



Canterbury Earthquakes Royal Commission
Te Komihana Rūwhenua a te Karauna

UNDER THE COMMISSIONS OF INQUIRY ACT 1908

IN THE MATTER OF CANTERBURY EARTHQUAKES ROYAL COMMISSION

Before: The Honourable Justice M Cooper
Judge of the High Court of New Zealand
Sir Ron Carter
Commissioner
Associate Professor Richard Fenwick
Commissioner

Appearances: S Mills QC, M Zarifeh and M Elliott as Counsel Assisting
D Laing and N Daines for Christchurch City Council
H Smith and K L Benson for T H Consultants
K E Patterson for H Patel

**TRANSCRIPT OF HEARINGS ABOUT INDIVIDUAL BUILDINGS (EXCEPT CTV
AND PGC) WHOSE FAILURE RESULTED IN LOSS OF LIFE**

COMMENCING ON 13 FEBRUARY 2012 AT CHRISTCHURCH

595 AND 595A COLOMBO STREET

JUSTICE COOPER:

Today the Royal Commission will consider the circumstances of the failure of
 5 buildings situated at 595 and 595A Colombo Street. Rachel Conley, a visitor
 from the United States of America lost her life when a heavy concrete slab fell
 on her in the street. It seems likely that the slab fell from 595 Colombo Street.
 Her family reside in the United States of America and I understand they are
 not able to be present today but it is likely they'll be watching these
 10 proceedings on the internet. We extend our deepest sympathy to them for
 their loss.

Before we begin I note that Commissioner Carter and I will be dealing with
 most of the hearings this week while Commissioner Fenwick attends to other
 work of the Royal Commission. I record that this is procedure that is possible
 15 under the Royal Commission terms of reference and that all three
 Commissioners concur in this process being followed.

MR ZARIFEH:

As the Commission pleases the two buildings that we're concerned with were
 20 really part of the one block of buildings of unreinforced masonry buildings that
 were situated on the west side of Colombo Street. 593 Colombo Street
 which the Royal Commission has dealt with and which housed the
 Southern Ink Tattoo in one of the shops in that corner building coming up on
 the screen at the moment. That was at 593. 595 was immediately adjacent to
 25 that building and 595A immediately to the north of 595 so they were if you
 like the second and third along from that corner of Colombo Street and
 St Asaph Street and there's an aerial shot showing 595 and 595A. Both
 unreinforced masonry, two storey buildings. Following the September
 earthquake, 4th of September earthquake, both buildings were green
 30 placarded and the Commission may recall evidence from Mr Simon Wall
 CPeng engineer who was a volunteer on, in the days after September
 earthquake he green placarded the buildings for 593 to 599A Colombo Street

so that included these two buildings and noted some, either none or minor damage to those buildings along that strip.

In relation to 595 an inspection was conducted on behalf of the owners by T H Consultants Limited, a Mr Hanham a structural engineer, on the 28th of January, 2011, so after the Boxing Day aftershock and Mr Hanham will give evidence. He concluded that there was no evidence of any significant structural damage to 595. In relation to 595A the owners of the building were operating a Japanese Restaurant from the building. They did not notice any structural damage following the September earthquake and they had some contact with the council because that part of the city was part of an initial cordon for a week or so and they did not engage any structural engineer but as I said the building was green placarded on behalf of the council.

Following the Boxing Day aftershock there does not appear to have been any further inspection of the building 595A either by the owners or on behalf of the owners or on behalf of the council.

595A had had some structural upgrading carried out 2000/2001 by Powell Fenwick Consultants and a Mr Simcock will give evidence. He was the structural engineer involved at the time and structural upgrading was conducted to remove the earthquake prone status of the building. That work included the tying of wall structures and some of the front façade to the wall.

In the 22 February earthquake both buildings suffered significant damage and in the main collapsed or partial collapse of the street façades on Colombo Street.

On the 22nd of February, 2011 Rachel Conley had been in the Southern Ink premises at 593B Colombo Street minutes before the earthquake to make an appointment. When the earthquake occurred she had exited the building and walked several metres north along Colombo Street and was adjacent it appears to 595 Colombo Street. Ms Conley was an American citizen visiting Christchurch on a working holiday and she was travelling with a fellow American Jessica Kinder. Ms Kinder who was with Ms Conley at the time but on the way out of 593B Colombo Street Ms Kinder paused to close the heavy sliding door of that shop whilst Ms Conley was walking, started walking north along Colombo Street. It was as Ms Kinder walked to catch up with Ms

Conley who was now outside as I said 595 that the earthquake hit and Ms Kinder watched as a heavy concrete slab as she described it fell from above and struck Ms Conley trapping her underneath it and killing her.

The witnesses –

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JUSTICE COOPER:

Just on this photo that we're looking at now which is which?

MR ZARIFEH:

10 So the one with the check tiling, black and white tiling that is as I understand it is 595A and so the one further from that to the left is 595.

JUSTICE COOPER:

The blue one?

15

MR ZARIFEH:

Yes sir.

JUSTICE COOPER:

20 I see.

MR ZARIFEH:

The light blue and there's another, a close up photo so 595A on the right, 595 on the left and beyond –

25

COMMISSIONER CARTER:

Where's 593?

MR ZARIFEH:

30 Sorry.

COMMISSIONER CARTER;

Which is 593?

MR ZARIFEH:

And to the left or beyond it 593 and the rubble that's outside, you may remember the rubble, extensive rubble on the corner from 593 collapse, you
 5 can see part of that.

The witnesses who will be called and the likely order I'm going to call firstly Mr Patel who's the son of the owners Mr and Mrs Patel who are overseas and he will give evidence of their ownership and what they did following the earthquake. Mr Hanham who I mentioned from T H Consultants Limited who
 10 carried out an inspection of 595 on the 28th of January. Then Mr Sakaguchi who has been summoned to give evidence. I'm not sure if he's here. I don't think so. If he arrives we'll call him. We have some written material anyway that's gone in and is in front of the Commission and we'll perhaps deal with that and see what transpires but one of the reasons for including 595A was
 15 because of some uncertainty as to exactly where Ms Conley was when the earthquake struck and when she was hit and there's some suggestion that she may have been in between the two buildings or close to 595A as well.

1010

Mr Simcock I mentioned. He'll give evidence, he was the structural engineer
 20 who carried out or was involved in the strengthening of 595A back in 2000/2001 and he'll give evidence about that. Then there is the statement of Jessica Kinder which is on the website and which perhaps I can read out the relevant portion in a moment, and there's also another statement that I can read out as well from an eye witness, a Denise Healy and I'll read that out
 25 after that, and then the Christchurch City Council represented by Mr McCarthy will give evidence and deal with both properties at the same time, and then lastly Mr Smith, Peter Smith the structural engineer will give evidence of his reports on both buildings.

The likely issues that I've signalled in the summary and to counsel for the
 30 various parties. Firstly the application of the Christchurch City Council's earthquake prone policy to the building. Secondly the assessment process of each building after the September earthquake, these being unreinforced

masonry buildings. And thirdly, in relation to 595A the efficacy of the structural strengthening that was carried out in 2000/2001.

I'm just going to read, this is from a statement taken by the police and I won't read it all because some of it doesn't have relevance to this hearing.

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STATEMENT OF JESSICA LEIGH KINDER

Jessica Leigh Kinder states that is my full name, I'm originally from the United States, I'm 24 years old at the time of making the statement. I make the statement to Detective Kevin Dillon of Christchurch police about my friend

10 Rachel Elizabeth Conley.

I came to New Zealand on 25 February 2010 on a working holiday. I got a job as a nanny in Wellington and about a month after I arrived I met Rachel. Rachel was working as a receptionist at Rowena's Hostel in Mt Victoria, Wellington. Rachel is an American too, she is from Ohio. We quickly became
15 friends, we hung out a lot together having coffee and just enjoying living in Wellington.

Around the beginning of February this year we decided to travel around the South Island as our visas were running out. After that we were planning to travel to Brisbane and then to Asia to do some more travelling. We went
20 travelling through the South Island from the 14th of February and came to Christchurch on the 20th of February, a Sunday. We were booked to fly out on the 23rd. We went to Sumner on the Monday and mucked around and on Tuesday we came into Christchurch, so the 22nd was actually the first day we actually had in Christchurch.

25 We had decided that we would both get tattoos in Christchurch that day. Rachel had looked up the addresses of some tattoo shops on the computer before we left. One of these shops was called Southern Ink in Colombo Street. When we got to town we went to the Salvation Army and dropped off some clothes then we went to the Westpac Bank and got some Australian
30 money. Rachel would have had \$800 on her. This money would have been wrapped up in a bank statement in her bag that she was carrying. This bag was a purple coloured cloth shoulder bag that she'd bought in Asia, I think Nepal. The bag had little stripes through it. These stripes were coloured,

maybe green or blue but it was basically a purple coloured bag. Rachel wore this bag over and across her chest usually. Also in this bag would have been New Zealand driver's licence, her silver Canon camera, her cellphone I think it was coloured black, it was new, I'm not sure, it was a block type or maybe a slide. The camera may have been a Sony. Also in the bag was her bank, it was her Westpac Visa debit card, it would have been a similar style knitted pouch.

We went to one tattoo parlour but they didn't have an appointment so we left and kept walking on Colombo Street until we found Southern Ink. We found that the next available appointment was 3.00 pm. We had to drop off the rental car at 2.00 pm so we figured we could drop off the rental car and get back to Southern Ink by 3.00 pm. We set up the appointment and then left. Rachel walked out first. I was behind her. The door to the tattoo shop was a quite heavy glass sliding door. As we left the shop I paused as we left and turned and closed the sliding door. The door was quite heavy and I didn't want to slam it so I closed it slowly. While I was closing the sliding door Rachel continued walking away from the tattoo shop. The direction Rachel was walking away was away from the corner of Colombo Street and St Asaph Street. After I closed the door I looked at Rachel and saw that she was about three metres ahead of me. For some reason after I closed the door, some reason I turned away from the tattoo shop and sort of veered slightly towards the roadway away from the building. Just at that moment the earthquake struck. As it started shaking I looked at Rachel and I saw her standing still. I have a memory of trying to reach out to her but she was well away from me. I took a couple of steps running towards the road and as I did so I looked at Rachel sort of over my shoulder. She was standing still just as at that very moment I saw a large slab of concrete fall right on top of Rachel. This was immediately followed by a large amount of what seemed like rubble which also fell on the spot where Rachel had been standing. I didn't see the material hit her face, I saw her torso hit and then she has immediately become buried. This all happened extremely fast, the force was extremely strong. I couldn't stand up straight. It was like the ground was moving up beneath me and it was extremely loud. The force of concrete hitting Rachel was horrible, it

happened so fast she wouldn't have had time to move. As soon as I saw her get hit I knew instantly that she would have been killed. I was on the road by this time and I knew that there would be a huge blast of dust and debris following the building falling. I braced myself against the side of a car to protect myself from this. After the dust had blown through I turned to look where Rachel had been. I stood there yelling for Rachel, even though I knew she would have been killed. A group of guys gathered and said, "Where is she?" I indicated to the big pile of rubble where she had been. There was a car parked pretty much right beside where she had been standing. These guys started pulling rubble away from the spot. It took maybe a couple of minutes. They worked very frantically. After a few minutes they started calling her name more enthusiastically so I knew they had found her. They found her arm, a guy checked her pulse but I could tell from his reaction that he knew immediately that she was gone. When the earthquake struck Rachel would have been about one shop further up Colombo Street moving away from St Asaph Street.

MR ZARIFEH:

I'm not going to read the rest, it describes clothing. The other statement that I'll read now Your Honour is from Denise Anne Healy.

STATEMENT OF DENISE ANN HEALY

My full name is Denise Ann Healy. I live in Christchurch. On 22 February 2011 I was at the Lotus Heart Café at 595 Colombo Street. I had been inside the café sitting right by the window. Just before the earthquake I left the café and went to my bike which was locked up by the kerb in front of Billiken Japanese Restaurant, 595A Colombo Street. When the earthquake hit I had just set off on my bike and was where the footpath started to go out onto the road because of the barricades.

MR ZARIFEH:

And I think that's a reference to it, Your Honour, of all the barricades that were on the corner of St Asaph and Colombo.

MR ZARIFEH CONTINUES READING STATEMENT

I was hit by masonry and my bike was crushed. I crawled out into the middle of the road. A man in a car stopped and told me to get in the car which I did,
 5 however I did not feel safe in the car so I got out again and went and sat on the kerb in front of the Krishna Café directly opposite the Lotus Heart Café. This would have been about seven or eight minutes after the earthquake hit. I remembered that I looked over at the Lotus Heart because I had been sitting in the window only minutes beforehand. I could not see into the café because
 10 the awning had fallen down and was covering the front of the café. I also recall that some masonry had fallen down from the first floor of the building. By this point I was in shock because I realised that I had been injured, however my recollection is that some men were frantically trying to remove masonry away from a person in front of the Lotus Heart Café. Shortly after
 15 that I went back across the road to retrieve my personal belongings which were in the basket on the front of my bike. I noticed that a man and a woman who must have been near to me when the earthquake hit had been covered in falling masonry, but I believe they were rescued.

20 MR ZARIFEH:

Sir, I'll turn to the first witness to be called and that's Mr Patel, Hiten Patel and Miss Patterson from Buddle Finlay appears for Mr Patel and she will lead his evidence.

1020

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MISS PATTERSON CALLS:**HITEN RAMESH PATEL (SWORN)****MISS PATTERSON:**

30 With your permission just while Mr Patel's getting sorted if I may just make some very brief comments by way of opening?

JUSTICE COOPER:

Yes certainly.

MISS PATTERSON:

- 5 Mr Patel is here today to represent his parents Mr and Mrs Patel who are the owners of the property at 595 Colombo Street. Mr and Mrs Patel are in India and therefore unable to be here today. Mr Patel has had some firsthand involvement with this property but much of his evidence will consist of relaying information from his parents. This is the best available evidence in the
- 10 circumstances and Mr Patel is here to assist the Commission as best as he is able to today.

JUSTICE COOPER:

Thank you very much.

EXAMINATION: MISS PATTERSON

- 15 Q. Mr Patel, do you have with you your brief of evidence?
A. Certainly.
Q. Is your full name Hiten Ramesh Patel?
A. Correct.
Q. And you reside in Auckland?
20 A. Correct.
Q. And you're a business manager?
A. Yes.
Q. Could I ask you please to read from your brief of evidence. You may start at paragraph 2?
25 A. Certainly.

WITNESS READS BRIEF OF EVIDENCE

- A. "My parents Ramesh and Parwati Patel are the owners of the property at 595 Colombo Street. My parents are currently in India and are unable to attend the hearing. From time to time I have assisted my
- 30 parents with the management of this property. My parents purchased the property in 1995 and at the time an Indian restaurant was operating

from the property. For many years prior to the earthquake on February 2011 the property was leased to the tenants who operated the Lotus Heart café from the premises. I understand the top floor was set up as a residential use. It may have been used for this purpose but it is all part of the same tenancy. I am aware the tenants carried out some works at the property over the years. My parents were never made that these were – sorry, I'll repeat that sorry. My parents were never made aware that these works by the tenants. I am unsure the nature of those works. I have seen a copy of the Council records to the building consent application in 2004 that the application was made by the tenants. My parents had no involvement in this building, in the building consent application or processing. In particular they did not see or did not know the report by Endel Lust dated October 2004. My parents remember receiving a letter from the Council about the building being possibly earthquake prone and they were generally aware that some strengthening work would need to be carried out sometime in the future, which they intended to do. We are unaware of any strengthening work that had been carried out on the property prior to the purchase in 1995. No strengthening work has been carried out since my parents have purchased the property.

Following the earthquake on 4 September 2010 my parents visited the property to check the building and the tenants. This was about a week after the earthquake. They saw that they had been given a green placard from which they understood the building was safe for the tenants to continue to occupy. A broken window was in the process of being fixed. I initiated an insurance claim on behalf of my parents. I attended the property with somebody from Cunningham Lindsay, the insurance assessor. She recommended we have a structural engineer to inspect the property to check for any structural damage. Accordingly I contacted Noel Hanham of TH Consultants Ltd to do an inspection. I met Mr Hanham on site on the 28th of February 2011 to arrange access. I received Mr Hanham's report on the 3rd of February 2011. I passed it on to my parents. The report noted that there were no evidence of

significant structural damage. The report recorded potential hazard posed by plastering, plaster falling off the laths. My mother discussed the hazard identified by Mr Hanham's report with the tenants and told them that they should clear the upstairs unit and should not use it.

5 Neither my parents nor, nor I know whether the tenants did vacate the top floor prior to the earthquake on the 22nd of February 2011. Mr Hanham also reported that superficial repairs work had been carried out to fill internal cracks following the September earthquake. This work was done by the tenants without my parents' knowledge. I also passed

10 Mr Hanham's report on to Cunningham Lindsay in order to process the insurance claim for the damage caused by the earthquake. At the time of, sorry at the time of the February earthquake the insurance claim was being processed. My parents have asked me to express their sincere condolences to the family and friends of the victim."

15 Q. Thank you Mr Patel. Please stay and answer any questions.

CROSS-EXAMINATION: MR ZARIFEH

Q. Mr Patel?

A. Yes sir.

Q. I just want to ask you firstly about prior to September and the issue of

20 earthquake strengthening. As I understand it your parents have owned the property since 1995?

A. Yes sir.

Q. And in that time between '95 and September 2010 there's been no, they have not initiated any work at all to strengthen the building?

25 A. That's correct, there's been no strengthening been done.

JUSTICE COOPER:

I couldn't hear that I'm sorry.

CROSS-EXAMINATION CONTINUES: MR ZARIFEH

Q. There's been no strengthening done?

30 A. No strengthening has been done.

Q. Thank you. Now the tenants that were in the property and operating the Lotus Heart café?

A. Yes.

5 Q. Had been doing that for some time I think you said, you said for many years. Do you know how long?

A. To be exact, no, I can't but they had been there, they have been there for quite a few number of years. I can't, I'm sorry I can't give you an exact timeframe.

10 Q. All right. Now I think you're aware as you said in your brief now from I think looking at the file that's been put together for this hearing?

A. Yes.

Q. Of a building consent application back in I think 2004?

A. That's right.

15 Q. That names your parents as the owners, as they in fact were, and the applicant is the tenant of the Lotus Heart?

A. That's right, so the tenant had actually had placed, had put documents forward to the Council.

Q. Right.

A. For resource consent.

20 Q. And I think you're aware also that there was a, a report from a structural engineer Mr Endel Lust at that time and that's on the Council file recommending a programme of strengthening work over a number of years?

25 A. That's correct. But, um, if I can just add to that, um, we didn't actually get to see that file at all. What, what we've, we've only been notified, um, through a, particularly through the Council of a process of a resource consent going through.

Q. Right.

30 A. Um, that, um, that had been put through but there has been some documents that their tenants have actually put through forward.

Q. Right so the tenants applied for that work, is that what you're saying and –

A. That's correct.

Q. And you didn't know about that or your parents didn't know about it?

A. No we did not know about that at all.

Q. Right but you said all they knew was a letter from the Council?

A. A letter yep. Like a processed letter.

5 Q. Right.

A. That had come through.

Q. Well I'll get a letter brought up.

A. Sure.

Q. It's 5950031.11.

10 **WITNESS REFERRED TO LETTER**

Q. And you'll see in a minute this letter is addressed to R B and P R Patel?

A. Yes.

Q. And it's dated 12 January 2006?

A. Yep.

15 Q. Is that the letter you're talking about?

A. This is the letter and this is the first, um, knowledge that something had actually been going on at 595 Colombo Street.

Q. Okay and this letter and you see the last paragraph is essentially saying that "the Council will therefore not require you to take action on this matter at this time", so in relation to structural strengthening?

20

A. Yes.

1030

Q. So what did your parents do when they received that letter? From what you said that would have been news to them that anything had been going on?

25

A. Correct, that's right. First and foremost at that particular time my parents actually more so my mother and probably my father at the same time too but more so mum's been more proactive over the years that she would have contacted, had first port of call contact with our tenants and from there probably would have more than likely would have asked what's going on and I think that's been the first steps of what the plans that was actually, had arose that they were looking to do.

30

Q. Okay. So have you spoken to your mother about this letter?

A. Yes I have.

Q. Right. And is that her recall?

A. Definitely.

Q. Of speaking to the tenants. All right. But as is obvious from this letter in
5 terms of structural strengthening nothing had to be done at that time.
Was that her understanding?

A. Yes that's her understanding also.

Q. Did she have any contact with the council at that point, your mother?

A. To be honest I don't know.

10 Q. Okay.

A. At that point. I think more so they would have had contact with two
parties. One would have been the tenants and one possibly would have
been with our lawyer at that stage.

Q. And how did she feel about this consent application being put in without
15 her knowledge?

A. I can assume what she would have –

Q. You don't know.

A. Sorry yes.

Q. But in any event nothing was done and the Endel Lust report that was in
20 with that building consent documentation, did your mother or father see
that at the time back in 2006?

A. No. They haven't or they don't recall seeing it. The only thing that they
had recalled seeing had actually just been like architectural plans.

Q. To do with the alterations?

25 A. Correct.

Q. Well you said that in paragraph 6 that your parents remember receiving
a letter from the council about the building possibly being earthquake
prone and that they were generally aware that some strengthening work
would need to be carried out in the future right, so presumably that's not
30 the letter we've just been looking at. Are you talking about another
letter?

A. Yes another letter.

Q. Right. And do you know when that was, that letter?

A. To be honest.

Q. Was it before or after that one that we were just talking about in 2006?

A. To be honest sir I don't know but talking to my mother she has seen a letter come through via the council.

5 Q. Okay and did she know or when you say that she was aware or they were aware that some work would have to be done in the future, did she know the timeframes that were required?

A. It was something that she was looking to do eventually long term with the properties. It was their intention with their properties over a period of
10 time that they do look at doing upgrades eventually.

Q. Right. And in what kind of timeframe was she thinking?

A. I can't give you a definite timeframe but it would be something in the future that they would have done.

Q. So years rather than –

15 A. Yes years definitely not months.

Q. And did you say properties, did they have a number of properties?

A. Yes a small handful of properties.

Q. Similar construction?

A. This one was the only one as a double masonry building in their
20 portfolio.

Q. Just turning to September earthquake and events after that, you said that you attended the property with someone from Cunningham Lindsay?

A. Yes.

25 Q. When was that? How soon after 4th of September, 2010?

A. To be honest it would have been either in December or either in January, within those two months for sure.

Q. So it wasn't immediately after September?

A. No it was not.

30 Q. All right. And you refer to Mr Hanham reporting that superficial repair work had already been carried out for internal cracks. Had you seen those internal cracks when you went to the property?

A. Not myself at that stage no. My parents initially went first time to see if they were okay as I said in my briefing. My mother and my father had went at that stage and they had seen it. I had not at that stage but my understanding they were more of cosmetic cracks.

5 Q. Okay. Mr Hanham said that the tenants shouldn't be in the upstairs, the residential part. Has that always been a residential?

A. My understanding it has, it is used as, to be honest when Mr Hanham came that was actually my very first time of actually going up there too also.

10 Q. Going upstairs?

A. Yes. They've been free to use it but my understanding I don't know. At that stage when we saw it yes it was used as a residential.

Q. Okay. And you're not aware of it had always been?

A. I'm not aware that it had always been used as a residential no.

15 Q. But it may have been?

A. May have been yes.

Q. But it was certainly part of the same tenancy?

A. Definitely yes.

20 Q. And you said that you're not aware of the people upstairs or the tenants did vacate the upstairs. Is that because there were no further visits to the property or what?

A. I'll be honest no we didn't do any other further visits but when, when we were actually up there with Mr Hanham, Mr Hanham was there, I was there, my mother and my father was there and also the head lessee of that particular building she was there as well so at that time that's when Mr Hanham stated and you know when he was doing his inspection upstairs that his suggestion was that it was a good idea to vacate.

25 Q. When you say the head lessee are you talking about the tenant? The Lotus Heart Society?

30 A. Yes that's right.

Q. So your point is that they knew they were told by Mr Hanham?

A. Yes Mr Hanham had advised more so I think my mother and then my mother had also gone back and told the head lessee also. I definitely overheard that anyway.

5 Q. Now was there any repair work required to be done following September and Boxing Day then as far as you were aware?

A. From Boxing Day I'm not too sure to be honest because on Boxing Day my parents they did get around and have a look but on the Sunday itself, on the Boxing Day was that the Lotus Heart Café was actually closed.

10 Q. Right.

A. So I think mum did try to contact them back later on within that week to see.

Q. Okay. And do you know if any repair work was done then prior to February, prior to the February earthquake?

15 A. No, not that we are aware of no.

Q. And was any planned by your parents or not?

A. At that stage I think they were waiting, not waiting but they were still trying to absorb what options that they had to be honest.

20 Q. Mr Hanham says in his brief that he concluded that the building was likely to be earthquake prone. Is that your understanding?

A. Earthquake prone, in other words, sorry can I get you to break down earthquake prone. In other words more than likely it would collapse.

Q. Do you understand that term?

A. Can I get you to break that down sorry?

25 Q. Well did you understand it at the time? That term earthquake prone. Did you have any discussion with Mr Hanham about that?

A. No, not that I recall sorry.

Q. Now the tenants did they remain in occupation and were in occupation on 22 February?

30 A. Yes.

CROSS-EXAMINATION: MR ELLIOTT

Q. Mr Patel, I represent the interests of Rachel Conley's family today and firstly thank you for your expression of condolence on behalf of your parents. Not every building owner has made an expression of condolence like that and I'm sure it would be appreciated. Just firstly
5 dealing with the historical position of the building. Mr McCarthy from the council will give some evidence later on today about the building consent application that's been referred to. Have you seen his statement?

A. I haven't seen his statement, no.

10 Q. He makes a statement in paragraph 11. I'll just read it to you.

A. Sure.

1040

Q. "The securing programme recommended to the owner by their engineer does not appear to have been accepted by the owner and was not
15 included in any building consent application. The Council has no documentation concerning why the owner did not proceed with the programme," and I infer that he's referring there to report from Mr Lust that you referred to, and so is it your parents' position that they simply weren't aware of any securing programme because they didn't see that
20 report?

A. I'd say so, yes.

Q. I'm just going to highlight one or two sections from that. It will be referred to later on today as well.

A. Sure.

25 Q. I'll just start with the applications for building consent itself, which is BUICOL595.0031.1. Firstly if you look at the top left-hand boxes there you see there's an owner listed?

A. Yes.

Q. And then applicant and it says must be authorised by the owner to make
30 this application. Is it your parents' position that the applicant here has proceeded without their authority?

A. Sorry can I get you to repeat, I didn't quite hear that.

Q. Well the form says that the applicant must be authorised by the owner to make the application.

A. Yes.

5 Q. And I think you've said that the tenant made the application without any knowledge?

A. Correct.

Q. So is it your parents' position that they didn't have authority to make the application?

10 A. We – you know how it's got Harita Davis on there. We didn't even know that was actually, that was, obviously my parents' name has been written in but they were not even aware of that at all.

Q. I see. So their position is that the tenants didn't discuss with them at all the possibility of making an application for a building consent?

A. That's correct.

15 Q. BUICOL595.0031.8, this is page 3 of the report from Mr Lust of Studio 21 dated October 2004, and you've seen this now?

A. I've only sort of – only in the last few days, yes.

20 Q. Well I'll just highlight a few passages which may not be directly relevant to your evidence but which will be important through the day I think. So the building's identified as a standalone building in the top paragraph, assessed as earthquake prone and reference to the floor and roof timbers not being properly connected to the supporting brick walls. The next paragraph he does talk about the situation being more complex because the building is one of 10 sharing party walls. And then if the
25 next three paragraphs could be highlighted. He says, "not reasonably practicable to strengthen this one building to offer support," but then goes on to recommend securing the building to ensure no loss of life during an earthquake by independently supporting the first floor and roof and mentions that the building has seismic resistance, significant
30 resistance in the east-west direction along the line of the party walls but is lacking in the north-south direction along the line of the shop fronts. So this was October 2004 and is it your parents' position that the tenants didn't come along and raise any of these issues with –

A. No not at all.

Q. – them. All right. But you've said that at least as at the 12th of January 2006 when that letter from the Council came in there was an understanding that the building was, at least in the Council's eyes, potentially earthquake prone.

5

A. That was in 2006 and – that was a general letter that came out, correct.

Q. That was – well I can show you again if you like, you've seen it just now.

A. Oh yeah.

Q. January 2006. Now a question or two just relating to the period after the earthquake then, or after the September earthquake and before the February earthquake. There was a report from Mr Hanham at TH Consultants?

10

A. Yes.

Q. Do you know if there was any discussion with Mr Hanham about the fact that this building might be earthquake prone and how that might affect his assessment of the building?

15

A. Not that I recall.

Q. Did you have any discussions directly with him yourself or was that your parents?

20

A. That was (inaudible 10:45:33) the parents to be honest.

Q. And do you know if there was any discussion with Mr Hanham about a more detailed assessment rather than a level 2 building assessment?

A. No. The assessment that I thought would have been satisfactory to be honest of – the assessment that Mr Hanham done I thought was satisfactory. That was my understanding.

25

Q. What was that understanding based on?

A. I thought the report that Mr Hanham done was a thorough report on the building and that's what we adopted to go for.

CROSS-EXAMINATION: MR LAING – NIL

30 **CROSS-EXAMINATION: MISS SMITH**

Q. Mr Patel, you've said that Mr Hanham didn't discuss with you the fact that the building was likely to be earthquake prone but you've said he may have actually discussed that with your parents. Is that right?

A. Yes, I've – not with me directly, possibly with my parents.

5 Q. Did you have a discussion with Mr Hanham about correspondence that you've received from the Council and whether you'd received any correspondence about the strengthening of the building?

A. Not – no I haven't.

Q. But again that could have been with your parents?

10 A. Yes, more than likely.

Q. And likewise were you present, or again is this your parents were present during the conversation where the strengthening that would be required for this building was likely to be similar to that, that was evident for 595A Colombo Street?

15 A. No, I wouldn't have been present at all.

Q. But again that could have been – that discussion could have been with your parents?

A. It could have been, yes.

CROSS-EXAMINATION: MISS PATTERSON – NIL

20 **QUESTIONS FROM COMMISSIONER CARTER – NIL**

QUESTIONS FROM JUSTICE COOPER - NIL

WITNESS EXCUSED

MISS SMITH CALLS**NOEL RICHARD HANHAM (SWORN)**

Q. Mr Hanham, can you confirm your full name is Noel Richard Hanham?

A. I do.

5 Q. And you're a director of TH Consultants Limited, consulting civil and structural engineers. Is that correct?

A. That is correct.

Q. You're a chartered professional engineer. Is that correct?

A. That's correct.

10 Q. And you hold a Bachelor of Engineering with First Class Honours from Canterbury University and a New Zealand Certificate in Engineering?

A. That's correct.

Q. And you're a Fellow of the Institution of Professional Engineers New Zealand and you have 45 years experience in the building industry with
15 37 of those as a professional engineer?

A. That's correct.

Q. Now Mr Hanham you've prepared a statement for the Commission. Do you have that before you?

A. I do.

20 Q. Can I get you to read that please from paragraph 3?

WITNESS READS STATEMENT

1050

A. On 27th January 2011 Mr Hiten Patel contacted me by telephone in relation to the building located at 595 Colombo Street. Mr and Mrs Patel
25 are the owners of the building, Hiten Patel is their son. The Patels wanted me to investigate the extent of the damage that had occurred as a result of recent seismic activity to see whether there were any immediate safety concerns associated with the building. They did not want a detailed inspection as such. My inspection was limited to a
30 visual inspection only. The Patels confirmed my engagement by email on 27th January 2011. I inspected the building on 28th of January 2011. This was the first time that I had inspected the building. The inspection lasted approximately one hour, including 20 minutes spent walking

along the street and viewing the exterior of the building. The building is a two storey commercial premises constructed of unreinforced brick walls and timber floors. No structural strengthening was apparent compared with the shop next door which had a steel portal in place. I asked the Patels whether they had received any notices or correspondence from the Council about earthquake prone buildings, to which they said they had not. I also asked whether they had any plans available. They told me that they did not. I did not request a copy of building plans from the Council because that can take up to a week and such a delay is not appropriate when an immediate assessment of the safety of the building is required. Further, given the age of the building any plans were likely to be of limited assistance. At the time of my inspection the Patels advised that inspection had not been carried out after the September earthquake. I assumed that there would have been some form of level 1 assessment undertaken by the Council, Civil Defence, although I was unable to confirm this.

There were no signs of any placards. The Patels were unable to recall what colour placard if any the building had following the September event. Ultimately what placard was issued following a level 1 assessment was not going to be relevant to the immediate safety assessment that I had been instructed to undertake. My overall impression was that the Patels were not sure of the extent of damage to the building or when the damage had occurred. I understood they'd had very little access to the building since the earthquakes. At the time I visited the building the tenant's business was open for business but as there were customers in the café I was unable to speak directly to the tenants.

The Patels told me a number of window panes had broken but they had since been repaired. The Patels also told me the recent earthquakes had caused some cracking to occur but the tenants had carried out some work to fill the internal cracks. It was obvious to me that subsequent aftershocks had caused further damage to the building since the repairs because there were cracks in the repair work. It was

also obvious that the damage had been caused to the first floor ceiling and partition walls.”

EXAMINATION CONTINUES: MISS SMITH

5 Q. Mr Hanham if I can just get you to stop you there and we might just have some further clarification of the inspection that you did undertake on that day. Can I just get you to by start, starting to explain to the Commission the inspection that you did, perhaps starting from the front of the building?

10 A. Initially I had tried to get an overall view of the line of buildings that were there to try to judge if there were any obvious damage, cracks or anything of that nature. Subsequently when the Patels turned up we walked inside, through the building. I was looking at the walls in the café, the junctions of the ceilings, purely a visual undertaking.

JUSTICE COOPER:

15 Q. Pause for a moment, you say the Patels turned up. Who, how many, was Mr and Mrs Patel Senior there, is that right?

A. That's correct.

Q. And also their son?

A. That's correct.

20 **EXAMINATION CONTINUES: MISS SMITH**

A. We went through the café. I stopped to look around a bit at the, what appeared to be some little cracks in the rear. We would have then gone upstairs. I'm not sure exactly whether I went into the kitchen before going upstairs or after, I... Upstairs again I did a visual inspection of
25 the wall junctions, I looked out to try and get a better picture at the front of the building to check things like the connections of the verandahh to the brickwork trying to judge whether there was large cracking or, or minor cracking, whether there had been any separation between the various building elements. I went out the back of the building to have a
30 look at the external brick surfaces.

Q. Well maybe if we can have a look at some photographs and we can actually look at some specific points. Just bring up WIT.HAN.0001A.1.

WITNESS REFERRED TO PHOTOGRAPHS

Q. So this is a picture of 595 and did you take this picture?

5 A. I did.

Q. And what was, what was important for you in terms of this picture and what you were looking at?

A. Well in particular sort of near the top there, there's the connection of the verandah stay into the brickwork. In this case there's no obvious
10 movement or distress and it, I would also be looking along below that on the photograph at the state of the brickwork itself.

Q. And what was the state of the brickwork?

A. Generally considering the building's age it didn't appear to be damaged to any significant extent.

15 Q. And in relation to the connection from the verandah, why is the stability of that connection important?

A. These verandahs which sort of hung off the front of the building and if you get a vertical component in your earthquake are liable to jump up and down, pull out of the bricks, either pull the bricks with them or just
20 generally fall on the, ah, faller (makes sound) down on to the footpath below.

Q. And if we can get you to have a look at the next photograph in that sequence which is 002 and this is a view from the other direction and again you're looking at the verandah stay?

25 A. The verandah stays and their connections. It's not a particularly well-focused or, shot it doesn't show but the connection at the top on the right of the photograph there again didn't show any evidence of any distress.

Q. Did you got out on to the verandah or the roof area?

30 A. Well I can't say for sure but if there was access available I'm sure I would have done. It's, having done a number of inspections I have been out on a number of verandahs, I haven't got any photographs

taken out there so I – my, I think I did but I cannot say with any full certainty.

Q. But if there was little or if there was no damage to that area you may not have taken any photographs is that right?

5 A. I may not have taken my camera out with me.

Q. Right.

A. Which might have been more of the problem.

Q. And the nature of access to that area that you're talking about could be for example the ladder that you can see at the far end of that photograph?

A. That's correct.

Q. Now Mr Hanham you refer in your later report which we'll get to –

JUSTICE COOPER ADDRESSES COUNSEL – LADDER AND PHOTOGRAPH NUMBER 1A.2

15 1100

EXAMINATION CONTINUES: MISS SMITH

Q. So in your report Mr Hanham you also referred to some buckling of the verandah, if I can get you to look at photograph 0001A.3. Is this what you were talking about when you refer to that?

20 A. That is correct. There are two areas in fact of some buckling of the soffit lining to the verandah. In this case on the left there you can see old damaged rotten timber whatever it is. My conclusion really was that this was likely to have been caused by previous moisture ingress and whether or not it had received any movement or not in the earthquake it would be difficult to judge other areas of the joints between it on the right just above the blue sign. It doesn't appear even as though the paint work had been broken at that point.

Q. And again with reference to another photograph which is 0001A.4.

30 A. Just a bit further north the junction would be past 595A just above the, in the middle there above the hanging basket thing some buckling. Again that appeared to be related to older water damage with a downpipe somewhere near that area which takes water off the verandah.

Possibility it may have been slightly juggled around by the earthquake but nothing of any great significance.

Q. And you say nothing of any great significance is that because of the verandah stays that you referred to before?

5 A. These bits we're looking at are structurally not a part of any support system. That's really a soffit lining for aesthetic appeal.

Q. Okay. Perhaps then if we move to inside the building with reference to photograph 0001A.5. Now I understand and you'll correct me if I'm wrong but this is a photograph of the front?

10 A. Yes, yes it is. The upstairs at the front. At this point this is probably the worst evidence of any sort of damage you can find and then in the middle, bottom, near the middle there there's sort of peeling paint and plaster which I would suspect as old rather than earthquake related. There's a bit of along to the right some what do you call them cracks
15 that are opening up between the top of the soffit and the ceiling. Again it looks to be old. Existing more just over a short distance if you refer to the right there's no further damage.

JUSTICE COOPER:

20 Q. What is that feature that comes out at right angles to the –

A. I think that's some sort of electrical –

Q. Wiring.

A. – wiring. Something like that.

EXAMINATION CONTINUES: MISS SMITH

25 A. You can see a wee track just over to the left in the ceiling lath and plaster, for the plaster.

Q. And the next document I would like you to refer to is 0001A.6. Now this is, it needs to be rotated actually 90 degrees.

A. This is at the front of the restaurant looking out above the door or
30 window area there's a soffit lining – get myself orientated – over to the left and somewhere at the bottom there you can. Right now we're up the right way. The windows below the top of the front of the building

and in the middle of it here you can see it and the soffit lining comes back from there a crack that it's possibly been repaired and showing signs of bulging or just opening up slightly.

5 COMMISSIONER COOPER:

Q. Excuse Mr Hanham are we looking at the ceiling of the restaurant?

A. We are looking at I think it's the ceiling. I think the windows went right up to the ceiling but it's possibly not the underside of the floor above. That's a false piece there.

10 EXAMINATION CONTINUES: MISS SMITH

Q. But when you were carrying on your inspection of the interior of the building you've said that you were looking at the connections. What specifically were you looking for?

A. Well in terms of getting potential problems you'd be looking for separation of walls from floors or ceilings from walls, whether any significant gaps have opened up and other areas you might look at is whether there was any significant cracking in the masonry construction bricks.

Q. So maybe if we can have a look at one particular window which is 0001A.11. So as I understand it this is a window at the rear of the building?

A. That's correct.

Q. And the damage that you can see here did that cause you any concern at all?

A. Not to any great extent. A lot of the damage you've got here appears to be historic rather than earthquake related. There's a lot of peeling bits and pieces of plaster and paint, looks old. The cracks in the ceiling there going up the top of the photo that would possibly have, that was just in the plaster lining it was probably caused by the earthquake. Over to the left maybe a piece of filling has fallen out. There was no significant separation between the wall and the ceiling. The paint falling

off wasn't at the top is not of any concern. The windows themselves really just need a bit of TLC.

Q. In relation to the top part of the window though did it, did you think about removing any of those linings at all to see whether there was any further damage behind?

A. The fact that there hadn't been any significant separation it didn't seem relevant to go knocking more stuff off the building.

Q. And did you check outside this particular window?

A. Yes I also inspected the exterior of the building in behind here.

10 1110

Q. Let's have a look at that, which is 001A.7.

WITNESS REFERRED TO DOCUMENT

Q. Is that the window that you can see in that bottom right-hand corner of that photograph that you talk about?

15 A. That's correct.

Q. So in relation to that particular window, what you're saying is that there was no evidence of any damage at all flowing through to the exterior?

A. Not in the location of the window itself. There is some minor cracking you can see just in the left, to the left here. Right in the middle there's a brick that appears to have moved, but again it was difficult to say whether that was earthquake related or had been there for some time. The paint around it hadn't looked as though it had been seriously affected, you just, as you move down you can see some minor cracking in the mortar but not of any great width or anything like that. This rear end of the building was possibly where more damage in terms of, relative terms, had occurred.

25

Q. And in relation to the condition that we can see here, was it similar to or different to the condition at the front of the building?

A. This would be in poorer condition than the front. The mortar at the back is, well not as what do you call it, not good.

30

Q. And you've seen Endel Lust's report and the documents provided to the Commission, and he talks about the need to re-point some of the mortar and that's what you think might be required here?

A. I believe that's probably what he was referring to, this mortar at the back I think he said was a bit crumbly and what have you. Whether someone has done a bit of superficial repair work and the paint job you can see there.

5 Q. You referred in your evidence to the plaster coming off the lath in the first storey, if we can just refer to picture 0001A.9.

WITNESS REFERRED TO PHOTOGRAPH

Q. And is that the nature of the damage that you're talking about there?

A. That's correct. That's probably the worst part where the whole large
10 area of plaster has fallen off. You can see over more to the right there is loose plaster which is losing some of its integrity and hanging onto the laths.

Q. Did the condition of this give you any cause for concern at all?

A. Well this really is superficial stuff. The plaster work upstairs is not in very
15 good condition. What I would have been more concerned and what I was looking for if there'd been any separation in the area between junction of the ceiling and the wall, that's – oh, there it is, just along the line, sort of near the bottom there running across the photo, there was no apparent significant separation at that point.

20 Q. Perhaps if we can just look at one last photograph which is 0001A.14.

WITNESS REFERRED TO PHOTOGRAPH

Q. So what side of the building is that wall?

A. That's the south wall.

Q. So when you say the south wall you mean the party wall?

25 A. The party wall between there and 593A or B or however it may be.

Q. So and the damage that you can see there is that signs of movement between the wall and the ceiling?

A. Well there has been obvious movement to cause a bit of cracking to open, but again the extent of it or width of it was one, two millimetres
30 maybe, nothing to cause any particular alarm in terms of it looking as though it was about to separate between the roof and the wall.

Q. And from your recollection the wall or the front façade for example, did that evidence any damage like this particular photo?

A. I don't – I can't remember any, I didn't photograph any, I would have thought I should have taken photos of things that looked like damage.

Q. And in fact, sorry I did promise that was my last one, but I will refer you to one more which is 001A.16.

5 WITNESS REFERRED TO PHOTOGRAPH

Q. Now, I mean you were taking pictures of the damage that you observed on that day and this as I understand it is a photograph of some cracking to the rear of the building. Is that correct?

A. That's correct.

10 Q. And this is on the ground floor so the Lotus Heart Café's premises?

A. That's correct.

Q. And the cracking that you recall seeing?

A. There is some cracking, what appeared to be where they had done some repair work, on the walls, and had painted over it and I'm trying to
15 take a photograph of those cracks, but I'm afraid they haven't shown up in the photo, they were only hairline cracks and –

Q. So if you were taking a photograph of hairline cracks the fact that you haven't taken photographs of the front façade might suggest that there was no cracks evident in that particular area?

20 A. I would suggest that's a reasonable conclusion.

Q. Now you've seen a copy of Endel Lust's report from 2004 which refers to the fact that there is no sign of any positive connection between the walls and the floors of this building. Do you agree with that statement?

A. Indeed, that was how they would have expected to be constructed.

25 Q. And so that is why you were looking for particular movement in those areas?

A. That's correct.

Q. He had recommended some securing as opposed to strengthening work I think to be carried out, you don't recollect any work being done?

30 A. There was no evidence of any work having been carried out on this building.

Q. And you're familiar now with the works that he had recommended. What was the nature of those recommendations, what were they designed to protect?

5 A. Well again he was looking at mainly, what, securing work rather than full strengthening I think as mentioned. Full strengthening is very difficult within a building that is a one-off amongst a whole group of them, unless you can treat them as a group, so securing in his recommendations was to prevent the floor and roof that separation occurring and then collapsing onto people occupying the building.

10 Q. And that was similar to the work that had been carried out at 595A?

A. He might have been recommending a bit more than what was done there, but similar to that type of thing, a steel frame that has been put in the front of 595A.

15 Q. Can I get you Mr Hanham to continue reading your brief now please from paragraph 9?

WITNESS CONTINUES READING STATEMENT

A. At the time of my inspection there was no specific information for engineers relating to inspections after a seismic event other than New Zealand Society for Earthquake Engineering Building Safety evaluation
20 guidelines. I carried out my inspection as a level 2 rapid assessment. A level 2 rapid assessment is meant to identify initial structural and safety issues. It is a visual inspection only and not intended to provide detailed information on all repairs. It is focused on immediate public safety as well as assessing the need for any temporary works such as shoring,
25 temporary securing or making safe.

1120

I took into account the impact of the earthquake on 4th of September, 2010 on the structural integrity of the building as well as the subsequent aftershocks. Information from GNS or any other sources about the
30 likelihood, location and extent of further aftershocks was not used in the production of my report. My recollection is that I did not at that time have any particular knowledge of GNS predictions. There was limited

information available prior to February's earthquake. What information there was available tended to focus on the liquefaction effects.

I considered that the ground floor remained in a habitable condition. I could see that some repair work had been done but the extent of those repairs was hard to quantify. They were not obvious from a visual inspection. I thought that the first floor required repair work to restore it to its pre-earthquake condition and that the first floor ceiling presented a potential hazard because of plaster falling off the laths. As there was no evidence of any significant structural damage I did not consider that the building had been severely damaged by the earthquakes. I concluded that the building was in essentially the same structural condition as it would have been prior to the earthquakes. That is while the building was unlikely to meet the current building code standards. There was no signs of bricks pulling away from the structure for example and the building was essentially safe.

EXAMINATION CONTINUES: MISS SMITH

Q. Mr Hanham, if I can just stop you there. Can you clarify what you mean by 'essentially safe'?

A. Essentially well it is continuing in a condition that was acceptable prior to the earthquakes coming along. The nature of inspections done at that time, this was the type of the comparisons we're making was with the prior to the earthquakes and essentially safe was considered that it was continuing in the same state it had been previously considered safe enough to occupy.

Q. And has that changed do you think now as a result of what we now know after February?

A. Yes it has. I think since the February quake we are looking at buildings with a, from a different perspective. We are perhaps taking more into account, where they sit within the earthquake prone category than with the nature of the assessments and comparison criteria we used at that time.

Q. And I think you've seen now a report from Peter Smith to the Commission where he's recommending that the council should nominate some minimum strength levels that engineers should assess buildings to prior to occupancy or public access within the fall zones. Do you have any comments to make about that suggestion?

A. I believe that something like that has to come out of any future times of quakes or aftershocks that we now have. There's been some lessons for us I suppose have been more severe than the original quakes. That's I'm not an expert in it I guess a possibility. I don't know how we could actually, that should be carried out but it means something.

Q. Mr Hanham, can I get you to continue reading your brief please from paragraph 13 please.

WITNESS CONTINUES READING STATEMENT

A. After my inspection I recorded my observations in a report dated 3rd of February 2011 to Mr and Mrs Patel. I also had a general discussion with the Patels about the conclusions I had reached. Although not recorded in the report I recommended and Mrs Patel agreed that the first floor should not be occupied. The recommendation was based on the potential for harm should a person be hit by plaster falling from the laths during further aftershocks. I did not consider the risk life-threatening. My conclusion about the building was that it was likely to be considered earthquake prone. I had observed that the adjacent building at 595A had some strengthening work in the form of a steel frame installed at some stage. I considered that this frame by default would have provided some form of support to the building at 595. This was briefly discussed with the Patels.

Q. And Mr Hanham when you say this was briefly discussed with the Patels what do you mean?

A. I was trying to establish at that stage whether there'd been any discussions or correspondence or whatever with the council with regard to the requirements of strengthening. I was surprised that the council hadn't done something in the past. I was using the frame next door as an example of the type of work that may almost likely to be needed.

Q. So did you talk to them about the building being earthquake prone as such?

A. I'm not sure whether I would have used those particular words or whether I just talked in terms of strengthening requirements.

5 Q. And finally Mr Hanham paragraph 15 please?

A. I did not hear any further from the Patels until 17 November 2011 when Hiten Patel emailed me requesting a copy of the photos taken during my inspection so that they could be provided to the Royal Commission. I provided the photographs to him.

10

COMMISSION ADJOURNS: 11.27 AM

COMMISSION RESUMES: 11.42 AM

15 **CROSS-EXAMINATION: MR ZARIFEH**

Q. Mr Hanham I firstly want to ask you about the inspection and, or in particular your instructions from the Patels and you said that the Patels' son who we heard from today was the one that first spoke to you and –

JUSTICE COOPER:

20 Q. Just pause Mr Zarifeh, because it may not be... So the answer to that question was, "That's correct"?

A. That's correct.

CROSS-EXAMINATION CONTINUES: MR ZARIFEH

Q. And I think that was by phone?

25 A. That's correct, yes.

Q. And it was in that phone call that you discussed what you were required, was required of you?

A. That's correct.

Q. Right. You said that in your brief that, "The Patels wanted me to investigate the extent of the damage that had occurred as the result of

30

35

the recent seismic activity to see whether there were any immediate safety concerns associated with the building”?

A. That was my understanding.

Q. Right so that's the Patels' son conveyed that to you?

5 A. Indeed.

Q. You said that they did not want a detailed inspection. What do you mean by that, what's, what do you mean by firstly by detailed inspection?

A. A detailed inspection would to my mind include perhaps researching the history of the building, carrying out some calculations, possibly doing more than just visual possibly looking at how the building was fully constructed and...

Q. Right would that also include perhaps removing if necessary linings?

A. It may do if it were deemed necessary depending on the information available.

15 Q. What about looking in roof cavity?

A. It wouldn't, I would expect to do that as part of a detailed...

Q. Right and you said, mentioned calculations, is that to try and calculate the strength of the building or the capacity?

A. In essence yes.

20 Q. Right so when you say that they did not want a detailed inspection, did you discuss with them what kind of inspections could be carried out and what would be involved in the detailed one?

A. Ah, it would not have been discussed in any great detail. It would have been more along the lines of, “What do you require now?” Is this what I call safe to occupy type of inspection.

Q. Right. The reason I'm asking is because it seems to me anyway that when you're dealing, when an engineer's dealing with an owner of a building who may have no knowledge of structural engineering, their issue will often be “is it safe to be in there?”, correct?

30 A. Correct.

Q. And so they are reliant on an engineer to give them some guidance as to the level of engineering inspections required and presumably the more detailed the more costly to the, the owner?

A. That's correct.

Q. So in this situation did you give them some guidance as to what should be carried out in your view?

5 A. This probably followed from their insurance assessor at Cunningham Lindsay wanting some assurance that there were no immediate safety concerns to the occupants of the building.

10 Q. Right. Okay, and from your point of view and in your discussions with Mr Patel were you satisfied that the kind of inspection that they were wanting and which you ultimately did was sufficient for, for their purposes?

A. I believed it was appropriate at the time.

Q. Right and I think as you've said your view as indeed others has probably changed since February?

A. That's correct.

15 Q. Okay. And presumably if you knew then what you know now you might have approached it differently?

A. I believe I would've yes.

Q. Right and pushed for a more detailed inspection?

20 A. Yes and possibly would've had to notify the Council as to what they should be doing.

Q. As to your view of what they should be doing?

A. Correct.

25 Q. All right. And I presume that you would agree from what you said that the green stickering as was done in buildings such as this from a quick external inspection given what we know now is, you view that as inappropriate?

A. I can't say I, say it's fully inappropriate. We –

Q. Or inadequate?

30 A. In today's terms someone has to do an immediate assessment, are there any immediate hazards that means that no-one should go near the building or people should be allowed some form of restricted access? You can't be expected to have enough people available to cover a wide

area without something along those lines and it's the follow-up procedures that possibly need looking at.

Q. Okay. You said in your actual report dated 3 February 2011 under "Scope of Report", "The scope of this report is to investigate and provide recommendations for the following. Investigate the extent of damage that had occurred to the building as a result of recent seismic activity, provide an assessment of the structural implications of damage", and I presume when you saying, when you mention structural implications of the damage is that a reference to the safety aspect?

10 A. It is to the safety aspect. I'd been looking, has damage occurred? Should something be done immediately to rectify or prop it up or whatever is appropriate?

Q. In terms of this issue of safety and safe to occupy you mentioned in your report about the September earthquake and the aftershocks that have been experienced including Boxing Day and I think you said you took that into account?

A. The –

Q. Tell us a bit more about that?

A. Well what I probably would be looking at is we'd had a large event and the normal expectation after a large event is you get a tapering off with the odd shock of some lower magnitude but still sig- reasonably significant. I probably only considered the Boxing Day as one of that sequence whereas in hindsight maybe it was the precursor to what happened.

25 Q. Right. So again given knowledge post February the issue of safe to occupy might have taken on a different complexion?

A. A different, yeah, complexion yes.

Q. The cracks that you referred us to and that you saw in the, particularly I think in the upstairs in the ceiling between where walls and ceilings met, am I correct that you thought there were, there were gaps there but they were one to two millimetres and not significant to cause you concern structurally. What I was going to ask you though is what about enough

to cause you to think, "Well perhaps I should look in the ceiling cavity and look at the connections or anything like that", or behind wall linings?

A. The, the amount of, well there were cracks but separation was not evident. If there'd been obvious separation then you would take a look to see what had pulled away from what.

Q. Right.

1152

A. There was no evidence of anything having pulled away from anywhere.

Q. And just tell us then if you had seen separation what steps would you have taken as part of this assessment?

A. I would have either recommended further investigation had to be done if this is where it was at. My report would have included something in the conclusions that this had been noticed, further whatever's appropriate depending on what I found should happen.

Q. So again would that come back to the owner? I know this is hypothetical but to the owner, and it would depend on whether they wanted you to go to that further step?

A. That I – yes that's essentially how I would see it. This report was to take the initial assessment of where it stands at the moment; is there any obvious damage; what are the next steps that should be undertaken.

Q. And in this case your overall assessment was there was damage, and there was structural damage, but it wasn't significant?

A. Yeah, the structural damage was very minor cracking in brick mortar joints, a few things like that.

Q. So you didn't have to go that further step?

A. That's correct.

Q. You said in paragraph 5 that you asked the Patels whether they had received any notice or correspondence from the Council about earthquake prone buildings?

A. I don't know whether I've used the term exactly earthquake prone or used some more generic term about requiring building upgrade or strengthening or something along those lines.

Q. Right.

A. It was only a brief conversation. I'm not sure exactly who I had it with, there was people all round and at the time –

Q. Do you mean with Mr and Mrs or with the son?

5 A. Well they were all there at different times but one might have been over there and a couple there.

Q. But the answer you got was that there hadn't been?

A. That's correct.

Q. And from what you've said there was certainly no evidence of structural strengthening in the past?

10 A. No.

Q. You said also in that paragraph you asked whether they had any plans available?

A. Well that's –

Q. Are you talking about building plans?

15 A. Building plans, yes.

Q. Why did you ask them that?

A. It is always of some help if there are any plans available and you're making an assessment, there's a possibility of it giving you a clue as to a likely point of weakness or something like that.

20 Q. And they didn't have them, and then you said, you went onto say that they weren't essential for what you were doing, correct?

A. That's correct.

25 Q. So as I understand you they would have, if they'd had them there you would have looked at them and considered them, but given the nature of the assessment you were doing you didn't have to obtain them?

30 A. Well if – no. It's – the nature of the assessment and the nature of construction, it's a fairly standard form of construction for a building of that age. The expectation, I would have said the plans at most would have been rather brief in what they gave me and would have confirmed what I probably expected.

Q. But if it was a detailed assessment you might have required plans presumably before you carried out your inspection if they were available?

A. Ideally it is always good to have plans.

Q. You were referred to the Endel Lust report and in particular where he had said in describing the building that the floor and roof timbers were not properly connected to the supporting brick walls and you said that's
5 a common feature of these buildings. What I was wanting to know is, are you able to tell whether those connections have been compromised from damage in the form of cracks in the interior or do you have to actually look at the connections to be certain about that?

A. The type of connection that you get in the old masonry buildings is
10 generally they whack a couple of bricks out to make a pocket, poke the timber in. The failure mode is likely to be the timber pulling out of the brick wall in which case you would see separation between the wall and the floor or roof and wall, whichever one you're looking at. I considered that other forms of failure, well there is perhaps one instance down the
15 back where there was a piece of corner floor that was a bit spongy and it was right in the corner and looked to be old water damage where a timber had possibly been decayed.

Q. And so you didn't consider it was related to the earthquake?

A. No it wasn't earthquake related.

20 Q. Is that the same, you mentioned when you were giving evidence before that the plaster was falling on the upper storey, in the ceiling, and appeared to be old?

A. The bits here and there, there were bits of plaster that had, above a window, that had curled and buckled or whatever you call it, which
25 looked more like water damage of some sort.

Q. So you weren't concerned about those, you were concerned for – perhaps if we bring up 0001A.10 please?

WITNESS REFERRED TO PHOTOGRAPH

Q. Is that what you're talking about?

30 A. Yes, that window you can see at the back there, along the top of it there's been some in-fill plaster or something put in there at some point to the right. It's well what I call buckled or water damaged or been

pushed out a bit. Over on the left there, there's a possibility one bit has fallen out.

Q. Right, so that's old damage, is that what you're saying?

A. The general damage appeared old. There has been some movement, or
5 minor movement caused by the earthquake but nothing significant.

Q. In the ceiling that we can see the cracks and the plaster that's lifted in the big patch where you can see the actual timber, the lath and plaster on the left?

A. Yes.

10 Q. That was earthquake related?

A. I believe a lot of that was. It had fallen off in the – well I guess whatever shaking had gone on. The ceiling itself has probably decayed over time, the key between the plaster and the lath is possibly non-existent.

Q. Right and that was the concern for the upstairs use that you had?

15 A. Indeed yes, so there are loose bits even in that photo still alongside the bit that's disappeared on the left.

Q. I'll just get you to have a look another photo you've referred us to, .11 same sequence.

WITNESS REFERRED TO PHOTOGRAPH

20 Q. That was the inside window, inside of the upstairs window on –

A. Yes, that's a closer up show of the previous back window.

Q. Back window. And you then referred us to I think .7 in the same sequence and just look at that, or just before you leave that one, that appears to be a wooden window?

25 A. Yes, and that's – I must admit puzzled me at the time, and –

Q. Because if we go to .7 –

A. It appeared to be a steel window.

Q. Yes.

A. And I'm now – you've got me doubting whether it's the next window
30 over.

Q. What, this window is the next one over? So the window that we can see in .7, 0001A.7, that appears to be a steel frame window, correct?

A. It does.

Q. And you said previously that that was the exterior view of the same window in .11?

A. Yes and I believed it was but when I look at it now this one here there's a kitchen in behind and then over to, further over on the right outside the shop there's another window I think.

5

1202

Q. What I was going to ask you is that the front or the back do you think?

A. That?

Q. Yes.

10 A. To the shop?

Q. .7 the one we're looking at now.

A. The one we're, this is the back.

Q. That's the back yes. And what's .11 then if we go back to that?

A. Go back to that. This is also the back.

15 Q. All right. So but it might be a different window at the back is that what you're saying?

A. That's what I'm saying.

Q. Right. So did the building contain window frames that were wooden and some that were steel?

20 A. It had a mixture of windows.

Q. Obviously must have.

A. Yes.

Q. All right. So and anyway .7 can't be the exterior of .11 can it?

A. I believe you're right.

25 Q. But you don't have an exterior of this .11?

A. No, no. I went out the back and essentially photographed damage but have not got a photo of this.

Q. Now you said that after your inspection (paragraph 13) that you had a general discussion with the Patels about the conclusions you'd reached.

30 So that would be at the building?

A. At the building yes.

Q. Right. And what, when you say a general discussion just tell us what does that cover?

A. It would essentially I would have pointed out the, some minor cracking. Generally I couldn't find anything of any major significance. The most of the discussion probably centred around the upstairs and the state of the ceiling itself.

5 Q. And you said in your report under "conclusion" that the first floor required repair work so that would have been part of that discussion?

A. That's correct.

Q. Was that essentially the main repair work that was required?

A. In terms of bringing it back to where it stood before the earthquake at that stage yes.

Q. You also said that you concluded that the building was likely to be earthquake prone. You yourself concluded that.

A. That's a personal view I held.

15 Q. And that you'd observed the building next door 595A and that you thought that the steel portal may have provided some flow on effect to 595?

A. The row of buildings all had soft storeys shall we say, just fully open, no lateral resistance, mechanisms of any sort. You put one into one building somewhere along the line it's likely to only be designed for that particular building. It's either going to help or hinder the overall performance of a block of shops. If they all try to go sideways and there's nothing there you get the soft storey. If there's one there it may hang on in that particular instance. Whether the others are responding in the same mode is hard to know.

25 Q. So can it also potentially hinder the building that's not strengthened?

A. It is a possibility.

Q. So does that point to the importance of a combined approach in such circumstances?

A. Well if you are going to strengthen I believe it should be done as a combined approach seeing they are essentially one block.

30 Q. But in this case when you talked about it with the Patels you thought that it might provide some support?

A. Well that's taking the view that anything is better than nothing.

Q. Okay. You said in that discussion there was talk about not necessarily using the words “earthquake prone” you said that you were surprised that the council hadn’t done anything in the past re strengthening. What was the Patels reaction when you discussed – ?

5 A. It was only a brief discussion. I think at the time when I brought up that the council talked about strengthening I sort of looked, showed them similar to this steel frame when they asked what strengthening might mean and they just said to me they had not had anything from the council.

10 Q. And was there any discussion with them about any future strengthening of the building?

A. No.

CROSS-EXAMINATION: MR ELLIOTT

15 Q. Mr Hanham, I think you said that you formed the view following looking at this building that it was likely to be earthquake prone?

A. Correct.

Q. At the time you’d looked at it by that point there had been hundreds or perhaps thousands of aftershocks following the 4 September 2010 earthquake?

20 A. A fair number yes.

Q. And you said that you were looking at the question of immediate public safety and in your brief you say that you felt the building was essentially safe and your letter said the ground floor was habitable?

25 A. In terms of saying essentially safe it was in a condition no worse than prior to the beginning of the earthquake sequences.

30 Q. You have perhaps answered my next question. The question that may be going through the minds of people watching this is how is it that an earthquake prone building could be described as essentially safe or even habitable during an ongoing series of earthquakes. Is that because of the test you applied?

A. It’s because of the test I applied. The nature of assessment at that time was testing them against their condition prior to earthquake it be

considered they were habitable prior to the earthquake. At that time unless there was evidence of deterioration of the structure or an obvious fault the test you applied was yes it's carrying on in that same state.

5 Q. And in fairness to you engineer after engineer has come to the Royal Commission and given exactly that evidence. I appreciate that this test derived from the Christchurch City Council's post earthquake inspection process. Was that your understanding?

10 A. Yes, yes and the inspection processes they put in place were, came out of, it wasn't just something they had. It was a recommendation that had been put forward as a reasonable solution at the time.

Q. In your case however you're inspecting outside of the emergency period and outside of any council endorsed inspection process. Why did you apply that test in the context of a private inspection?

15 A. At that stage this was the type of inspection that I was being asked to do quite a bit, namely following where insurance assessors had come in and didn't believe they had the necessary expertise to tick that box.

Q. Well in your evidence you talked about the test that you applied being focused on immediate public safety. Are you saying that's what the insurer asked you to do or was the insurer focused on something else?

20 A. The insurer in this instance was concerned about public safety.

Q. So wouldn't that have suggested to you that you should apply a more wide test in the damage based test that you adopted?

A. In hindsight you might say that should have been done.

Q. Can I just refer you to one or two photographs please.

25 **WITNESS REFERRED TO PHOTOGRAPHS**

Q. Firstly just to get a bit more sense of what happened to this building BUICOL593.0007A.4. Bottom left-hand photograph, so I invite someone to correct me if I'm wrong but 593 is the building to the left and the blue building is 595, so is that correct?

30 A. That's correct.

1212

Q. 595 is the blue one you looked at?

A. Yes.

Q. And we note there that the upper level is obviously intact and then if we look at BUI.COL.595A.0030A.2, again I invite Commissioners or my friends to correct me but I think 595 is the building on the left of that photograph and 595A is -

5 A. In the middle there.

Q. In the middle there. So just keeping that photograph up Mr Peter Smith says in his report that the first floor façade of the building failed by an outward rotation of the façade above the first floor support in the severe shaking during the 22nd February earthquake. So do you agree with that conclusion?

10

A. I do.

Q. And so is it right to say that what happened was that the upper floor, the brick wall which was above the, the first floor there literally rotated outwards on to the street?

15 A. That would appear to be the case yes.

Q. Were you aware when you did your inspection of the tendency of walls and parapets in unreinforced masonry buildings to collapse outwards during an earthquake?

A. Yes.

20 Q. Is it right to say that particularly given what appears to have happened that the connection between the walls and the floor joists and rafters are there to prevent that type of rotation?

A. In these old building there was virtually no positive connection provided at the time of construction. Strengthening work would often be aimed at tying walls back to some other point of structure to help hold in this case the front wall and prevent that hopefully prevent that rotation.

25

Q. I'll just refer you to Mr Lust's report, BUI.COL.595.0031.7.

WITNESS REFERRED TO LUST REPORT

Q. This is tab 2 Your Honour. There's a section there in the middle "Floor joists and rafters are seated directly on a continuous recess in the brick wall or notched into the brick wall with no visible sign of any positive connection between the two". Based on your knowledge of the building

30

is Mr Lust talking there about the connections to which we've just referred, or lack of connections to which we've referred?

A. His reference there I think is more to the connection to the party walls on each side. The floor joists tend to run in the sort of north/south direction from party wall to party wall and I, at the front he talks about the brick work sitting on a steel beam across the front.

Q. All right well if we go to BUI.COL.595.0031.8, the next page, in the top paragraph, "Soft storey at the ground floor level, that is with the large opening for the shop front and on the basis that the floor and roof timbers are not properly connected to the supporting brick walls". Again you can't know what he meant, but from your knowledge of the building is he, do you think that may be a reference to connections at the front?

A. He hasn't, he's talked about the front being again the soft storey concept which is the usual thing as has happened in these type of constructions and then the next bit based on his previous explanations I think he's more talking as to how the floor and the roof are connected to their supporting walls which are the party walls between buildings.

Q. Yes. All right, well you didn't obviously see this report I take it before doing your inspection?

A. No.

Q. Your – was your evidence that you expected the building to be constructed in a way that there would be no connections between that front wall and the floor and roof?

A. There would be minimal connections at most, possibly you may or may not get something at the roof level in that if it's got a hip end they turn something round, again not likely to be of any help in any way. The main bit that's likely to be holding it together it would only be how the bricks whether they meet the party walls have been laid one over another.

Q. So from your perspective at the time of the inspection there would have either been no connections or connections that wouldn't have given any real help?

A. (No audible answer 12:19:00)

Q. I'm sorry if you could just answer that so that we can hear?

A. Oh, yes, no that's, that's essentially yeah, sorry.

Q. But it appears you didn't take the state of the connections into account because you were looking for the possibility of damage, is that right?

5 A. The fact that I didn't expect to find any great connections, I'd be looking for separation has this front wall started to move away from whatever minimal means of support it had.

10 Q. Do you think that given your assumption about the state of connections that you've just described that really you shouldn't have said that the building was habitable, that really sorry...?

15 A. In terms of the prior to the earthquake it had been considered habitable, the test we were applying was, "Is it continuing in the same state?" If you tried to apply the test at that time that we would now look at differently, I don't know how acceptable it would have been and it wasn't I guess part of the mind or the process that was being applied.

Q. A layperson might say the difference between pre 4 September and post 4 September is that we're having hundreds and thousands of aftershocks, how can we apply a test that applied before 4 September?

20 A. Again you're looking, "Has it been damaged?" "Are these aftershocks causing damage or it is continuing to carry on in the same state?" If you get a significant aftershock you would expect that a further report, a further assessment should be made to check has it deteriorated?

25 Q. I think you already answered this but you would agree at least in hindsight the wrong test seems to have been applied in this case and indeed many others?

A. Indeed yes.

CROSS-EXAMINATION: MR LAING

30 Q. Good morning, just one question for you and I'm coming back to hindsight. In hindsight you said that you thought you would have notified the Council and I think may have recommended a more detailed inspection. At the time though is it your evidence that you did not consider any necessity to tell the Council or notify the Council?

A. Ah, that's probably correct, I – the notification process tended to be if you found damage you would send in some form of report.

1222

Q. And did you apply that process in other cases where you were involved?

5 A. Yes, there were what, a couple of other buildings we had found damage.

Q. Yes and you told the Council about that?

A. Yes, because in those cases we did some temporary support works were being put in at the time when this event occurred.

10 Q. So in this case in applying the test which you did, you didn't consider that there was any cause for concern to tell the Council?

A. No, it was – what do I tell them other than I'd been down there.

CROSS-EXAMINATION: MISS PATTERSON

15 Q. Mr Hanham you've said in your evidence that the Patels did not want a detailed inspection?

A. That's correct.

Q. Now am I correct in understanding that that came from your conversation with Mr Patel?

20 A. The clarification of what he wanted was essentially came on the phone, was they were looking for the type of report that had been suggested to them by their insurance assessor.

Q. So when you say the Patels did not want a detailed inspection, is it fair to say that those are your words?

A. That was – those are my words, yes sorry.

25 Q. And if I could just have one document brought up please, it's BUICOL5950002A.RED.1?

WITNESS REFERRED TO DOCUMENT

30 Q. And right at the bottom of that page is, as I understand it, Mr Patel's initial email to you. We will need at one point to flick the next page as well which is .2. Do you recognise that email?

A. This bit right, where are we?

JUSTICE COOPER:

Q. We're looking at the first email in a chain so we've had to go to the end at the bottom of the document.

A. Yeah, the one at the bottom here?

5 Q. Yes. And it's split over two pages.

A. Two pages, yeah.

CROSS-EXAMINATION CONTINUES: MISS PATTERSON

Q. Recognise that email?

A. Indeed.

10 Q. And looking at that email do you accept that there's nothing in there that directs you to the nature of inspection you were to carry out?

A. I'd agree with that.

RE-EXAMINATION: MISS SMITH

15 Q. Can we just leave that document up at this stage. You will see there that the email refers to an earlier conversation though that you'd had with Mr Patel?

A. Yes, that's – he had rung me and then sent this as a confirmation.

Q. So had you discussed with him in that telephone conversation the nature of the inspection that you were to undertake?

20 A. In broad terms yes, that it was a visual inspection and would be aimed at trying to assess if there was any damage.

Q. And that was followed up was it not if I can refer you to BUICOL5950002.4 which is your short form agreement for consultant engagement which confirms the nature of the inspection that you were asked to undertake?

25

WITNESS REFERRED TO DOCUMENT

A. This would have been attached to my report.

Q. But that confirms the nature –

A. That confirms the nature of the work I was doing.

30 Q. You've commented that in hindsight you and many other engineers provided the wrong text. Is that because of the number of aftershocks

that were being experienced at that time, or is it in relation to the February earthquake in itself.

- 5 A. It's more in a response to the February earthquake in terms of the original quake. It was following perhaps what appeared to be a traditional pattern with a large event happening somewhere and tapering off of aftershocks. That February quake I think was a complete wake-up call as to what possibilities there are out there.

COMMISSIONER CARTER:

- 10 Q. Yes Mr Hanham, I've got a couple of questions. When you carried out your inspection in the company of the Patel family, did the tenant also accompany you on that visit?

A. I couldn't say for sure, there were a number of people milling around but I was not introduced to anyone as such.

- 15 Q. My interest relates to the likelihood that a tenant being continually present in the building would be more aware of anything new so I wonder whether any of those other people that you say were milling around actually offered views on where you should look to see damage that may have occurred recently?

20 A. Not really, no.

- Q. My second question relates to – the earlier witness whose report was read, who observed the killing of Miss Conley and said that a large concrete slab fell upon her. Can you tell us if you could see anything that would resemble a large concrete slab on the front of the building you inspected, or perhaps adjacent buildings?

25 A. Well I don't know whether there's anything you could call a – well would technically be a large concrete slab, but maybe a large lump of plaster and brickwork or something may have, I don't know.

Q. So it could have been plastered brickwork that fell upon her?

30 A. Possibly, yes.

Q. Could you make an observation about your knowledge of those elderly unreinforced brick masonry buildings. Did they normally contain concrete members?

A. Only on rare occasions, in this case I'm at a loss to know exactly when this building was constructed. Various reports refer to 1900s and yet one of the Council reports talks about built in 1923. In some of those early ones odd times they did throw in bits of concrete.

5 Q. In relation to the soft storey description which relates to the level between the ground and the first floor where the buildings were largely opened up, was that work that was likely to have been carried out in some past time, because were those buildings generally left open to the front that way when they were first built?

10 A. A lot of them were I believe, they just constructed the walls going back and put a steel beam or something along to hold up whatever –

Q. Did that age of building would more likely to be a steel beam to support the work above?

A. I suspect that and Endel Lust in his report does refer to one as well.

15 Q. Now the steel frame that was – you observed in the building alongside, would have been active when the forces of the earthquake were in the plane of that wall, whereas the wall falling out onto the street was the result from forces at right angles to that direction?

A. That's correct.

20

QUESTIONS FROM JUSTICE COOPER - NIL

WITNESS EXCUSED

MR ZARIFEH CALLS**KEVIN JOHN SIMCOCK (SWORN)**

Q. Mr Simcock, can you give your full name please to the Commission?

A. It's Kevin John Simcock.

5 1232

Q. And you live here in Christchurch?

A. I do.

Q. And just tell us in brief terms what your qualifications are and just a little bit about your experience as an engineer?

10 A. I have a BE Honours Degree and a Masters Degree in Engineering. I'm a chartered professional engineer. I have been practicing engineering in Christchurch for 30 years and I'm principal of a practice here in Christchurch. Specialist field is structural engineering and I have geo-technical CPeng qualification as well.

15 And your firm is called T M Consultants?

A. Yes it is.

Q. Now as you know I want to ask you about work that was carried out on the building of 595A Colombo Street back in 2001 or thereabouts and I think at a time when you were employed at, by Powell Fenwick, is that correct?

20

A. A shareholder and director of Powell Fenwick.

Q. Sorry thank you. And you have been asked by the Royal Commission or counsel for the assisting the Commission to explain the structural work that you carried out and you've done that in a letter and I just wonder whether the simplest way is for you to read that letter to us now.

25

A. Okay. I don't have it.

Q. You don't have it. Thank you I will get you a copy.

A. Thank you.

Q. And we can stop when the opportunity is. You've got some photos that were taken at the time, correct.

30

A. Yes.

Q. And we've got those on the system we can refer to them. So perhaps if you would like to start at the second paragraph please?

WITNESS READS LETTER

A. The Powell Fenwick Consultants Limited producer statement design dated 25th of January, 2001 noted that the upgrade work was designed to remove the earthquake prone status of the structure at that time. The design standard to achieve that was 33% of the old Christchurch loadings. This standard conflicts with the recommendations in the Powell Fenwick Consultants Limited report of 8 November 1999 where an upgrade of close to full code was recommended. The change was because it was subsequently determined that the alteration was not a change of use for the building and hence only the issue of earthquake prone status had to be addressed.

EXAMINATION CONTINUES: MR ZARIFEH

Q. If I can just get you to pause there. Just clarify that. So as I understand it the initial instructions or understanding was that the building would have to have a full upgrade correct?

A. My initial report identified that if there was a change of use it would require a full upgrade.

Q. Right and that's the report of 2 November 99?

A. Yes it is.

Q. All right. I will just get that brought up.

A. 8 November 1999.

Q. 8 November 1999. I think we've got that. What's the title on it please?

A. On the front page it's report on building at 595A Colombo Street, Christchurch.

Q. All right so it's BUICOL595A00280.1. Just while they're finding that that was a report that you did at the start of this request to do strengthening repairs?

A. No it was a report I did at the start of the commission and the commission was that they were looking at this obvious change from what was a retail space downstairs into a restaurant space. Whether or not any strengthening was required was in fact what the subject of the report ended up dealing with.

Q. Okay all right. Just tell us who did your instructions come from then?

A. It came from a company called Property Check who were acting as the project managers for this restaurant chain.

5 Q. And you heard me mention the name Mr and Mrs Sakaguchi. Was that your understanding of who the client was?

A. I didn't know the names of the client. I knew it was a Japanese friend of Alan Miller who was the project manager from Property Check.

Q. Okay. And they wanted to change what was a retail shop, it was a florist shop is that correct?

10 A. Yes.

Q. And establish a Japanese restaurant in the ground, at the ground floor?

A. Yes and I think in my report here I identified the upstairs as office but it appears it may have always have been some form of sleeping upstairs.

Q. All right if we go over to the next page .2 under introduction.

15 A. Yes. No that's what I'm saying they were converting it to was ground floor restaurant with sleeping accommodation for the restaurant owners above but if you go to the bottom of that page, I say the proposed change for this building from a retail office use to a restaurant sleeping occupation is interpreted as a change of use for compliance for the Building Act. I suspect that my knowledge of that being an office space on the first floor wasn't correct at that time. I think in fact it was always sleeping looking at the drawings I've seen subsequently.

Q. Right and just tell us then on this issue of change of use, why did you consider that it would be a change of use when you wrote that?

25 A. Because generally retail and office weren't necessarily, sorry retail and restaurant weren't necessarily both interpreted as being the same use. Those things are always negotiable with council because there's a whole lot of criteria determines what is change of use. Level of occupancy is a key one because that identifies risk and whether or not you're strengthening a building is effective related to risk so at that time my interpretation was that I thought it was a change of use and as I said
30 it's open for negotiation with council.

Q. Okay but was your thinking then that the change of use came because it was going from retail to restaurant or was it related to the upstairs use for sleeping?

5 A. Well again because it's related to risk a change from office to sleeping is a much more significant change than retail to restaurant because a sleeping space means that there are people in it for a much longer period. They are asleep so it means that they are unaware of what's going on so the hazards are greater so that would be more significant change than retail to restaurant.

10 Q. All right. And presumably in a restaurant there would be more people present than in a retail at any one time or is that not a factor?

A. It's a factor because again it's risk but not necessarily, more space.

15 Q. So just tell us then if you can summarise it in relation to what you perceive then as being a change of use what level of structural strengthening upgrade would be required?

A. As nearly as is reasonably practicable that of a new building.

Q. Right. And if it wasn't a change of use or it wasn't deemed to be a change of use what level would be required?

A. Remove the earthquake prone status.

20 Q. So get it to 33% of the new building standard?

A. 33% yes at that time. I mean that level was established by the territorial authorities themselves and the Building Act empowers them to do that and in Christchurch that was the level.

25 Q. Right. So just in practical terms and again just a summary if you were going to strengthen it to higher standards what kind of things would have done that wouldn't have been done or weren't done for the lower standards?

A. Well I gave an outline in the next page of my report.

Q. .3.

30 A. No section four, what is required to make this building compliant. So that gives an outline of what I thought would be required. Comparing that with what we would do we did put a portal frame in the front. We did show tying the floors to the walls. I highlighted in this report that we

needed to inspect the ties between the walls and the front façade and between the front façade and the roof and unfortunately because Powell Fenwick's handwritten files are destroyed every 10 years I have no record of that inspection note because that would be a handwritten note because it's done on site so I would presume that was done in accordance with what I've written here. What I would have expected to have been more than what we did was that there would have been more ties, more tying in of the roof to the façade I would expect, probably more diaphragm strengthening of the roof than a third of code requires. It was just – it'd be heavier forms of what we actually did.

1242

Q. Right, so in relation to the tying of the front façade to the walls and ceiling, there was some of that done in the work carried out by you?

A. I can't confirm that there was some of that done because as I said, I don't have copies of the handwritten notes.

Q. Okay.

A. This highlights the fact that it needed to be checked, this particular report.

Q. And highlights the fact that with the lower requirement eventually being done, albeit at a lower level, there wouldn't have been as much tying in presuming that it was done, as to the higher level?

A. Clearly one-third load versus three-thirds load, there's a significant change.

Q. Right. Now just on this issue then of change of use. So your report was done on the assumption that you had then that it would be a change of use, correct?

A. My report concluded that it was in my view a change of use at that time and that if the change of use was actually the rules that the Council applied to it, then we would end up with this kind of scope of work. This is just a preliminary outline so that they could scope it for pricing and see whether or not this was a viable project.

Q. And then you referred to your Powell Fenwick producer statement design?

A. Yes.

Q. Did that, and I think if I'm right that that's 0028L.1, so that records under property check in respect of proposed alterations, building strengthening to remove earthquake prone classification?

5 A. Yes.

Q. So as you've said in your written letter that shows that it was the lower level, the 33 percent that was in fact done in the end, correct?

A. Yes it is, yeah, yes it was.

Q. Can you help us then as to why it wasn't to the fuller, the higher level?

10 A. Unfortunately I don't know all the details and as I said earlier there was a project manager involved in the project who did a lot of the negotiating with Council. What this shows quite clearly is where it ended up and it ended up being that earthquake prone status was all we had to deal with and not the full structural strengthening.

15 Q. And presumably from what you said you've got no record of contact with the Council over the change of use issue, and any determination?

A. No, well this is electronic, the only information that we've been able to get is what was stored electronically so if that communication wasn't electronic we don't have a record.

20 Q. Right, would it usually be in writing in your experience, or could it be orally?

A. It actually can quite often be orally because it can often be the outcome of a discussion with the Council and then the oral work is frankly confirmed by the likes of this sort of document which clearly defines where we got to.

25

Q. All right, can I get you to carry on reading your letter, the second paragraph or third paragraph, yes, "the upgrade."

A. Yes, sure.

WITNESS CONTINUES READING LETTER

30 A. The upgrade work completed was to tie the wall structures into the first floor and to provide a stiff and strong bracing on it to the front façade of the building below the first floor level. The aim of this work was to utilise the inherent in-plane strength of the brick walls and of the floor as a

horizontally spanning beam. The upper floor was a domestic fit out with sufficient internal bracing walls. The front façade was tied into the first floor and had restraint from the transverse walls, the first floor ceiling and the roof structure. A You-Tube footage of the damage to the building after the earthquake shows that the front façade has fallen out onto the verandah which has in turn collapsed to the pavement level.

EXAMINATION CONTINUES: MR ZARIFEH

Q. And I just think we've got – I don't know if it's the same You-Tube footage you're talking about but I'll get it played and you can tell us, we can see what you're talking about on that. Just pause there please, can we see 595A there?

A. Yes we can. That's 595A there, the one with the bricks still standing and you note significant proportion of the bricks to the front facade standing, and you'll also note that these ones adjacent, that side and even to a degree that side have also got quite significant proportions of brick standing and we'll compare that with what we see as we move further to the north.

Q. Carry on.

A. Can we pause there, now you'll see that these buildings that are more remote, but remember are still part of the same complex of 10 units have had a much more significant failure of their front façades in terms of how much material seems to have fallen away from the buildings. I think that the strengthening work and stiffening the work that was done to the front of 595A has to a degree supported those adjacent but the ones further away of course were unable to benefit from that.

Q. So it's had a beneficial effect to the adjacent ones, although minimal?

A. Although minimal, yes.

Q. Just carry on and watch the rest of this then, and that's looking down, see the bus outside 605 to 613?

A. Yes.

Q. Coming back down towards 595A again.

A. If you pause it there, something else about those other units is that they all appear to have more of a lean on them. That is evident when you look at 595A and the ones adjacent, they have stayed more rectangular than these ones have.

5 Q. And what do you put that down to?

A. Again the beneficial effect of the strengthening at least below first floor level of the 595A unit. It's kind of hard to remember this isn't it?

Q. Mmm. Thank you. I return you to your statement. You had just read the first sentence in that at the bottom paragraph.

10 **WITNESS CONTINUES READING LETTER**

A. All of the units in the row have a similar collapse. The building at 595A appears to have held the brickwork better with sections still connected to the transverse walls either side, whilst the neighbouring buildings appear to have peeled off fully. It's also noticeable that the adjacent
15 buildings appear to have collapsed a little internally whilst the strengthened structure at 595A has stood up well. I suspect the adjacent façades have failed first and have in turn pulled the façade from this building. The bite size shape of the section of brickwork remaining above the first floor level is indicative of this. It suggests a
20 tearing starting from the north and pulling across the façade of this building. The November, and that would be November 1999 Powell Fenwick Consultants Limited report notes, "this building is one of 10 in a group and that upgrading one building can often penalise that building as it will attract more than its share of load until the other units are
25 similarly upgraded." It appears that in terms of the face load façades that this is what has happened to this building. Looking forward there is scope to attach real importance to the parts of a structure that had more likelihood to cause loss of life or to inhibit rescue activities. The building façades are clearly an example of this. When buildings are
30 strengthened to only a proportion of the current code there is merit in requiring that façades, ties and supports and other elements that could impinge in critical activities are strengthened to the full code.

EXAMINATION CONTINUES: MR ZARIFEH

Q. Thank you, and just I talked to you before about the change of use issue. I take it you can't recall any discussions back then now?

A. Unfortunately no.

5 Q. And from your experience would the change of use have to have been confirmed by the Council as to what their view of it was?

A. Yes, it's a discussion between us and the – yes.

Q. And if the Council accepted or came to the view that it wasn't a change of use, then the owners would only have to strengthen it to the
10 33 percent level?

A. Correct.

Q. Can you express any opinion from what you know occurred in February in the forces, as to whether or not the building would have survived and not collapsed in the way it did in February if that higher level work had
15 been done back in 2001?

A. I can, and obviously it is an opinion. My belief is that February was a very unique event, I mean I think we've been told enough times that it was unique with its level of vertical acceleration and also the level of high intensity short frequency attack that we had in the city centre. I
20 mean generally the earthquakes we expect through Canterbury were going to be longer shaking because we have this picture of it always occurring on the Alpine fault. As it turned out we had something very close at hand, those high frequency waves that normally attenuate quite quickly, through softer materials, didn't have the chance between the
25 Port Hills and the centre of the city to attenuate sufficiently and as a result we had a quite a different sort of shaking occurred in the city centre. From the numbers that both Peter Smith and I have done, if that façade had been tied back to the building at full code it still had potential to fall.

30 Q. Right, and we won't know of course, but such was the force in February.

A. Such was the forces in February, and that's really why I've highlighted in my last statement there that the benefit of perhaps considering those critical areas at least – because if you look around even at those

buildings in a row there, the façade, the rest of the building is still intact despite the level of shaking largely. People wouldn't have died if we could have held those façades to the buildings.

Q. So you'd agree with Peter Smith's recommendation?

5 A. Yes I do.

CROSS-EXAMINATION: MR ELLIOTT - NIL

CROSS-EXAMINATION: MR LAING

Q. I've got one question for you. You mentioned that if there was no change of use the upgrading had to be to 33 and a third percent of code, 33 percent of code. Was that your understanding in 1999 was it?

A. That we had to remove the earthquake prone status, yes it was.

Q. And what – where did you derive that understanding at the time?

A. That – the Christchurch city had despite the fact not stating their full policy, had their guidelines as to what they accepted and that was what they were accepting at that time.

Q. I don't want to ask you a legal question, but Mr McCarthy would say in evidence that the effect of the Building Act 1991 was that the threshold was less 33 percent. Can you comment on that?

A. No, only that we were typically designing to 33 percent.

20 **CROSS-EXAMINATION: MISS SMITH – NIL**

CROSS-EXAMINATION: MISS PATTERSON – NIL

QUESTIONS FROM COMMISSIONER CARTER – NIL

25 **QUESTIONS FROM JUSTICE COOPER – NIL**

WITNESS EXCUSED

COMMISSION ADJOURNS: 12.55 PM

COMMISSION RESUMES: 1.38 PM

MR LAING CALLS:

STEPHEN JAMES MCCARTHY (SWORN)

5 Q. Your full name is Stephen James McCarthy?

A. Yes it is.

Q. You've prepared briefs of evidence for 595 and 595A Colombo Street?

A. Yes I have.

10 Q. Could I ask you to start with the brief for 595. Do you have that with you?

A. Yes I do.

Q. And could you start at paragraph 6 please.

A. Certainly.

WITNESS READS BRIEF OF EVIDENCE

15 A. "Events after the 4 September 2010 earthquake. At 1.00 pm on 5 September 2010 a level 1 rapid assessment was carried out for 593 to 599A Colombo Street. The buildings received a green placard. The Council has no record of any further inspections or assessments being carried out in relation to 595 Colombo Street. As a green placard
20 had been issued for these addresses it was not the Council's general practice after 4 September 2010 earthquake to undertake further inspections in such circumstances. The building was noted as possibly earthquake prone in the Council records. On 23 August 1951 there were proposed alterations to the shop frontage. In 1951 it is unlikely
25 that consideration would have been given to earthquake strengthening when a building permit was issued. The Council was first given the powers under section 301(a) of the Municipal Corporations Act in 1969 to deal with potentially earthquake prone buildings. Between October 2002 and January 2006 there were various complaints from the
30 neighbouring building owner about alterations being done to 595 Colombo Street without a building permit. Subsequently a retrospective application for a building permit was filed in September 2004 which attached a report from Endel Lust, civil engineer,

and which noted that the building was earthquake prone and recommended a securing programme over the following five years. The value of the work was declared to be \$15,000. The Council wrote to the building owner on 12 January 2006 noting that the building consent was currently being processed, that the building was likely to be earthquake prone under section 122 of the Building Act but that the proposed alteration was minor and would not affect the structure. Therefore the Council advised that it did not require any action to be taken at that time unless any further, any future building consent applications were lodged. Securing programme recommended to the owner by their engineer does not appear to have been accepted by the owner and was not included in any building consent application. The Council has no documentation concerning why the owner did not proceed with the programme”.

EXAMINATION CONTINUES: MR LAING

- 15 Q. Could you just pause there for one moment. You heard evidence this morning that the building consent application was lodged by the tenant?
- A. Yes. I did.
- Q. Yes. And you’ve got no reason to doubt that evidence?
- A. No I don’t, I, I – the assumption is that the tenant and the owner were communicating with regard to that application. That, that is the assumption the Council would have made at that time.
- 20 Q. Yes. Thank you, paragraph 12?

WITNESS CONTINUES READING BRIEF OF EVIDENCE

- A. “The building consent was granted in January 2006. The owner later decided not to proceed with the work and asked for the consent to be cancelled.”
- 25

EXAMINATION CONTINUES: MR LAING

- Q. And just again there, do you now accept that in fact it was the tenant who cancelled the consent?
- 30 A. Yes I do.
- Q. Thank you, 13?

WITNESS CONTINUES READING BRIEF OF EVIDENCE

- A. "As it appears that no earthquake strengthening was carried out on the building it would have continued to be regarded as possibly earthquake prone on the introduction of the Building Act 2004 and for the purpose of the Council's Earthquake Prone Buildings Policy 2006. After the commencement of the Earthquake Prone Buildings Policy 2006 in May 2006 the building consent application for significant alteration had been received, the strength of the building structure would have been assessed and the application would have been dealt with in accordance with the policy. However no such application was received."

EXAMINATION CONTINUES: MR LAING

- Q. Yes, thank you. Could I now ask you to turn to your statement in respect of 595A Colombo Street?
- A. Yes.
- Q. And can you again start at paragraph 6.

WITNESS READS STATEMENT

- A. "Events after the 4 September 2010 earthquake. At 1.00 pm on 5 September 2010 a level 1 rapid assessment was carried out for 593 to 599A Colombo Street. The buildings received a green placard. The Council has no record of any further inspections or assessments being carried out in relation to 595A Colombo Street. As a general placard, as a green placard had been issued for the building it was not the Council's general practice after the 4 September 2010 earthquake to undertake further inspections in such circumstances.

EXAMINATION CONTINUES: MR LAING

- Q. Just pausing there, there is an annexure in my copy, but it is the same document as attached to your other statement of evidence isn't it?
- A. Correct, yes.
- Q. Thank you. Please continue at paragraph 7?

WITNESS CONTINUES READING STATEMENT

- 5 A. "The building was noted in the Council's records as a possible earthquake prone building. The building would have been deemed to be earthquake prone under section 66 Building Act 1991. However, the building was strengthened in 2001 to 2004 by the addition of a steel portal frame at the street front fixed to an existing steel beam. The first floor was joined to the walls. This work would have removed the building from the earthquake prone category under the Building Act 1991".

EXAMINATION CONTINUES: MR LAING

- 10 Q. Again pausing there what is your understanding of the, the percentage of new building standard that was required to remove a building from the earthquake prone status under the Building Act 1991?
- A. The 1991 Act referenced a 1965 standard and required 50% to meet 50% of that, that standard to remove it from an earthquake prone status.
- 15 That translates to the new building standard pre-September 2010 of between 10 and 16%.
- Q. Yes thank you. Would you now go on at page, paragraph 9 please.

JUSTICE COOPER:

- 20 Q. Sorry, 50% was referenced back to the New Zealand standard 4203 was it?
- A. It was the standard prior to that Sir, it was the 1960 –
- Q. 1900?
- A. The 1965, 1900 standard yes.
- Q. NZS1900?
- 25 A. Yes.
- Q. Whatever?
- A. Yes. Chapter 8 1965 Sir.

EXAMINATION CONTINUES: MR LAING

- Q. Mr McCarthy could you just confirm that it is actually NZS1900?
- 30 A. Yes it is.

WITNESS CONTINUES READING STATEMENT

A. "Paragraph 9. The strengthening was done before the regulations of 2005 increased the level at which a building was considered earthquake prone. When the regulations became operative applications for building consent would have had to be assessed against the new level and
5 against the Earthquake Prone Building Policy which became operative in 2006. However there were no further building consent applications.
1348

CROSS-EXAMINATION: MR ZARIFEH

Q. Mr McCarthy, I just ask you about 595 firstly.
10 A. Yes.
Q. And I just wanted to ask you about the events in 2004, 2006 and there's some documentation as you're aware of the proposed alterations I think, putting in a new stairway.
A. Yes.
15 Q. And renovating upstairs and as you've indicated the evidence showed, this morning showed that the tenants applying for that and presumably getting the report from Mr Endel Lust and obviously they didn't have a permit initially anyway for that work but it started, correct?
A. That's right.
20 Q. So a notice to rectify was served and I'll get it brought up, it's BUICOL5950032.1. I think you've seen that notice?

WITNESS REFERRED TO DOCUMENT

A. Yes I have.
Q. And it says looking in the middle paragraph, the site is noted as having
25 a possible earthquake prone building?
A. Yes.
Q. And then it goes on, no building consent shall be granted for the alteration of an existing building unless the Territorial Authority is satisfied that after the alteration the building will comply with the
30 provisions of the building code for structural behaviours nearly as reasonably practical to the same extent as if it were a new building.
A. Yes. That's what it says.

Q. So can you just explain what the policy was, then the Council policy was then, if the building consent was to be granted presumably a retrospective one in this case?

5 A. Okay, clearly there'd been some work undertaken which required a building consent at that time and the, I believe the intent of the application to continue the work was going to encompass that work that had already been done. This note is – doesn't accord with what we can legally do. It's perhaps an error I would suggest. We would had to have allowed or issued a building consent at that time.

10 Q. But the notice seems to say before any building consent would be issued it would have to be, structurally have to be as reasonably practical to the same extent as if it were a new building. Are you saying that was incorrect?

15 A. It would have to trigger a – it would have to be triggered by a change of use at that time and so we wouldn't be able to require it to go to the use, new building standard, structural standard at that time, to go all the way to 100 percent. So what I'm saying is this notation is beyond, would have been beyond our legal power to enforce.

Q. Right, so I mean, this is obviously from the Council file, this document?

20 A. Yes it is.

Q. And it's signed by, on behalf of the Council on the next page, .2, that sequence. That presumably would have been sent out or served on the owner?

A. Yes it would.

25 Q. And the owner or the tenant?

A. It would have been sent probably to both I would imagine, I would expect.

Q. The tenant being the one as it transpires who applied for the building consent?

30 A. Yes.

Q. All right, but I was going to ask you is that middle paragraph on the first page that I referred you to.

A. Yes.

Q. Seems at odds with what the Council subsequently said in that letter you recall this morning, it was referred to, in January 2006?

A. Yes, you're saying that the building consent had been processed and –

Q. Nothing had to be done.

5 A. Yes. That's right.

Q. So is this wrong, this form?

A. It is, it is. That part of the form is wrong.

Q. And in fact if the thing had proceeded what would the Council have been able to enforce in terms of structural strengthening? Nothing
10 unless it was a change of use, or significant alteration?

A. That's correct.

Q. So if we turn to that letter, it's 0031.11.

WITNESS REFERRED TO LETTER

Q. And I think this went on for some time, didn't it, this letter's dated 2006.
15 There was quite a bit of toing and froing from the – reading it from the Council file?

A. Yes there is.

Q. And so this is a letter from the Council to the owners saying that the building consent is currently being processed. Now is that a building
20 consent that was later withdrawn or modified in some way from what you said in your evidence?

A. Yes, so the building consent was subsequently withdrawn and we understand it was by the tenant.

Q. But at this stage anyway that hadn't happened?

25 A. It hadn't.

Q. And so the Council's saying in this letter that the Council could require strengthening of the building or demolishing of it?

A. Yes.

Q. Second paragraph. And third paragraph that the Council appreciates that the exercise of their powers could have significant cost
30 implications?

A. Yes.

Q. That may not have been anticipated and it's noted that the proposed alteration of the building is minor in nature and will not affect the structure, that no changes of uses proposed therefore the Council doesn't require you to take any action?

5 A. That's correct.

Q. So firstly that wasn't inconsistent with the notice to rectify that had been served earlier because that notice to rectify is wrong?

A. Correct.

10 Q. Secondly then one might say, well when the tenant had applied for this retrospective consent and provided a copy of that report from Mr Lust, which obviously recommended strengthening and some to be carried out almost immediately and then others over a five year period, why wouldn't the Council when it's got that information, that type of information, why not insist on at least some of those, perhaps those
15 initial strengthening steps being taken. What would you say to that?

A. The application would have for those works, would have presumably picked up some of those items. In it the Council at that time wasn't in a position to require the immediate strengthening of the building, as I guess I've explained, so, and when you exercise those powers you have
20 to do it across all of the building stock or, so we need to be uniform in what we do.

Q. Right, so there wasn't any flexibility in the approach, it was merely applying the law. Is that what you're saying? And the only way Council could require strengthening was if there was a change of use?

25 A. Yes.

Q. Or if the alterations were significant?

A. Yes.

Q. And was that a percentage, was it 25 percent of the value of the building?

30 A. That evolved in the 2006 policy. I note that these – the significance of these alterations was valued at around about 15,000 so they were quite comparatively minor.

Q. And would that be a judgement call by the Council at the time then in terms of whether it was significant or not?

A. Well it would have been, yes, at that time it would have been. I think it was fleshed out more in 2010 when we amended our 2006 policy.

5 Q. And would any consideration have been given to the type of building, or as in this case where you had a structural engineer's report or was it simply based on whether the alterations were significant or not?

A. Just the significance of the alterations.

10 Q. The other question on 595 was, there was no post Boxing Day inspection of 595 or 595A?

A. That's correct.

1358

15 Q. And is that because they were green placarded in September and the Council wouldn't have had any further information from owners or the like in terms of damage or request for further inspection?

20 A. That's correct. Yeah, they'd si- I think we have presented evidence previously that we, we – observable damage we, we addressed after Boxing Day but otherwise we were alerting building owners to, they needed to do their own checks or alert us and where possible we would, we would seek to assist them.

Q. Right, and I think actually there's an example of that in the, in relation to 595A?

A. Yeah.

Q. I think it's BUI.COL.595A0031.1.

25 **WITNESS REFERRED TO EMAIL**

Q. This is an email from the owner or owners to the Council and in fact if you go please to the next page to get the context, it's the Council response below there but see the, in the middle of the page there's an email from the owners of the restaurant?

30 A. Yes.

Q. And this is 4 October and they're thinking of reopening. They are concerned that there was no paper which said no restricted use (green) or restricted use (yellow) or damaged (red) in front of the shop?

A. Yes.

Q. And could you tell me who has authority about that? So if we go back to page 1, .1 I'll just get you to look and see the, there's a chase up and then at the, in the middle there's the Council response, do you see that?

5 A. Yes. Yes.

Q. So the Council, the response said, "The Council were responsible for issuing the red, yellow and green placards. This is no longer happening as we were only doing this in the state of emergency and we did not get to every building. I would recommend that you get a building professional in to your business like a master builder or structural engineer to check the building to make sure there's no underlying damage and that the building is safe to open". So that was sent by Emily Baker of the Council, building recovery office?

10

A. Yes it was.

15 Q. Right so is that the kind of thing you're talking about it's raising an issue of no placard on the building?

A. Mhm.

Q. And we've heard evidence that those buildings were green placarded but leaving aside what happened to the actual placard, is that what you're talking about the Council policy to recommend to the owner to get their own check?

20

A. Yeah, the, the status of placards would obviously change with aftershocks and there were a lot of them going on at that time obviously so the status of buildings were, was, was subject to some change so owners really needed to engage their own engineers or their own building professionals to assess that on an ongoing basis.

25

Q. Okay thank you. just in relation to 595A?

A. Yes.

Q. I think you've been here and you've heard, you heard the evidence of Mr Simcock about the structural strengthening?

30

A. Yes.

Q. And it seems from the records, you correct me if I'm wrong, that Mr and Mrs Sakaguchi who are the owners of 595A when they purchased it and

set up the Japanese restaurant, prior to that it had been a florist downstairs and seems perhaps sleeping or office upstairs?

A. Yes.

5 Q. Not entirely clear, that Powell Fenwick were engaged to look at the building and what would have to be done for that change?

A. Yes.

Q. And you heard Mr Simcock's view that, back then that he thought it would be a change of use and therefore would require a higher level of strengthening?

10 A. Yes.

Q. The lower level was done, let me put it that way. He thought the level was 33% of new building standard. There doesn't appear to be any written record anyway in relation to the Council's view on the change of use or it not being a change of use. Is that your understanding?

15 A. It is and perhaps I can put that in a little bit into context for you if I might. When the application came in, it came in for the alterations to, to the building so there was some strengthening work on the downstairs and the, and support for the upstairs but just alterations to the residential use upstairs which was pre-existing, so they, so, so the immediate change if we, if we use it in that context is from a florist on the ground floor to a restaurant. The Council at that time and nationally there was, there was an application where, where commercial, it was still a commercial activity and generally restaurants and shops were in that, that commercial category so it wasn't considered upon reflection to be actually a change of use and I think that's how, that's how the, the processing of that consent evolved.

20

25

Q. Right.

A. Yes.

30 Q. Okay so that was the situation and the definition of commercial use then?

A. Yes.

Q. As you say restaurant or shop were included in the same commercial definition –

A. Yes.

Q. – or use, am I correct that that changed subsequently?

A. It has changed yes, there was some regulations in 2005 that –

Q. That separated the two?

5 A. May, may, yeah there was a lot more definition put in around change of use.

Q. Right. And I think so that retail would be treated differently from restaurant, restaurant?

A. Yes it would.

10 Q. More use?

A. Yes, you're correct.

Q. Higher use and higher risk?

A. Yep.

15 Q. But that was the position at the time and that's your interpretation of what's happened even though we haven't got a record?

A. Yeah that's, that –

Q. And it could have been oral?

A. – that's correct.

Q. Could have been an oral decision as Mr Simcock said?

20 A. Well yeah, look I have absolutely no, no reason to disbelieve what Kevin, Mr Simcock said. He, he would have been in communication with the Council at that time and I'm sure that, I'm sure as I've explained what prompted that decision was the, the background that I've, I've discussed.

25 **CROSS-EXAMINATION: MR ELLIOTT**

Q. Mr McCarthy, I think at this point you've given evidence a number of times –

A. Yes I have.

30 Q. -on behalf of the Council and I just wanted to make a point which I perhaps should have made earlier which is that none of the questions that I am asking or others are asking are directed at your conduct

personally. You're speaking on behalf of the Council and the questions are directed to you in that capacity?

A. Thank you.

Q. The – and also to acknowledge what it must take to be coming here day after day and providing evidence on each of these files. Speaking in
5 relation to 595 Colombo Street can I just refer you firstly to the report of Mr Lust, BUI.COL.595.0031.8.

WITNESS REFERRED TO LUST REPORT

Q. One of the first issues which may be on the minds of Rachel Conley's
10 family and friends is just that we have a document which appears to have been on the Christchurch City Council file dated October 2004 which says in the middle there, "An approach is recommended which could entail securing this building to ensure no loss of life during an earthquake", and then goes on to describe how. Firstly am I right in
15 saying that this letter would have been received by the Council in or about October 2004?

A. I believe so. That would have come in in support of the application I imagine for the building consent.

Q. And the question which I accept that you've answered to some extent
20 already is, given that the Council seems to have some information about the possibility of some alterations which might prevent loss of life and apparently a willingness on behalf of the applicant on the face of it to advance such works?

A. Yes.

25 Q. How is it that the Council didn't in some way seek to advance those works?

A. I think the evidence was that we process the consent, we were in a position to allow the works to proceed. We were writing to the, to the tenant and the owner, keen to see this work done but we were unaware
30 of the reason why it didn't proceed and clearly it would have been beneficial if it had.

1408

Q. I think Mr Zarifeh referred you to the letter BUICOL595.0033.1.

WITNESS REFERRED TO LETTER

Q. You're familiar with that letter I think?

A. Yes.

5 Q. Just in terms of the Council's ability if you like to require some upgrading and again if these are legal issues then Mr Laing can intervene, the – you've given some evidence about the Council's legal abilities. Isn't it right though that at least before the implementation of the 2004 commencement of the 2004 Building Act.

A. Yes.

10 Q. The Council did have some powers under the 1991 Building Act to identify a property as earthquake prone and to take some action?

A. Yes, we were somewhat legally constrained at that time. We had to demonstrate under the 1991 Act that there was going to be a catastrophic collapse of the building before we could invoke immediate
15 strengthening of the building and that was a difficult test to prove.

Q. Yes, all right, but didn't that test change as at the commencement of the Building Act 2004?

A. Yes, and what it – yes at that point we were able to enact a policy which we did subsequently in 2006.

20 Q. This letter dated 12 January 2006 seems to pre-date the enactment of the policy?

A. Yes it does.

Q. The policy was introduced in May 2006.

A. Yes.

25 Q. Doesn't the letter as set out here reflect what the policy ultimately was?

A. There was transitional provisions in the 2004 Act so that consents that had been applied for in 2004 could carry on and we could continue to process them so we were looking to close out this application at that time.

30 Q. The determination of the earthquake prone policy which was confirmed in 2006 involved a process of consultation with the public?

A. Yes.

Q. This letter seems to indicate some, pre-determination perhaps isn't the right word, but the Council's preferred option was in fact the relatively passive policy which it ultimately chose to adopt in May?

5 A. Yes, at that time it was – it didn't impose timeframes but in all other respects it adopted the powers that the legislation gave it, so it didn't set specific timeframes but it's definition of where it required work was in all other respects an active policy.

10 Q. And just finally on that issue, subject to whatever its policy was, the Council did have the power though under section 124 of the new, of the 2004 Act to take steps in relation to an earthquake prone property?

A. Yes where it could demonstrate that the building was immediately dangerous, yes.

15 Q. Another feature of the 2006 earthquake prone policy was that the, correct me if I'm wrong, that the Council determined that it would undertake an initial desktop review of Council files to assess which buildings could be earthquake prone. Is that right?

A. Yes it did, yes it did.

Q. And had the Council completed that analysis by the 2010 policy?

A. Yes, it completed that around about the end of 2009.

20 Q. So I think you've identified that according to Council records 595 Colombo Street was identified as potentially earthquake prone?

A. Yes.

Q. So 595 would have been one of the properties on that list that had resulted from the assessment?

25 A. Yes. That's correct.

30 Q. When the Council and others sat down or stood up following September 2010 and made an inspection about how to inspect buildings, was there any discussion about accessing this list so as to direct some different treatment towards earthquake prone buildings that were being inspected?

A. Are you talking about priorities in respect of the list we had, is that what you mean?

Q. Well your evidence is that there was an inspection of these buildings post 4 September for green sticker and then no further inspections.

A. Yes.

Q. So that these buildings seem to have gone through without any further inspection other than the initial inspection?

A. Correct.

Q. And the question just is given that this building amongst others was identified as earthquake prone did the Council seek to address those buildings in some way by reference to that list which it had at its disposal?

A. No it didn't.

Q. Do you know why?

A. We went down a path of doing building assessments according to the guidelines following a Civil Defence emergency so that was, so we treated all buildings fundamentally the same and did an assessment, a rapid level 1 assessment or a, if it warranted it, a rapid level 2 assessment according to the guidelines.

Q. And is it the Council's position at this point that perhaps looking back on it there should have been some differentiation of earthquake prone buildings in the inspection process?

A. In hindsight that might have been worthwhile, yes.

CROSS-EXAMINATION: MISS SMITH – NIL

CROSS-EXAMINATION: MISS PATTERSON

Q. First just a point of clarification Mr McCarthy. You've said in your evidence that Mr Lust's engineering report was submitted to the Council with the building consent application. Do you recall that evidence?

A. I believe that to be the case but I'm not entirely sure, but I assume so.

Q. It might help if we could turn up a document, it's BUICOL5950031.10.

WITNESS REFERRED TO DOCUMENT

Q. You may not be familiar with this document but it might help you to have a quick read of it with particular reference to the second bullet point.

A. Yes, yeah, so it appears that perhaps Mr Lust's report wasn't submitted at that time. I guess the other issue would be that we would be looking for a level of strength where the building is currently sitting so that would have been helpful in the consideration of any application at that stage as well.

5

Q. Yes, so Mr Lust's report was presumably submitted in response to that letter?

A. May well have been.

Q. Seem correct?

10

A. Yes.

Q. Now with reference to paragraphs 11 and 12 of your brief of evidence, I understand you've now accepted that it was actually the tenant that was driving the building consent process rather than the owner?

A. Yes.

15

Q. Now the applicant for a building consent is supposed to have the owner's authorisation to make that application. Is that correct?

A. Yes.

Q. But the Council relies on the applicant's word so to speak that that consent has been obtained?

20

A. Yes we did.

CROSS-EXAMINATION: MR LAING – NIL

QUESTIONS FROM COMMISSIONER CARTER - NIL

QUESTIONS FROM JUSTICE COOPER - NIL

WITNESS EXCUSED

MR ZARIFEH CALLS**PETER SMITH (SWORN)**

1418

5 Q. Mr Smith, you have prepared reports on the buildings at 595 and 595A Colombo Street for the Royal Commission?

A. Correct.

10 Q. And I want to come to those in a moment and get you to deal with them and take us through the relevant points, but before I do can I just you to correct something in relation to the report on 595A, and I'll get it brought up. It's 595A0044.3, it's page 3 of the report.

WITNESS REFERERD TO DOCUMENT

Q. Under the heading 'Event Subsequent Force September 2010 Earthquake,' I think there's been a transposition of material from that relates to 595. Is that correct?

15 A. Yes, I'm not really sure how that's happened about, but unfortunately there are three paragraphs there which really should be deleted.

Q. So it's the second paragraph?

A. Second, third and fourth.

Q. Second, third and fourth, starting "Buildings understood?"

20 A. Yes.

Q. And down to the paragraph beginning, 'The above assessment is consistent.' Correct?

A. Yeah, including that one.

25 Q. Including that, yes, those three. If they can be deleted, because I think that the third paragraph under that heading relates to 595, correct?

A. Correct.

Q. Thank you. Now if I – what I wanted to –

JUSTICE COOPER ADDRESSES MR ZARIFEH:

30 The third paragraph with those omissions having been made?

MR ZARIFEH:

No, no, three paragraphs should be deleted from that report because they're in the other report. The relevant portion's in the other report.

JUSTICE COOPER:

5 Yes, I followed that but I didn't follow the question you then asked.

MR ZARIFEH:

No, the point I was making is that the third paragraph under that heading.

10 **JUSTICE COOPER:**

Beginning –

MR ZARIFEH:

15 The building at 595A, the substance relates to 595, it's just been a transposition I think, so it should be deleted as we've just done in that report.

JUSTICE COOPER:

Right, okay.

EXAMINATION CONTINUES: MR ZARIFEH

20 Q. Now Mr Smith, what I want you to do if you can is, we'll deal with each building separately where it's relevant, but perhaps we can start and where we can deal with them together, you and perhaps just describe to us, we've already covered where they were but perhaps a bit about the construction and the type of building they were and where they sat in its
25 relevance in the block?

A. Yes. The two buildings concerned were part of a row of 10 buildings constructed on or about the same time of very similar construction. They were, each building is quite rectangular in proportion being on a relatively narrow street frontage and quite a long depth away from the
30 street. Along each boundary was a masonry wall which varied in thickness. It was the main mass of the buildings was actually in the perimeter walls and in particular party walls. The buildings had

generally light weight roofs supported on timber framing which in turn was supported on the masonry boundary walls. There was a masonry façade and a masonry rear wall and –

Q. I just wonder if we get a photo brought up that you can – is the one in
5 your report –

A. The one on the front cover probably.

Q. On the front of 595A?

A. Yes.

Q. So it's 0044.1.

10 **WITNESS REFERRED TO PHOTOGRAPH**

Q. This is an older photo I think taken prior to the Japanese Restaurant being set up?

A. Correct, this is when it was a florist. You can see, so 595A is the one with the florist, 595 is the one to the left. The features of the façades
15 are that the ground floor of both buildings was relatively open, largely shop front which was a feature of all the buildings in the row. You'll see there's some high level windows above the verandah, the canopy, in the florists those have been painted out but they're still visible in that photograph, and then there was some fairly significant window openings
20 at first floor level, and above those windows a reasonably significant parapet.

Q. What's the significance of the openings?

A. The significance of the openings is that the building was very weak along the street frontage and that is the area where the steel frame was
25 introduced in 595A so that it was strengthening the building and along the – parallel to the street.

Q. I think you heard, you would have heard a question from Commissioner Carter about what would have been put in above those openings originally whether it was concrete or steel. Have you got any comment
30 to make about that?

A. Not really, it was traditional to do that in masonry. It could have been plastered masonry, quite a few buildings had the parapets replaced in concrete at some stage in the past. There's no evidence to suggest that

happened in this case but I notice in one of the photographs there is quite a – it's under, it's BUICOL595A0044.13. We know the job to rotate this in the right direction.

Q. Which one?

5 A. It's the photograph at the bottom right which you need to turn upside down. If we just look at that photograph there's a fairly heavy element, it's actually from the adjoining building at 597 but there is one element there which has obviously remained intact and it does raise a question as to just what the construction of that element was.

10 Q. Getting it enlarged.

A. You'll see that element there which would appear to be the parapet. It seems to have a slight depth at the front, at the top and then to reduce.

Q. So it may have had concrete?

A. There's some uncertainty.

15 Q. All right, now just tell us if you can now about the failure of in the February earthquake, the failure of both those buildings?

A. Yes, the primary failure was of the façade. It failed in an outward direction. It's possible on that same photograph to see the remnants, they're both on the – looking at 595A there is some masonry left on the
20 – both the left-hand side and the right-hand side above first floor level and the up-stand beneath the windows, up to the window sill level has remained intact over the left-hand side and over quite a large portion of the building. Now it's uncertain, we don't know what strengthening was done or securing was done at that part of the building, and whether that
25 contributed or whether the quality of the masonry was superior to other buildings, we just don't know, but it seems to me the parapet which was up at the – above the roof line there, and the central pillar of the façade collapsed outwards, presumably by rotation for it – about the sill level of the window.

30 Q. And is that the same for both buildings?

A. I think the other buildings suffered a rotation about a lower level and lost more of the façade but not significantly different in nature.

Q. And have you got a photo of that?

A. I think the –

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Q. Perhaps BUI.COL.595A003A.2, that might show part of it, or I think the YouTube footage showed it didn't it?

5 A. Yes. Yes. It was quite –

Q. Let's see if this shows it, 595A003A.2.

WITNESS REFERRED TO PHOTOGRAPH 595A003A.2

Q. Is that any help or not?

A. It shows the, the one on that same sheet 0044.13, does show the left or
10 the right-hand side of the adjoining building.

Q. Oh, okay so sorry can we go back to 0044.13?

WITNESS REFERRED TO PHOTOGRAPH 0044.13

A. Unfortunately that photograph on the screen shows it after the USAR
demolition. It's the bottom right-hand side if we can enlarge that one.
15 That shows a very similar failure on the adjoining building at 595.
There's a portion of the brickwork left there on the right-hand side of the
595 and the windowsill I think you can see the timber framing around
the window is still in place but everything above that level has rotated
and fallen outwards.

20 Q. And the parapet on 595 is gone?

A. Yes, yes.

Q. Can we see any of the strengthening work in 595A there or not?

A. I don't believe so.

Q. No. Just while we're looking at that photo you heard the evidence of
25 Mr Simcock about the strengthening work that had been conducted on
595A in 2001?

A. Yes.

Q. And you heard his opinion that 595A may have fared better than other
buildings along, particularly further along to the north on that same block
30 perhaps because of the tying albeit we don't know exactly what tying but
the tying in of the façade to the walls. Have you any comment about
that?

- 5 A. Clearly those two buildings fared slightly better than the buildings to the north but without detail it's not really possible to tell whether that's due to the securing. It may well be, or whether it was a superior construction of the masonry. The workmanship in masonry is very dependent on how well the mason ties in the façade to the return walls.
- Q. Right. And what about any comment on the effect whether positive or otherwise on the adjacent building to one that's been strengthened?
- A. It may have a beneficial effect.
- Q. Can it have a detrimental effect?
- 10 A. It can equally have that I think, it all depends how that row of buildings as a whole respond.
- Q. Right.
- A. And it's, if you stiffen one particular portion of that row it's very hard to predict what the result would be.
- 15 Q. Right so can you make any comment following that in relation to the strengthen of buildings that, unreinforced masonry buildings that are in a row?
- A. It is, it is a significant challenge to the engineering profession because really if we want to see these buildings strengthened they really need to
- 20 be strengthened as a row not as an individual building, but the ownership and tenancy arrangements make that often extremely difficult. So often by strengthening one building it doesn't necessarily improve the overall performance and these buildings tend to survive an earthquake by acting like a row, the balls on a string where the
- 25 earthquake force goes through and it's the end building often that gets the worse effect. If you start introducing some form of resistance to individual buildings but not the entire row I think you have the potential for opening differential movements between the buildings that are strengthened and the adjoining buildings.
- 30 Q. Right. I just want to turn now and we've really dealt with one of the issues and that was the strengthening work that had been carried out on 595A but there are other issues, issues that arise from your review that I just want you to touch on and explain and perhaps in relation to 595 we

can deal firstly with the fact that that was a building very much in its original condition correct?

A. Correct.

Q. And it had had no structural strengthening?

5 A. Correct.

Q. And I think you heard the evidence of Mr McCarthy just before you?

A. Yes.

Q. About the effectively the policy or the application of the law as it was then in not requiring structural strengthening unless there'd been a change of use or significant alteration?

10 A. Correct.

Q. Have you got any comment about that?

A. Only that since the passing of the legislation back in 1969 I think, an opportunity was lost to, to look after public safety in particular. I think that if we are to learn hopefully if we learn something from the Christchurch event it is the vulnerability of these buildings and the risk they pose to the public. Clearly the Christchurch event was a unique event, it was particularly severe but I think the primary lesson is that any area of unreinforced masonry buildings with these façades not secured does pose a significant risk to the public at the time of a significant earthquake.

Q. Okay thank you. The next issue I want to ask you about was the basis of the assessments post a substantial earthquake and in this case the September earthquake and that we have examples here of rapid assessment level 1 conducted and a green placard on both these buildings in common with others adjacent to them?

25 A. Yes.

Q. And we have in relation to 595 a level 2 assessment by Mr Hanham?

A. Yes.

30 Q. In late January?

A. Yes I think in this case it appears that the connection of the façade to the return walls was reasonably well detailed and also was probably intact after the initial September earthquake, however because of the

vulnerability of the façades to the separation of the façade to return walls which is the primary restraint of the façade there is real concern that an external inspection will be effective in determining the safety of the building and for that reason an inspection of the interior is really necessary before one could have confidence of public safety on the street or of occupancy.

5

Q. Right and you heard Mr Hanham in his evidence say that the test he applied and of the benefit of hindsight after the February earthquake as to the appropriate level of detail that might be required for such a building?

10

A. Yes I think the you know the concept of the assessments was put together based on American experience. Clearly it does overlook the vulnerability of some of these weak buildings or buildings which have a weak element such as façades and I think I would hope that the lesson we learn from Christchurch is that these buildings or these aspects of buildings and the weak buildings and ones which have a weak façade or other parapet or other element do need to be taken into consideration before we allow public occupancy around them or occupancy of the building.

15

Q. And would that flow on to the issue of barriers pending that?

20

A. Clearly if they are potentially a risk one has to consider very carefully the area should be barricaded or the area where the public have access.

Q. Right. Finally in relation to 595A you've made a comment about the vertical acceleration effects?

25

A. Yes I think one of the features of the Christchurch earthquake in February was the very significant vertical accelerations. Masonry has very little tensile capacity and its ability to resist lateral loads is significantly reduced if it is subject to a vertical acceleration at the same time and given the period of the structures concerned it was highly likely the high level of vertical acceleration coincided with a lateral acceleration coincided with a lateral acceleration and as such these buildings were very vulnerable.

30

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Q. Do you, can you express any opinion as to whether or not 595A would still have failed in the way it did if the strengthening had been done to the higher standards that was being considered at the time of the strengthening?

5

A. It's a fairly difficult decision that's, the little acceleration both vertical and horizontal in that February event. I think it was a case where we watched a Landrover respond to the earthquake shaking and I think that demonstrated very clearly the complexity of shaking initially in one direction then changing quite rapidly to the other direction but also significant vertical accelerations which moved the vehicle backwards and forwards so I think that gave some degree I suppose perspective to the severity of shaking.

10

CROSS-EXAMINATION: ALL COUNSEL – NIL

15

QUESTIONS FROM COMMISSIONER CARTER – NIL

QUESTIONS FROM JUSTICE COOPER - NIL

WITNESS EXCUSED

COMMISSION ADJOURNS: 2.40 PM

20