite hard on the other initiatives around the earthquake-prone buildings issue to try and get more public awareness and really provide better information to building owners. One of those is an annual free workshop for heritage building owners to come along and listen to key
25 speakers and this year Jason Ingham, who spoke to you, will be there as well as a number of our city's leading engineers and also we cover other topics such as insurance and resource consents and building consents, etc. Last year we ran the first one in November and we had
30 85 people at it. This year we've just, it will be run again this month and it's already booked out at over 110 people. So there's a really strong interest in that. We've also expanded Heritage Fund assistance to earthquake strengthening projects. The Council does, or has over the

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last few years, put a significant amount of money into this area and we've had a really strong uptake from building owners. As a result, I think of the eight projects that we gave to in our last heritage fund round, five of those involved earthquake strengthening. We do provide rates relief assistance to earthquake strengthening projects and that is in the order of 50 percent of the general rates. We've just, Council has recently approved, and it will be launched at this year's annual workshop, a targeted rate for earthquake strengthening of heritage buildings where the building owners can undertake the work and pay back the costs of that work through their rates over 10 years. We also provide quite a comprehensive maintenance checklist for heritage building owners, well that's available to anyone on our website, which looks at key areas like giving advice on what people should be looking for in their parapets and gives some quick tips for people on how they can better protect their buildings, particularly around maintenance but it does also deal with earthquake strengthening issues. We have regular public site visits to the strengthening projects that are being undertaken in the city. I guess that's one of the values of providing heritage fund assistance to many of these projects is that we then require those building owners to open the doors to others to let them see those projects. I think we've had seven site visits this year and there've been between 10 and 40 people at probably the most popular ones and they get to come along and talk to the engineers and building owners about what they've done, how they've done it and it's basically it started off with a range of different types of earthquake strengthening methods and we've had really good feedback from building owners that they've learnt a lot from those. And this year we also launched an award for earthquake strengthening of heritage buildings that will go in with the suite of other awards we have that go out to heritage re-use projects and all of these things are really trying to build awareness around actually there's things you can do, because I think after, particularly after the February there were many people who were just feeling quite disillusioned and thought there's nothing we can do what's the point so

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we wanted to show them there is actually a point to them doing something.

JUSTICE COOPER:

- 5 Q. Can I just, before we move on, ask you a little more about the rates relief, sorry the targeted rate for earthquake strengthening. I understand the concept of rates relief, the previous bullet point, but the targeted rates from what you said I infer that if you can tell the Council that you'll
- 10 result in some sort of deferral of the date by which you have to pay you're rates, is that the way it works?
- A. No it's not. It operates much in the same way that many of the councils around the country have a solar heating or energy schemes where effectively the Council pays for that work and you pay the money back
- 15 to the Council or a percentage of that and so what we're looking at here is that on certain buildings we'll pay for up to 50 percent of it and they can pay that 50 percent back to Council over 10 years, with interest added but it's much less than they'd be paying if they borrowed that money commercially.
- 20 Q. So the rate aspect of that is that you're actually charging the land owner a rate that the land owner would not otherwise have to pay and the quid pro quo is some sort of 50 percent contribution by the Council itself to those upgrading works.
- A. No, the first part of that statement's true that its like an additional rate on
- 25 them but we may, in most cases we probably will actually provide some funding but it will be via the heritage fund otherwise the scheme is fully cost recoverable. So, effectively, they're not alone but they are effectively receiving money from Council that they will pay back to us with interest.
- 30 Q. I'm still not following it I'm sorry and I'm sure it's my fault but what's in it for the land owner?

A. They get to take the money from us at a much lesser rate than they would pay for it commercially at a bank. It's effectively like a loan but it's not a loan scheme because otherwise we'd be a lender.

5 Q. So does it involve the exercise of any powers under the Rating Powers Act or not? You're calling it a rate that's what I'm not quite understanding.

A. They are provided for under the Rating Act. I'm not an expert in rates so I can't.....

10 **MR HAZELTON CONTINUES:**

Next slide please. So in terms of the post-Christchurch environment in Dunedin there is a very strong interest in building owners initiating the process of seismic upgrade and certainly I think, from our point of view, seismic upgrade has increased but the important thing also to note there is that we're
15 also further into our policy time frames so I don't only put it down to Christchurch and that's why I said in one of the earlier slides perception of you know a failure, if you like, of the earlier approach actually when you start dwelling or started diving down into the figures, actually quite a bit of work was starting to happen and we were only four years into what effectively was a 30
20 plus year policy. So I think it's unsurprising that after now five years that we are seeing more work starting to occur. The majority of building owners are achieving two-thirds or greater as part of a change of use because that's primarily how they are initiating that process or some of them are doing the work but future-proofing themselves for change of use or any potential
25 changes to relevant legislation. There has been a really strong uptake for staged approaches, the strengthening, and they fundamentally come down for building owners to economic viability and also the fact that you can't always, particularly with larger buildings, just empty your building of all the tenants to do the work. You have agreements in place. So what we're finding is a
30 number of building owners are now saying well each time we get a vacancy we'll upgrade that part of the building. So the message is getting through to them that it is the best time for them to, as they are doing other work that they should keep doing that. There are some opportunistic building owners in this
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city using perceptions of risk to achieve outcomes that undermine other city goals so we've had a number of building owners who are now using the perception that all unreinforced masonry buildings are you know liable to collapse, at any potential moment, to demolish buildings that they've had an idea that they'd like to demolish for quite some time but haven't been able to

5 because of protections over them, so they're now saying, using pressure to say, well it's really difficult for us to do this, Christchurch has shown we shouldn't do it, you know, we shouldn't upgrade the buildings anyway, so you should let us pull them down, when quite, you know in most cases they've had

10 quite a strong history of neglecting their buildings. And the other thing that we've noted out of Dunedin and it may be quite particular to Dunedin is really the need for targeted specific information for owners of residential dwellings, because we have a very, very large number of unreinforced masonry homes in the city as well, I think unlike, it was something that's always struck me

15 about Dunedin is that many, we have lots of very, very large homes and particularly in the suburbs around the central city, but building in wood was not particularly popular in Dunedin and most homes have been built in brick or stone and so even though they're not caught by the policy, they are a strong risk for the city. Next slide please. So in terms of the continued challenges as

20 well for Dunedin City Council, this is a delicate balancing act, certainly we want to encourage continual safety improvements in the city, but we have a challenge of very low growth and not wanting to impact the city's vibrancy, most often what has happened in Dunedin is when a building has been demolished either for safety reasons or economic reasons, nothing gets built

25 on that site, so while it becomes much safer we are increasingly in parts of the city having a city characterised by lots of car parks and nothing else. Change for us we think can only be incremental given the need to work around tenancies, the available space that is already in the city, we have a large amount of vacant space and unfortunately there is a large amount of vacant

30 space that has already been strengthened so I took heart from what Mr Petty said this morning, unfortunately in Dunedin it hasn't quite worked out that if you strengthen it tenants will come, so for council we've needed to take a very measured approach. Information as well for us on the large number of pre-

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1900 buildings can be quite difficult to locate, that earlier example I showed you with the absolutely outstanding 1976 building, that took quite a few days of delving through information to find out exactly what had and hadn't been undertaken on that building, so for us getting you know the information together correctly so that we can notify those owners, is quite a challenge.

5 Another big challenge for us is discouraging and taking action on demolition by neglect, we're trying to avoid as much as possible the earthquake-prone status being applied to buildings increasing cases of demolition by neglect, where people see that, particularly where their building has heritage

10 protections over it, that the earthquake-prone building status they see that the best way to work around that is to let the building get in such a bad position so that they don't have to do the upgrade and then they can bring it down particularly under the dangerous buildings provisions when it becomes an immediate risk. And that's something we're really struggling to find a way

15 round. The staging and prioritisation of building components is something that we're very interested in, particularly with the parapets and facades, our main pedestrian shopping street, because we don't really have malls in Dunedin, is predominantly as I showed in that earlier photo, predominantly buildings built before 1930 and a large number built before 1900, but still despite previous

20 work to reduce the size of parapets and still predominantly have very large parapets on them and verandas and we certainly are worried, and that is one of our priority areas, but one of the other things we note here and it's something that's implicit in our policy, well actually it's probably explicit in our policy, particular with regard to heritage buildings, is that we will work with

25 building owners to find mutually beneficial approaches to strengthening but that can be quite time intensive, it does take a lot of work to work with the building owners to find those outcomes. I think there might be a next slide. Maybe not. Oh there is another slide. I'll continue to this slide, even though it's not there, for building owners the feedback we've been getting is that the

30 uncertainty and a perception of continually shifting goalposts and what they're supposed to achieve, is problematic and actually discourages upgrade and investment in the buildings that could be quite valuable, there's a number who despite policy changes are sitting aside waiting to see the outcomes of any

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Government changes and that, that does mean that if we do have something in the interim there's a number of buildings that may have already had some work done on them that won't have done, because people are worried about doing something then having to redo it again. There is a – some questions

5 about the clarity of what is trying to be achieved, whether it is just trying to protect the safety of people, or whether you are trying to get outcomes that protect the building. Dunedin's policy, we went on the basis that we were trying to protect as much as possible, people and people in and around buildings, and that if the buildings still had to be demolished at the end of it

10 that was okay. A lack of central Government financial assistance and incentives or the removal of earlier incentives is troublesome for building owners. Dunedin City Council has been working quite hard to provide as many different types of financial incentives as we can, but obviously it's tough times for council and we don't have endless amounts of money to put into this

15 issue. One of the things that's come up from building owners time and time again in Dunedin is changes to depreciation that occurred in the last couple of years that have actually provided a disincentive to undertake this work and they'd like to see those changes reversed or like Wellington was talking about some sort of deductibility. The combined costs of seismic upgrades and

20 upgrades for fire and accessibility has been touched on by others and it's certainly something that we're aware of and something that the staging often helps, and low returns on investments and seismic upgrades is challenging. As I said before, we have a number of buildings that despite being strengthened have not attracted tenants and partly that's just a reflection of

25 the market in Dunedin, but also currently although hopefully it will change is that you don't actually attract further – tenants aren't willing yet in Dunedin at least to pay that much more for earthquake strengthened premises so there's no real incentives for the building owners to do that. Hopefully that will change and I think there's some signs of it now starting to change that I've

30 noticed more and more there are building owners in there are building owners in their property adds in the paper just – you know they actually disclose publicly what the building has been strengthened to as a way to try and attract tenants, but feedback has been that that hasn't been that successful yet.

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Perception that achieving two-thirds is always at least twice as costly as one-third when this is not the case and we've been trying to work against that through the information we've been providing that it is always a building by building approach but often actually getting to two-thirds or more is very you know cost comparative with the one-third, and the other thing that we've talked about here is unfortunately in Dunedin some of the media around, issues around earthquake strengthening has been somewhat sensationalist and that has actually discouraged a lot of owners from investments in unreinforced masonry buildings and I was talking to one building owner the other day who was talking about how they just wanted to get rid of their building now and you know basically when we talked through many of the issues they just weren't aware of what they could do and actually that might not be financially ruinous for them, but the more an environment I think is created that discourages people from doing even some investment in it, the worse the outcomes are going to be as well, because if those buildings are being unmaintained and not pulled down in the immediate future, we run that risk of what happens to those increasingly badly maintained buildings until they actually get the notice to demolish, and that I think is the end of our presentation.

20 1642

JUSTICE COOPER:

Thank you very much. Questions – Commissioner Fenwick.

25 **COMMISSIONER FENWICK:**

Q. Yes thank you you made the comment back there that the cost of upgrading between one third and two thirds is probably not as large as people expect, I think you said not twice the value, have you got any specific information on the relative costs of the upgrading?

30 A. No we don't. What we had was mostly feedback through the hearings process which I think we've provided although I'm not sure it would have been in there from. There was quite a bit of discussion on it at the hearing and I think the question was specifically asked of one of the RCI - Canterbury Earthquakes - DAY 9 [14 November 2011]

engineers in town by the hearing panel. I'm not sure if it was recorded or not and they said you know is it always going to be twice as much and he discussed how those values were worked out and the difference between different strengthening methods and also just the price of steel and so that actually it wasn't going to be you know that expensive. A number of engineers also made it quite clear that when people come to them they don't tend to ask or sometimes they'll come and ask we want our buildings to not be earthquake prone. We want to meet whatever the minimum is but they'll very present it in terms of we can achieve this much for X amount of dollars and we can achieve this much and the feedback they gave was that for most people 67 was achievable. It was the 67 to 100 that would tend to cost more.

MR MCLEOD:

15 A. That of course is very much dependent on the type of building you've good. There are a whole raft of variables in there so it's not just a straight line calculation unfortunately.

MR HAZELTON:

20 A. And the issue of maintenance is certainly a key one that the engineers brought up often just by completing some of the disturbed maintenance many buildings would actually get to 34% just by doing that.

COMMISSIONER CARTER:

25 Q. Do you have any engineering staff on the council or are you using outside services to do this? Do you have anything to inform us on the issue of peer reviews in determining the actual strength characteristics of the building?

30 **MR HAZELTON:**

A. We don't have on staff engineers but we did include within the policy here reference to peer review as well and partly that was because we didn't adopt one of the suggestions whereby a number of the submitters

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around the assessments having to be done by someone who is CPENG. We decided because of the relatively tight timeframes we were asking for around having to provide the assessments that we wouldn't require that but we would require sufficient information to be peer reviewed. In reality you have a policy how we would undertake that peer review.

MR MCLEOD:

A. The way we would normally do it is that when we're presented with a building consent for earthquake strengthening we would have a brief look at it and decide whether (a) we knew the engineer if it was a CPENG engineer it gave us some level of comfort but there are a number of other engineers around our part of the world that we have some faith in who, but they not be CPENG as such so we would make the decision at building consent application status to whether we wanted peer review or not and then we would generally go back to the applicant and say you need to have this peer reviewed and submit it with your application so we do carry out a peer review process on a shall we say a percentage of applications.

20

JUSTICE COOPER TO MR McLEOD

Q. I suppose arising or related to that how have you found as the regulator the ease with which a concept such as 33% of new building standard is able to be administered when it's applied to unreinforced masonry buildings which have been constructed in accordance with completely different rules to those applicable to new buildings?

A. That's a shocking question really.

Q. Thank you.

A. It rather depends on which engineer you're talking to and invariably we would need to go to an engineer to gain that information. The only way we can know what percentage of new building standard of current building or an existing building is is to have an engineer tell us and we are completely at the mercy as it were of the engineers giving us this

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information. We have no real reason to doubt what they're telling us but as has been mentioned by some previous submitters some of the estimates for the current strength of the building could vary by as much as 100% so you know one engineer might tell you it's 40% the other might tell you it's 80%. I guess if you get to that stage you need a third opinion so we really have no other mechanism.

5

Q. Do you think that it would be possible to come up with this issue of unreinforced masonry buildings some sort of set of measures which would be descriptive of work that would need to be, typically need to be carried out to strengthen such a building which wasn't referenced to some notion such as percentage of new building standards?

10

A. Maybe. Typically when we end up strengthening existing unreinforced masonry buildings that the classic system is tying floors into walls, tying ceilings into walls and maybe diaphragming the roof in some way. They appear to be the usual methods to reinforce an existing building and I guess you could adopt those as a I don't know a toolbox of possible solutions but whether you could say for every building they would be effective or not I don't know. I suspect not. Much will depend on the way the building was constructed originally. Much will depend on the ground on which it was constructed. Much will depend on its height, its floor plan. There are so many variables that I suspect the only way to be certain is to have an individual engineering solution for each building but I think if I understand where you're coming from I think it is possible to have a toolbox of solutions which would invariably improve buildings but maybe not give you an answer as to how much improvement it was.

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Q. Changing tact am I right in thinking that Dunedin City Council is itself quite a substantial land owner in the central business district?

A. Indeed yes sir.

Q. And what, how has that, has that helped or hindered the council as it develops and administers earthquake prone building policies?

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A. I don't believe it's had any real affect on the deliberations at all. Some of the older buildings the council own have already been substantially upgraded. Some will still need to be done so I don't believe there has

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been any real consideration given in terms of council's property holding when developing this policy.

Q. Right.

A. Some have already been demolished.

5 Q. That caps both ways but has the council applied, developed and applied some policy of upgrading its own important public buildings for example the town hall? Has that been seismically strengthened?

10 A. Indeed yes in fact that work's going on as we speak now and it's part of a continual upgrade. The town hall was for instance built in the late twenties so it's time for a do up and the seismic upgrading will come as part of the overall upgrade.

Q. Yes. All right well you will be joining us tomorrow in the discussion?

A. Indeed.

15 Q. I must say and speak for my fellow Commissioners it has been very interesting today to get the different perspectives of those councils who have come before us and we're very grateful for it but each one of you has emphasised different considerations and things which are important in your own districts and that's been very valuable for our work so we're indebted to you for coming along and sharing these thoughts with us.

20 1652

A. Indeed, sir. If I might make perhaps just two closing points.

Q. Yes.

25 A. One is we would absolutely endorse Auckland's proposal that any decisions need to be based on science and research, not just a knee-jerk reaction, and the other point is that we come from very diverse types of environments and I don't believe that one national policy has any chance of being successful. Every local authority in the country has it's own slightly different problems, it's own slightly different way of solving those problems and it's own funding for those issues so I really don't know how a national policy as such could solve the issue.

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Q. Some, if I can just, that leads me to another question, some councils would see merit in nevertheless there being more national content than currently exists, if I may put it that way, about such things as the

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standard of strengthening that is required and about time limits. On the first of those, although I'm not familiar with your policy in detail, you seem to support a situation where the strengthening to two thirds of the new building standard would be considered desirable. Am I right about that?

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A. Yes sir I believe so. I think that there was certainly a lot of support within Council for that approach but for reasons already stated we believe that the regulations to the Building Act actually require, prohibit us doing that. We will provide encouragement and we believe there is, in fact, already a national standard but the national standard exists set in regulation at one-third new building standard.

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Q. Yes.

A. And for the rest of it it's set by NZS1170.

15 **JUSTICE COOPER TO MR HAZELTON:**

Q. Yes. Well if it was thought that the one-third standard, which is the national standard, were not sufficiently high would you, would Dunedin's, and you may not be able to say what the Council would think, but I understand from what you're saying that there wouldn't be much objection from Dunedin if the standard were made higher.

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A. I think it would something that would need to certainly go back to Council for a political view. There was quite a bit of discussion about it at the adoption of policy and particularly in terms of the costs that were imposed, both on Council and on other building owners. It's not something that I'd specifically feel we'd be able to comment on but certainly we're trying to provide incentives for people to go as high as possible and, for the most part, people who are undertaking that work currently are people that are naturally going to be inclined to want to go as high as possible anyway because they're being proactive. Typically the people who are only going to want one-third are probably going to be the ones we're going to be battling with right at the end of the time frames because they don't want to invest whatsoever.

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Q. Well do you think, the hazard factor in Dunedin is 0.13 under NZS1170.5 and strengthening URM building to a third of the new building standard, you know, the Z factor is already quite low. Are you satisfied that meeting that standard makes a significant contribution to the integrity of unreinforced masonry buildings?

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A. It comes back again to what you're trying to achieve. If we're trying to save the buildings it probably doesn't. I guess after reading some of the evidence from Christchurch the jury's out a little bit on whether it provides the safety for the public that's required or not and we need to look at that further. Certainly, even amongst the engineering fraternity in Dunedin, if you put that question to them, there'd be no agreement as well. That was debated quite heavily in itself at the hearings as well with engineers coming from very different positions on that.

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Q. All right well I'm not sure if any further questions have been provoked by my own but that appears not to be the case.

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COURT ADJOURNS: 4.57 PM

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