



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

Associate Professor Richard Fenwick
Commissioner

Appearances: S Mills QC, M Zarifeh and M Elliott as Counsel Assisting
J Hannan for Holmes Consulting Group
P Woods for 32 Cathedral Square Ltd/Ganellen Pty Ltd
D Ferrier for Fairfax Media
D Laing and N Daines for Christchurch City Council

**TRANSCRIPT OF HEARINGS ABOUT OTHER BUILDINGS (EXCEPT CTV AND
PGC) WHOSE FAILURE RESULTED IN LOSS OF LIFE (WEEK 3)**

COMMENCING ON 30 JANUARY 2012 AT 10.00 AM AT CHRISTCHURCH

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JUSTICE COOPER:

Yes, today the Royal Commission will enquire into the failure of The Press building in Cathedral Square on the 22nd of February. Adrienne Lindsay known as Ady died in the building that day and we extend our deepest sympathy to her husband Phil and all those who were close to her. We also
5 acknowledge the ordeal of others who were in the building that day and were injured in the collapse. In particular I mention Stacey Herbert who, as a result of the injuries that she sustained, has lost her legs and will have to live with that for the rest of her life and our heartfelt sympathy goes to her as well.

10 Mr Zarifeh you are here representing –

MR ZARIFEH:

Counsel for the Commission.

JUSTICE COOPER:

15 Counsel for the Commission with Mr Elliott. Mr Laing and Ms Daines for the City Council.

MR WOODS:

20 May it please the Commissioners, Woods for the building owner and the property manager Sir, the building owner being 32 Cathedral Square Limited.

JUSTICE COOPER:

Yes and the property manager being?

MR WOODS:

25 Ganellen Pty.

JUSTICE COOPER:

I've been wondering how to pronounce that. Thank you.

MR HANNAN:

May it please the Commissions Hannan for Holmes Consulting Group.

JUSTICE COOPER:

Thank you Mr Hannan.

5

MR FERRIER:

And may it please the Commissioners, counsel's name is Ferrier and I appear for Fairfax New Zealand Limited the owner of The Press, the tenant of 32 Cathedral Square.

10 **JUSTICE COOPER:**

The Press is a body corporate is it, it's a separate company Mr Ferrier?

MR FERRIER:

It's a division of Fairfax New Zealand Limited Sir.

15 **JUSTICE COOPER:**

All right thank you. Anyone else? All right, yes thank you Mr Zarifeh.

MR ZARIFEH:

If the Commission pleases. The Press building that was situated at
20 32 Cathedral Square was a four-storey ornate heritage building that was
constructed in 1906. The building consisted of four suspended concrete floors
with a concrete basement carpark and a concrete roof. Typical floor beams
were a combination of steel angles and concrete, numerous iron and steel
beams and cast iron columns. Thick brickwork walls wrapped the perimeter of
25 the building to the north, east and across the centre in a combination of
reinforced concrete brickwork, and stonework frames to the south and west
walls. A large brick and stonework turret was located to the south-west corner
extending above roof level. The original brick and stonework parapet
extending above roof level was reduced in height in the 1970s along with the
30 installation of structural steel securing works to the south and west wall

parapets. It is thought that this was the only strengthening work undertaken to the building since it was built.

In the September 2010 earthquake the building appears to have suffered only minor damage and after a level 1 and then following that a level 2 rapid
5 assessment was green placarded. The owners of the building through their property management company Ganellen obtained a structural damage report from Lewis and Bradford, Structural Engineers. Lewis and Bradford noted structural damage in three main areas of the building. The north-west brick wall at level three, the north-east brick wall at level three and the stone work
10 to the south and west perimeter frames. In relation to that northern end at level three Lewis and Bradford at that point recommended the construction of a new in situ shear wall in the north-west corner and recommended that that be done, this is back in mid-September in the following two to three weeks.

The tenants of the building, The Press Newspaper obtained an independent
15 inspection by Harrison Grierson, Structural Engineers. They noted various items of damage. The only one which required further assessment was diagonal cracking and loose bricks in the north-east corner of the eastern exterior. It was recommended that the interior pin board lining be removed in that area for inspection of the interior face of this wall. As well the north-west
20 corner of the northern top story was noted to have large cracks in the wall.

In an earthquake response report completed obtained by Ganellen for the owners areas of damage noted were “payroll office north-west corner of level three, suspected diagonal shear failure, turret railing, that's in the tower, and stone parapet damage above the main entrance required repair”.

25 A level 1 rapid assessment on 26 December 2010 following the Boxing Day aftershock noted “general brick cracking including risk that neighbours’ parapet on the east side could fall on The Press building”. The Press building was red placarded and a Building Act notice served on the owners. Repairs were effected and a certificate was completed by Holmes Consulting Group
30 Structural Engineers who had become involved in the building in late December after the September earthquake. That certificate was forwarded to the Council and resulted in the Building Act notice being removed and red placard and the building being able to be occupied again. The Press

Newspaper reoccupied the building at that point, so following the certificate being forwarded on the 12th of January and remained in occupation until the 22nd of February earthquake. And I should say that The Press were intending to move into a new building that had been built for them managed, that build
5 managed by Ganellen, a new purpose built building, that was to occur in March 2011.

There was no further work completed following reoccupation by The Press, however various proposals for strengthening work were provided by Holmes Consulting Group who had as at November 2010 in effect replaced Lewis and
10 Bradford and were in the process of completing a formal assessment of the building, its strength in particular and using a time history model analysis and with a view to advising the owners on what repair work and permanent solutions for the strengthening of the building were required. In that strength
15 assessment by Holmes Consulting it was clear that the building's residual strength following the September and Boxing Day earthquakes was less than 33% of code. None of the proposed structural work had, permanent structural work, had been commenced prior to the 22nd of February earthquake.

In the 22nd of February earthquake the building suffered structural damage of a severe nature, including the collapse of the upper level entirely onto the 4th
20 floor or the top floor – sometimes referred to as 3rd floor, the ground floor being the 1st floor – most of the parapets dropping from the top of the building and the corner of the tower roof toppling back onto the top floor and cracking to the south and west façades.

At the time of the February earthquake Adrienne Lindsay was working on the
25 top floor with seven or eight other staff members from The Press. Mrs Lindsay was killed as she sheltered under her desk on the top floor when the roof collapsed onto the floor. Survivors from that top floor were rescued by USAR, making a hole into the collapsed floor to get access to those
30 people. It may assist the Commission, there's a small video clip that shows the damage to that roof area post the February earthquake which I will ask to be played now. We may have to come back over it. It is not very long.

VIDEO CLIP PLAYED TO THE COMMISSION

It's showing the roof area and you can see the parapets fallen and the damage as a result. I think I am right saying that's looking west, that shot that has just gone out. It's more south-west than south.

5 It may or may not be of assistance later but I just wanted to show it now Sir and we can be brought back to it if necessary. There are some photos that show the building, police photos, that show the building post February, starting on page 0004.8. I will get them displayed just as I am discussing the witnesses Sir.

10 That's looking from the east. You can see the Cathedral Square in the middle, The Press building lower right. Close-up view of that from that angle. That's a view looking towards the south end of The Press building along the top of it, the collapse. Similar view slightly moved around – south-west corner where the turret tower was. It shows it's toppled back onto the top. There's a close-up of that looking from the east and that's a view of the collapsed roof
15 and I believe that's the hole that was made by USAR to effect the rescue. Another view of the collapsed roof area and you can see the collapsed parapets on the west face, and finally a view from the southern side of the building showing the collapsed tower and parapets.

20 **JUSTICE COOPER:**

Can you go back to the one that was I think it might be the suffix 4.9 and just if the lower picture there which is marked 08 there's a structure which roughly divides the top floor in two which is proceeding west to east. Does the collapse of the roof to the south of that as well as to the north? Did the –

25

MR ZARIFEH:

From my understanding it is and I think it's had the effect of splitting the roof into two and there's a wall under there as I understand it, a structural wall.

30 **JUSTICE COOPER:**

The structure which is sort of standing clear of that and roughly dividing that area into two, is that what you're referring to?

MR ZARIFEH:

Yes Sir.

5

JUSTICE COOPER:

And Mrs Lindsay and Ms Herbert were in the part of the building to the north of that weren't they or have I got that wrong?

10 **MR ZARIFEH:**

Yes I think that's right, to the north of that divider on the top floor.

JUSTICE COOPER:

And the other building where survivors were taken is that the north again?

15

MR ZARIFEH:

Yes Sir.

JUSTICE COOPER:

20 There's a plan at 10.220 which is part of the Lewis Bradford report which has reference to various sub-divisions of the top floor. It would be helpful at the appropriate time if somebody could tell us, just explain to us, what those various partitions were because some of the evidence –

25 **MR ZARIFEH:**

Yes Sir that's intended, using that plan or there's a few similar ones. We will use that one perhaps. The first two witnesses will be able to do that.

30 Sir the likely issues that the Commission will have to deal with are firstly application of the Christchurch City Council's Earthquake Prone Policy to the building and, secondly, the assessment of the building after the September 2010 earthquake and after the Boxing Day aftershock and that includes the assessment, obviously, by or on behalf of the Christchurch City Council but also the assessments by the various structural engineers that were engaged

and I've mentioned three firms and perhaps the one in particular that the focus will be on is the assessments by Holmes Consulting Group who were engaged late in 2010 following the September earthquake and who were involved in effecting remedial work following the Building Act notice as a result of the Boxing Day aftershock and who were providing advice in terms of structural strength and solutions to the owners early in 2011 before the February earthquake. So they are the general issues Sir with that focus.

The witnesses that the Commission will hear from. Firstly, Naomi Magee who was an employee of Fairfax and was in the building and she will, she may be able to indicate where various people worked on that floor. So too the next witness, Andrew Boyle, who was the general manager of The Press and he will give evidence of the steps taken by The Press following the September earthquake. He's represented by Mr Ferrier.

Michael Doig is the next witness, from Ganellen, the owner of the building, 32 Cathedral Square Limited's property management company. He will give evidence of Ganellen's involvement, in particular what it did after the September earthquake and the structural engineers that were engaged.

Then the Commission will hear from Ashley Wilson, a Lewis Bradford structural engineer who carried out inspections close to the September earthquake, Andrew Thompson from Harrison Grierson, a structural engineer who was brought in by The Press to give a second opinion after the Lewis and Bradford assessment and then two witnesses from Holmes Consulting Group, John Hare who was involved in assessments and Ben Dare who signed off a CPEng certificate following the remedial works after Boxing Day.

Then Steven McCarthy from the Council will talk about the Council assessments, earthquake prone policy et cetera and Mr Smith, Peter Smith from Spencer Holmes Limited, a structural engineer commissioned by the Royal Commission.

There are three other witnesses whose written material is before the Commission and who I don't intend to deal with specifically but some of the statements they've been made will be referred to witnesses that are giving evidence for comment during the hearing.

JUSTICE COOPER:

Yes well they don't all say precisely the same thing do they?

MR ZARIFEH:

5 No Sir, they don't. So Sir if there's no issues I'll move to the first witness.

JUSTICE COOPER:

Yes, thank you.

MR ZARIFEH CALLS:**NAOMI ANNE MAGEE (SWORN)**

Q. Ms Magee is your full name Naomi Ann Magee?

5 A. Yes.

Q. You live here in Christchurch?

A. Yes.

Q. Have you got a signed statement that has been prepared for you?

A. Yes.

10 Q. Can I ask you please to read that to the Commission starting at paragraph 2 and if I need to point you to a map or anything or photo I'll stop you.

A. Okay.

WITNESS READS BRIEF OF EVIDENCE

15 A. "I work for Fairfax New Zealand as a credit controller and I have been with them for almost three years. Up until the 22nd of February 2011 I worked in The Press building at 32 Cathedral Square. The credit hub where the credit controllers were based was on the third floor of the centre section of the building. The cafeteria was at the northern end of
20 the third floor. The payroll staff were based in the north-western corner of the third floor. Prior to the 4th of September 2010 earthquake I had no concerns about The Press building, in fact I loved being in it. I thought it was a beautiful old building and had plenty of space."

25 Q. Now if I can just get you to pause there and you might have seen that diagram that was put up of the third floor, the top floor.

A. Mmm.

Q. I'll just get that put up again. It's 0010.220. Right now just to get your bearings. You can see at the top the north indicator. The top right?

A. Yep.

30 Q. Right. So the bottom right is the turret or tower?

A. Okay.

Q. Okay and – because that, have you got your bearings of where things were?

A. Yes, yes I do.

Q. Now I just wonder if you can take us through and tell us, and you have to describe it because your evidence is being recorded, so describe it in relation to something on this diagram when you're saying where something was.

5

A. Right, yeah.

Q. So this is the top floor of the building.

A. Yep.

Q. Where was, you just said that you were, you talked about the credit hub where the credit controllers were based.

10

A. Mmm.

Q. Just tell us where was that on this diagram.

A. Where it's got T16, we were in that area there.

Q. And was that an open plan area, the T16?

15

A. Yes, yes.

Q. So that's the credit hub. You said the cafeteria was at the north end of the third floor.

A. So that, that was –

Q. You can see the end wall at the north.

20

A. Yep.

Q. And various divisions within that northern end of rooms. Where was the cafeteria?

A. T25.

Q. So that's the cafeteria?

25

A. Yep.

Q. You said the payroll staff were based in the north-western corner of the third floor?

A. Yes. They were –

Q. Where's that on. What, what's marked, what marks that?

30

A. T24.

Q. Is that the payroll staff?

A. Yes.

JUSTICE COOPER:

Q. That space marked T22 is a landing is it from which it was possible to go either to T16 or T24 or T25?

5 A. Yes, it was through the, basically the stairwell. You'd walk through, through –

Q. Yes.

A. Yes that's quite right, right through.

EXAMINATION CONTINUES: MR ZARIFEH

10 Q. And if we look at the T16, the credit hub area. To the right of that there appears to be a wall that goes right through from east to west on the building?

A. Yes.

Q. And there's a couple of doorways towards the middle where T1 and –

A. Yep.

15 Q. – T15 are?

A. Yes.

Q. Was that correct? That was a dividing wall?

A. It was a main, yep, main dividing wall, yes.

20 Q. And the other walls that we see for example around the credit hub area and cafeteria and the offices down on the west side, T20, T19, T18 et cetera were they all internal walls dividing those?

A. Yes, yes.

Q. So whereabouts did you work in that area? Can you be any more specific?

25 A. Yes in the corner, top corner of the office, it was a glass internal wall and you can see that.

Q. So which wall are we talking about?

A. You can see a line.

Q. Yes.

30 A. You can see T1, if you go through that doorway -

Q. Yes.

A. – and you can see a line there.

1032

Q. Right.

A. And that was a glass wall, so that line was a glass internal wall.

5 Q. See the mouse in front of you, you can use that and you can look up, or you can see it on your screen you can point to it.

A. So that here, that was the glass internal wall and I sat here.

Q. All right, so you're in the south-east corner of that credit hub area?

A. Mmm, yeah.

10 **JUSTICE COOPER:**

Q. So the area marked T30 is a passageway, whose boundaries are defined on the –

A. Yes, yeah, so you'd walk round here.

Q. – around that by your glass wall?

15 A. Yeah.

Q. And another question I have, sorry to interrupt Mr Zarifeh, the area marked T29 was that the women's toilets?

A. Yes.

EXAMINATION CONTINUES: MR ZARIFEH

20 Q. Can you direct us to where other people on this floor were working as at 22 February?

A. Yes. There were three of us here, there was three separate desks.

Q. So that's along the south wall if you like of that glass partition, this hub area?

25 A. That's right, yeah.

Q. There was yourself and two others?

A. Yeah, Liam and Evan, they were there.

Q. Liam and Evan, yes.

30 A. Yeah, and then here were the pod of three desks which was Ady, Andrea and Stacey.

Q. So Ady, Andrea and Stacey were in the middle of the hub area?

A. Yes.

JUSTICE COOPER:

Q. Roughly where that wording is I take it?

A. Yes.

5 EXAMINATION CONTINUES: MR ZARIFEH

Q. Right.

A. There was a spare desk, empty desk there, Liz was over here.

Q. So you're pointing to the right of T31?

A. That's right. Mark was around here I think, I can't –

10 Q. To the left of – upper left of T16?

A. Yes.

Q. Right.

A. I think there was still an empty desk here, I can't recall but I think there was.

15

JUSTICE COOPER:

Q. Were there columns at those two points?

A. Yes. That was one big column and that was of great concern to me, because that was behind Stacey, and there was another column there.

20 Q. Yes.

A. As well and I think that's round where Mark's desk was.

Q. So that's the northern of the two, yes.

EXAMINATION CONTINUES: MR ZARIFEH

Q. Right, who else?

25 A. In that open plan part that's where, that's everyone that I can recall was there.

Q. And as at 22 February who else, if anyone was working anywhere else on that floor?

A. There was Sarah working in one of these offices and I'm sorry I can't recall.

30

Q. Okay, so T33 or T34 or 35, you're not sure.

A. I think it was 34 or 35, I don't recall there being that many offices there so it may have been one of those ones, 34 or 35.

Q. Anyone else?

A. Not in – at that time.

5 Q. Now I just want to take you back to your written statement and I think you're up to – where have we got to, I think you've read paragraph 7.

A. Yes.

Q. So you're up to 'after the 4th of September earthquake,' paragraph 8.

WITNESS CONTINUES READING STATEMENT

10 A. "I remember that we went back to work either a week or two after the 4th of September 2010. Once I went back into the building I could see why there had been a delay in going back to work. In the cafeteria there were several huge bolts in the northern wall. You could also see light coming through the brickwork. We were able to use the cafeteria but I
15 did have a feeling that less people were going in there than before the earthquake."

EXAMINATION CONTINUES: MR ZARIFEH

Q. So just while we're there with that diagram, you told us the cafeteria's T25?

20 A. Yeah.

Q. So when you say the northern wall you're talking about which wall, can you just point it out?

A. It was, I recalled it being round here.

Q. So you're pointing to the north-west corner, or towards the north-west
25 corner?

A. Yes, yes.

JUSTICE COOPER:

Q. Miss Magee was that some sort of balcony on –

30 A. Yes.

Q. – to which the doors, a number of doors opened out?

A. That's right, yes.

EXAMINATION CONTINUES: MR ZARIFEH

Q. So you're talking, you're pointing to the wall to the west of that balcony area. Is that correct?

5 A. Yeah, the – yeah, the way I recall it is that the bolts were sticking like that, out that way.

Q. And at that time were you aware what those bolts were there for or not?

A. Well I assumed they were holding the wall together.

Q. Thank you, paragraph 10.

WITNESS CONTINUES READING STATEMENT

10 A. “The payroll section in the north-western corner of the building was completely off limits at this time.”

EXAMINATION CONTINUES: MR ZARIFEH

Q. Right, and how was that signified, or how did you know that?

15 A. It was – we were advised it was off limits, and I think there was a note on the door and it was locked and it was – you looked through it and it didn't look stable, the walling, yeah.

Q. What's make you say that, what did you see?

A. From what I can recall it looked – the brickwork had moved, it had all moved and displaced its position so it looked like it was crumbling.

20 Q. Did you see gaps in the bricks?

A. No, it was quite dark, there was no lighting and I couldn't see any gaps in those bricks.

Q. All right, but you say they looked crumbling, the bricks looked crumbling?

25 A. Yeah.

Q. So it looked damaged?

A. Like collapsing, yeah.

Q. Right, paragraph 11.

WITNESS CONTINUES READING STATEMENT

30 A. “After the September earthquake I was a little bit concerned about the building but other than the damage and repair work I have noted there was nothing else that seemed to be wrong with the building. I did feel

the aftershocks which were happening at this time, probably because we were at the top of the building. Some of us started to go under our desks during a couple of the bigger aftershocks but while I felt nervous I still felt fine being in the building. There was no noticeable cracking at this time.

5

The Boxing Day earthquake. I was due to go back to work the week after Boxing Day, but after the aftershocks there was a delay in the building re-opening. I then went on holiday so it was later in January when I went back into the building.”

10 **EXAMINATION CONTINUES: MR ZARIFEH**

Q. Do you know roughly what date you came back?

A. No, no, I would say –

Q. It was after mid-January though?

A. Yeah I think so, yeah.

15 Q. So was it late in January?

A. I think about the 15th, 16th would be about right, maybe, or 12th.

Q. But the building when you came back was open for staff?

A. Yes, yeah and staff had already been working in there when –

Q. For some time.

20 A. – before, well for I think a few days at least.

Q. Thank you, paragraph 15.

WITNESS CONTINUES READING STATEMENT

A. I clearly remember my first day back in the building in 2011. All the way up the stairs from the first floor up there were hessian panels draped on either side of the stairway held up by wooden battens. This was not there before Christmas.

25

EXAMINATION CONTINUES: MR ZARIFEH

Q. And just using this diagram can you, either that, use that or tell us where the stairs are that you're talking about?

30 A. T11, sorry T1, the stairway there, yeah.

Q. So was that the main stairway that you would use?

A. Yes.

Q. And again were you aware of what that hessian and the battens were there for or what they were doing or not, or were you told?

A. I don't recall being told, I just felt it was cosmetic, but I was also worried was what was crumbling behind it, but ...

5 Q. And I take it you didn't look behind it?

A. No. I actually just didn't feel comfortable looking behind it, I didn't want to know.

Q. Okay, 16.

WITNESS CONTINUES READING STATEMENT

10 A. "From my desk which was close to the eastern wall of the building I could see two areas of cracking which really concerned me."

EXAMINATION CONTINUES: MR ZARIFEH

Q. And so that's your desk as you've pointed out in that south-west corner of the –

15 **JUSTICE COOPER ADDRESSES COUNSEL – SOUTH EAST**

1042

EXAMINATION CONTINUES: MR ZARIFEH

Q. South-east sorry of the credit hub?

A. Mmm, yes.

20 Q. And carry on at 17 and then I'll get you to show us where.

WITNESS CONTINUES READING STATEMENT FROM PARAGRAPH 17

A. "The first was around the doorway which you took from the main stairwell at the southern end of the building into our office area. There was cracking right around the door frame which started off low on either
25 side of the door and went up and around the door. This was obvious cracking and you could see it from distance away."

JUSTICE COOPER:

Q. So is that the, is that, is the closest reference on that plan the legend
30 T15?

A. Yes, yes. It was, from what I can recall it was like all along the ground, up around the doorway and all around down the other side and all on the floor.

5 Q. So that's the southern side of that corridor we talked before, just north of the stairwell?

A. Mmm.

EXAMINATION CONTINUES: MR ZARIFEH

Q. And was there cracking in that main dividing wall that we talked about before?

10 A. Main yes, yes.

Q. You said that this was obvious cracking that you could see from some distance away. How far away roughly?

A. As far as you could go without going into another room.

Q. So some metres?

15 A. Yes.

Q. Paragraph 18.

WITNESS CONTINUES READING STATEMENT FROM PARAGRAPH 18

20 A. "There was another area of cracking at the door on the northern end of our office. This was an internal wall. Beyond that wall was a stairwell and then the cafeteria was at the northern end of the building. This was diagonal cracking from the top left-hand corner of the door to the ceiling. I knew enough about cracks by this time to know that this was significant. You could see it from my desk which was quite a distance away. It was a point of discussion in the office."

25 Q. I'm not sure if this shows it but if you get BUI.CAT0320010.449 brought up and I think it needs to be turned around and the photo that's on the right at the moment, if we can concentrate on that. Can it not rotate? Looking at the top photo?

A. Mmm.

30 Q. Can we see that crack you were talking about?

A. Yes that was it right there.

Q. So you're pointing to a, well vertical, I think you called it diagonal –

A. Mmm.

Q. – but a vertical crack to the left of this fire exit sign?

A. Mmm.

Q. On that top photo on that page?

5 A. Yes.

Q. And that stairwell, was that the stairwell to the left?

A. Yeah that was the other stairwell which you'd go through to the cafeteria.

Q. And that's T22 on the map. You haven't got it in front of you, sorry.

10 Perhaps if I can just hand it to you it might be quicker.

A. Yeah.

Q. Can you just confirm that please.

A. Thank you, yes that's T22.

Q. T22?

15 A. Yep.

Q. Okay. Did that, did that crack concern you?

A. Yes. I'd see it, I'd look at it every day. It was across from the office and I couldn't avoid looking at it all the time so.

Q. And how far away was your office roughly from that crack?

20 A. Metres. I was the other corner of the office, the far corner.

JUSTICE COOPER:

Q. There seems to be a crack coming down from the ceiling roughly above that crack above the door frame. Do you see that there?

25 A. Sorry.

Q. If you follow up from the crack that you've just been talking about.

A. Yeah, yeah.

Q. To near the ceiling.

A. Yeah.

30 Q. There seems to be a crack there as well. Did you, am I right about that or?

A. Possibly I, I –

Q. You can't recall that?

A. I can only, it was, I would have been concerned about that at the time but now I can, can only remember that one.

EXAMINATION CONTINUES: MR ZARIFEH

Q. So paragraph 19 please.

5 WITNESS CONTINUES READING STATEMENT FROM PARAGRAPH 19

A. "I still remember that on that first day I was quite astonished that we were in the building. I remember thinking, how can we be in here? Other damage that I remember was in the women's toilets on our floor on the eastern side of the building closer to the cafeteria end. The doors didn't shut properly and there were windows that were boarded up."
10

Q. Okay and so that's the area that His Honour pointed out before, T29?

A. Yes, yeah with the women's toilets, yeah.

Q. And windows boarded up presumably because they're broken or could you not tell?
15

A. I couldn't tell but I assumed.

Q. Okay 21.

WITNESS CONTINUES READING STATEMENT FROM PARAGRAPH 21

A. "I remember talking with my colleagues Adrienne Lindsay, Stacey Herbert and Liam about the building. Something that we discussed was moving Ady and Stacey away from the large floor to ceiling beam. It seemed to us that if, if it was going to come down it was going to fall towards where Stacey sat."
20

Q. So just, I think you pointed that out before but can you just take us to that again on 220 please – bring it up.
25

A. So that would be, that being there.

Q. So you're pointing to, looking at that diagram, to the beam to the right of T16?

A. Yes.

Q. And that was a column from floor to ceiling?
30

A. Yes.

Q. And what was the concern. Why were you talking about doing that?

A. I think we were just having a general discussion about how we felt being in there and then, I don't know how the subject was brought on about the beam, and then we thought about if it was going to fall how it was going to fall and it was just right in the line of Stacey and Ady, it was going to hit Stacey first, then Ady and I remember, I remember we really seriously, the boys were trying to look at moving the desks along but, of course, with all the wiring and the computer wiring and we thought, it was just impossible, it wasn't just simply picking up a desk and moving it. It was, everything that had been, you know, wired in, so.

10 Q. So did anyone move or not?

A. No.

Q. Paragraph 22.

WITNESS CONTINUES READING STATEMENT FROM PARAGRAPH 22

15 A. "We felt unsafe in that building and I heard Ady on the phone talking to people saying that she didn't feel safe in there. I did see engineers in the building because they were wearing jackets with the names of their firms on them. I did see them look at the diagonal crack that I have referred to in the northern end of the building."

Q. And is that the one that you referred to in that photo?

20 A. Yes.

Q. That's on page - .449. Thank you.

WITNESS CONTINUES READING STATEMENT

25 A. "We would get emails from management after most of the reasonable sized aftershocks saying that the building had been checked out and was safe but I remember on some occasions I would only see the engineer after the email had been sent out. I think at least, at least on one occasion we were sent the engineer's report by email.

30 Looking back I wonder now if I would have been feeling different about staying in the building if we weren't scheduled to move to new premises behind our existing building in March 2011. Everyone was looking forward to the move and at the time of the 22nd of February 2011 we were packing up our belongings, getting ready to go."

Q. And that was to move to a new building that had been built for The Press –

A. Yep.

Q. – in Gloucester Street, correct?

5 A. Yep.

Q. Thank you. Carry on please.

WITNESS CONTINUES READING STATEMENT

10 A. “22nd of February 2011. On the morning of 22nd of February 2011 I remember talking to a colleague in Oamaru. We talked about the building and I told her it was only two weeks until the move and that I was glad to be going because I felt we shouldn't be in the building.

15 When the earthquake hit I was at my desk. I was standing up just about to go for lunch. I remember hearing the rumble and then thought, this is bad, I better get under my desk. I must have been knocked out because when I came around I was under my desk facing around the other way and on my elbows and knees. A piece of wall or a piece of roof had hit me in the back and must have thrown me under my desk.

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20 A. It was pitch black and I couldn't breathe but luckily short time later during an aftershock part of the wall fell away further down and I could see some light and get some air through the split in my desk.

25 I understand 11 of us were trapped in The Press building three in near the cafeteria area and the rest in my office. I was rescued from The Press building after five hours. After the main shake there were a number of significant aftershocks. I remember how much the building wobbled around in those later aftershocks on the 22nd of February and it is amazing to me that the building didn't collapse given how much it was moving. It was not until after the 22nd of February that I learned the building had been red stickered as a result of the post Boxing Day inspection”.

30

Q. You mentioned before that you were told by management that the building had been checked and was safe. Did that include after Boxing Day once you'd returned to work?

A. We were, what I recall is we were constantly getting emails reassuring us that the building had been checked and was safe.

Q. Right and including after Boxing Day?

A. Yes.

5 Q. So January –

A. Yes.

Q. – 2011.

**CROSS-EXAMINATION: MR LAING, MR WOODS, MR HANNAN,
MR FERRIER – NIL**

10 **QUESTIONS FROM COMMISSIONER FENWICK AND JUSTICE COOPER
– NIL**

JUSTICE COOPER:

Ms Magee your evidence has been very helpful for us in setting the scene thank you very much.

15 **WITNESS EXCUSED**

MR FERRIER CALLS:**ANDREW SIMON BOYLE (SWORN)**

Q. Your full name is Andrew Simon Boyle?

A. It is.

5 Q. You live in Christchurch and you're employed as the general manager of The Press and Fairfax Southern Region is that correct?

A. Yes I am.

Q. And you've held that position since May 2008?

A. Correct.

10 Q. And have you prepared a statement for this Commission?

A. I have.

Q. And have you a copy with you?

A. I do.

Q. Can you just please read Mr Boyle from paragraph 2?

15 **WITNESS READS STATEMENT**

A. "Fairfax New Zealand Limited trading as Fairfax Media became the owner of The Press as part of a broader purchase of Independent Newspapers Limited in 2003. The Press is an operating division of Fairfax.

20 The Press owned The Press building at 32 Cathedral Square until 2008 when it was sold to Ganellen Pty Limited. The sale was completed on 31 July 2008 at which time The Press became Ganellen's tenant. In 2006 we had begun a comprehensive review of facilities which led to Fairfax planning the construction of a dedicated print centre at Logistics Drive near the Christchurch airport. As part of this project Fairfax was

25 selling its Cathedral Square complex in order to move into a more suitably sized building for Press administration and publishing operations. Ganellen agreed to buy the Cathedral Square complex and to build a new building at 156 Gloucester Street which was to be leased

30 to The Press. We would occupy the existing Cathedral Square site until we could move into the new building.

During the sale process in 2007 Fairfax's real estate agent Colliers had obtained a LIM from the City Council which noted that some buildings

on The Press site were either earthquake prone or potentially earthquake prone. Fairfax gave the LIM to all prospective purchasers and Colliers on behalf of Fairfax also commissioned Holmes Consulting Group to provide a report that Fairfax could give to prospective purchasers discussing Council requirements in relation to buildings described in LIMs as earthquake prone. Copies of the LIM and the Holmes report are attached to this statement.

5

The Holmes report in 2007 did not include an on-site investigation. It said that “none of the buildings in the complex had been put into a category for upgrading yet, none would likely to be in category A and the heritage Press building had been recorded by Council as likely to be earthquake prone and The Press building was almost certain to be earthquake prone”. But I note that in Steve McCarthy’s brief of evidence he says the Council did not specify the building as earthquake prone. I was not at the relevant times aware of the report or the LIM at all as I had not been involved in the sale process in 2007. I first became aware of the LIM and the subsequent Holmes Consulting report in December 2011.

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15

Following the 4 September 2010 earthquake Civil Defence very rapidly cleared The Press building for occupation and Council engineers green stickered it on 5 September. Ganellen instructed Lewis Bradford Consulting Engineers to inspect The Press building on 6 September. On Lewis Bradford’s instruction the payroll area of the building in the north-western corner was strengthened. Subsequently we received a copy of the Lewis Bradford report to Ganellen dated 16 September.

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25

After the significant aftershock on 8 September 2010 I had staff vacate The Press building immediately. Over the next few days I arranged for Harrison Grierson, another firm of structural engineers, to also inspect the building. I did this so that we could have another expert view additional to that of the owner’s engineers. Lewis Bradford for Ganellen recommended work be undertaken including temporary steel work to the parapets, an inspection for loose bricks and immediate bracing and securing of the north-western corner of the building. They also

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recommended an in situ shear wall in the north-western corner be installed within two to three weeks. In relation to the recommendation for an in situ shear wall in the north-western corner Harrison Grierson agreed but I did note that they did not specify or recommend a
5 timeframe for that work to be done. After re-inspection of the bracing work by both Lewis Bradford and Harrison Grierson for The Press I understood that the engineers considered the bracing was satisfactory until The Press moved out of the building permanently to go to its new building. That understanding was based on discussions that I and two
10 of my senior managers, Barry Appleby and Phil Marshall-Lee had at the time with Nick Jennings, site manager for the building owners Ganellen. The recommended work from the Lewis Bradford report was undertaken and inspected by them and by Harrison Grierson independently on behalf of The Press. On 16 September both firms, Lewis Bradford and
15 Harrison Grierson reported that the building could be re-occupied. We received from Ganellen a letter dated 16 September 2010 discussing these findings. Attached to this statement is a copy of the minutes of a management meeting held on 16 September 2010 in which we discussed the decision to move back and the need to be certain that the
20 building was safe”.

Q. I'll just stop you there Mr Boyle. Can I take you to document WIT.BOY.0004.127?

WITNESS REFERRED TO DOCUMENT

Q. Which is annexure C to your statement. Can I just get you to read into
25 the record the last paragraph on page 127?

A. “There will still be nervousness about going back into the building. Getting some EAP support – when people move back into the building. Clear communication is needed. The safety of the building is critical. Managers to be there to meet and greet. Ganellen will lodge a letter
30 stating that the building is safe to return to, and Phil to chase that”.

Q. And did Ganellen ultimately provide that letter?

A. They did.

Q. Thank you Mr Boyle if you just continue from paragraph 16.

1102

WITNESS CONTINUES READING STATEMENT

- A. “As these minutes indicate a small number of us, including myself began to move back to the building in the late afternoon of 17 September 2010.
- 5 The area where the bracing bolting had been installed in the north-western corner was not reoccupied, nor the area on the floor below it as recommended in the Harrison Grierson structural integrity assessment. All the key findings of the engineering reports we had were made available to all Press staff as part of many communications we made. I
- 10 emphasised in these communications that staff could stay at home if they had family or home matters to attend to first. We had operated with a reduced staff during the period in which we were out of the building and my managers had in that period encouraged some staff who we deemed to be non-production critical to stay at home or to work
- 15 remotely. We could operate and get news out partly by re-routing some functions like call centres and credit team to Fairfax sites outside of Christchurch. Our own staff were not all required to come into an office and some worked remotely and this was the outcome of contingency planning we had put in place after 4 September in case we needed to
- 20 move out of the building as happened from 8 to 20 September. However in the media business there is a strong drive to lead the flow of news and information to the public so we tend to be less likely than other businesses to shut down temporarily or to have staff stay away. Staff and their families could also access counselling at EAP which was
- 25 entirely confidential and free of charge. My communications also sought feedback from staff as to any concerns that they may have. Our health and safety committee were put on alert to watch for staff who were uneasy and our Fairfax National Health and Safety adviser made a trip to Christchurch to assess our management of the building damage and
- 30 staff welfare.

EXAMINATION CONTINUES: MR FERRIER

Q. Thank you Mr Boyle, I'll just stop you there, you've discussed communications you had with staff. If I could get document BUI.CAT0320022.1 brought up please.

5 WITNESS REFERRED TO DOCUMENT

Q. Have you got a copy of that document in front of you Mr Boyle?

A. I do.

Q. Can you just explain for the Commission the background to this document and what it really is?

10 A. This was a document that was written on the day, the first day after which we occupied the building post 4 September as a full complement of staff. It was the first opportunity for me to give people a very clear update as to what the state of play was, and a very first opportunity to let them know particularly over the weekend what the responses were from engineering inspections.

15

Q. Could you just read into the record the last two sentences of the second paragraph on page 1?

A. "If you feel you need to go home to attend to family or issues at home then I urge you to do so. Or likewise if you are feeling in anyway unsafe."

20

Q. And turning over to page 2, could you please read into the record the second sentence of the third to last paragraph which starts, "equally I am conscious."

A. "Equally I am conscious that there has been an aftershock in the last hour and if you are wishing to leave, please contact your department manager and let them know."

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Q. Thank you, and turning to page 3 of that document Mr Boyle, if you could just explain what that document is?

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A. Yeah, this is an update from Joanne Ballantyne, our HR Manager about the provision of EAP Services for staff and their families. I think it also, you know, reiterated that an event such as the earthquake would make people feel uneasy and they would react in different ways. It was a timely reminder in my view to remind people about, that those feelings

might be normal and therefore if they wanted some assistance they had every opportunity to do so by contacting EAP, including that we had an EAP counsellor on site available for staff to do so.

5 Q. Right. Turning to page 5 of that document if you would please, Mr Boyle, if you could discuss that?

A. This is the communication that I sent to staff on the 17th of September which was the Friday before the full complement of staff were to return to the building on Monday the 20th of September. So really it was an update about what had happened with respect to the various
10 engineering checks, a bit of a commentary on the damage and some commentary on the logistics of how we would move back in.

Q. And the third to last paragraph is asterisked and underlined. Could you please read that into the record?

A. "Your manager will go through the details of your department's shift with
15 you. Please advise your manager if you have any concerns about this plan."

Q. Thank you, turning to page 6 of that document. Is that an email from you to all staff dated 19 October 2010?

A. It is.

20 Q. And could you explain for the Commission the genesis of that document please?

A. Yes, on the 19th of October I had my management team off site for a planning meeting. We were at Jade Stadium. During that meeting there was a significant aftershock, and Joanne Ballantyne our HR Manager and I immediately returned to the premises to check on the welfare of
25 staff by doing a walkthrough of all the floors. It was timely for me to update the staff later in the day in terms of what the process was for rechecking that building following an aftershock of this nature and so I did that in quite some detail in paragraph 2.

30 Q. And then perhaps if you could just read into the record paragraph 3?

A. "I absolutely appreciate that for many of you this morning's aftershock was scary to say the least. Please contact me or your immediate

manager if you need assistance or you need to provide it to your families.”

Q. Thank you, and finally turning to pages 8 and 9 of that document. If you could just discuss those?

5 A. Oh, these are – this document here is prepared I recall by Joanne Ballantyne. Again it's just a reminder about the process we should follow that Civil Defence advise in the event of earthquake or an aftershock. And so just – it really is just a reiterating what we should do and I wanted to make sure that people understood that clearly.

10 Q. And so we've seen written communications. What else did you do to ensure that management could hear any safety concerns that staff might have?

A. A very common topic of discussion at my management meetings was that they had to be alert to look out for staff. Included within that they need to be aware of their own welfare because it was really important to me that they were feeling comfortable in the building themselves, that they were well rested and that they could identify any sense of anxiety or uncertainty amongst people in their team. I emphasised the need that they needed to get up and walk around a lot more than say perhaps might be normal in terms of being in contact and sensing how their staff were feeling. I referred earlier to the incident on 19 October and how Joanne and I performed a walk around of that building and I remember going back to the building and I said to Joanne, “Okay, you do the top two floors, I'll do the bottom two floors. Let's do it as thoroughly as we can. We'll meet up in an hour and a half, two hours and have a debrief on it.” So they were very sort of consistent messages that I was pushing at our weekly management meetings to the whole executive team.

25 Q. Thank you Mr Boyle, if I could just get you to resume reading your statement from paragraph 21?

30 **WITNESS CONTINUES READING STATEMENT**

A. “Following the Boxing Day 2010 aftershock the building was red stickered partly because a section of the parapet on the Britten building at 105 Worcester Street had collapsed causing damage to our building.

The remaining piece of it was a fall hazard. Part of the parapet of the Coachman Hotel had also collapsed on top of the roof of a smaller building at 146 Gloucester Street where the Press had its circulation and marketing teams situated. The events of Boxing Day necessitated that we vacate all of the Press buildings at that time. We set up our operations at our print centre at Logistics Drive that afternoon.

- 5
- A. By then Ganellen had undertaken a tender process to find the best engineering firm to advise them on the best way to manage this property. I assumed that that was not only because of the earthquake but also because Ganellen needed to identify code work required long-term as part of the development of The Press Heritage building after The Press moved to their new building. Holmes Consulting Group had been appointed in about November of 2010 and consequently after the Boxing Day earthquake Ganellen instructed Holmes Consulting to re-check the building. Holmes Consulting duly did post Boxing Day checks and provided a report to Ganellen. This report was given to The Press in early January. Some bracing work to the north-eastern corner and the south wall was required and the Britten building parapet had to be removed before The Press building could be re-occupied. All of that work was completed. Holmes Consulting issued a report to Ganellen on 7 January which said the building was safe to occupy and The Press re-occupied the building on 10 January 2011. A small amount of further securing works was undertaken on the brick piers of the toilet lightwell on the top floor of the building under the recommendation from Holmes and this work was completed on 24 January 2011.

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In the period after we re-occupied the building from 10 January 2011 until the February earthquake struck Ganellen and its engineers monitored the repairs that had been done previously and we saw this monitoring first hand. After the September earthquakes there was a lot of cracking in the plaster work especially in the stairwells and more again after Boxing Day. To properly inspect the brickwork behind, the engineers had to remove further plaster. After the September earthquake these areas had been re-plastered and painted after

inspection but after Boxing Day there was one section of the stairwell where canvass painting drop cloths were placed by Ganellen over the exposed brick work. We agreed to this even though we were about 10 weeks of moving out of the building into new premises and Ganellen would be retrofitting as soon as we vacated...

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Q. I will just stop you there Mr Boyle. Are those the drop cloths that Ms Magee was discussing earlier on?

A. They are.

WITNESS CONTINUES READING STATEMENT FROM PARAGRAPH 27

10 A. I am very confident that any damage observable by us had been pointed out to Ganellen and respectively Lewis Bradford, Harrison Grierson and Holmes Consulting. My staff and I were concerned about the north-western corner where the temporary bracing had been put in on 6 September. We consistently looked at that after the aftershocks and 15 contacted Ganellen immediately to inspect again. It was the obvious damage to that corner that was part of the reason we got a second opinion from Harrison Grierson after 8 September. We were also informed by Ganellen that that area was also regularly checked by them and engineers who concluded that the securing work to that area was 20 holding and no further action was instructed.

20

When Ganellen advised that they had engaged Holmes Consulting Group I was aware that they had credentials and that they were familiar with The Press building from previous work. I had also heard that John Hare from Holmes was an experienced engineer and highly regarded. I 25 had no reason to question their appointment by Ganellen as consulting engineers. The engineering inspections having been repeated and apparently comprehensive and key findings were made freely available to staff.

25

The Christchurch events were unprecedented and it would be expected that staff were unsettled to varying degrees. My focus was on ensuring we obtained the best advice, that all work recommended by the engineers was done and that we communicated all the advice and the steps taken to our staff. Not surprisingly there were a number of 30

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questions to me from staff about whether the engineers had okayed the building but no specific request to me to work elsewhere.

5 I would like to comment on suggestions made by John Hare that The Press was pushing hard to re-occupy the building following the Boxing Day aftershock in paragraph 20 of his statement. Following the aftershock I had many discussions with Michael Doig and Nick Jennings of Ganellen to understand the degree of damage to The Press buildings, the likely repairs needed and the likely time-frame for those repairs. The relevance of these discussions for me was that I could start the immediate and urgent planning of where we could locate staff to continue publishing given we were operating with a very skeleton crew and most of these discussions took place on 26 and 27 December. Michael's report of 27 December stated that there was no major damage that would prevent immediate occupation of the ground mezzanine and 1st floors of building 2 which adjoined the Heritage Press building but that the top floor could not be used until the restriction was lifted from The Press building and access returned for fire egress. I responded on 29 December. Before sending that email to Michael I had not fully appreciated that the fire exit on the top floor of building 2 would have necessitated staff evacuating via the Heritage Press building, building 1, which I clearly understood was red stickered and inaccessible. Michael in turn forwarded my email to John Hare and in his response he explained that the whole complex was red stickered. In a subsequent discussion with Michael on 30 December he explained the response from John Hare and why we couldn't have staff on the top floor because their fire exit would have required them to come out through The Press Heritage building. That fully clarified the situation for me and we confirmed our booking with the Novotel Hotel.

30 I recall another conversation with our maintenance foreman, George Piper, either on 28 or 29 December, in which he expressed concern about the urgent need to remove the remaining piece of the Britten parapet. It was very brittle and George thought might fall irrespective of more aftershocks. George's particular concern with that was that the

bricks might fall onto an air conditioning unit that cooled our computer server room on level 1 of the old Press building. Had that occurred the server room would almost have certainly shut down after a period because it had to be kept within a specified temperature range controlling the air conditioning units. If our server room had shut down we would have had no connectivity in Christchurch from which to publish all our South Island newspapers and understandably I was anxious about this development and that anxiety was probably reflected in my email to Michael on 29 December urging him to give me a response as to when the Britten parapet was going to be removed. The brick parapet on the Britten building was removed on 6 January. I also recall this was the last piece of work outstanding as required by Holmes. The shoring work on The Press building had been completed earlier that week. We were not pushing hard to return to the building. Rather, we were looking for clarity as to the implications of the various developments post Boxing Day and the need to ensure a safe working environment for my staff far outweighed any imperative to resume normal operations.

When part of The Press building's roof collapsed in the February earthquake Adrienne Lindsay was working on the top floor with other staff and tragically she was killed. Two other staff suffered very substantial injuries and there were other injuries on that floor. Some survivors were rescued through a hole that was made in the collapsed roof by USAR; others were assisted out of the top floor by Press and a number of Ganellen staff. We don't know what caused the roof to fail but I have heard speculation that the Britten building swayed into or otherwise struck the roof of The Press building.

In hindsight I have asked myself whether we could have permanently vacated The Press building after Boxing Day. In fact while we were waiting for expert advice about the safety of the building my senior staff and I explored two options including moving to the new building at 156 Gloucester Street which was due to be fully complete in mid to late March. While many floors there remained a building site there was

space on the ground floor which looked to me to be finished. However, this option was very difficult to implement. The new building was not fully complete and still had a number of workers on site. Not being practically complete, shifted some liability for our staff health and safety to Ganellen. Ganellen was not willing to have that responsibility and we did not want to pass it to them so we decided not to pursue that option. The second option was for our staff to remain working at the business centre of the Novotel Hotel where we had housed some staff from 5 January 2011. The importance to us of the Novotel Hotel aside from the sufficient space to accommodate a good number of us was that we could run a cable from our server in The Press building to maintain connectivity with our network. We could not easily operate our business and that of the many other South Island newspapers given many of their production processes are centralised in Christchurch without such connectivity. However, remaining at the Novotel until our likely move into the new building was clearly going to present the hotel with significant difficulties and we concluded that remaining in the hotel was not a feasible option either.

Ultimately, however, my primary concern was the safety of my staff and difficulties arising from the practicalities of any required move would never have superseded that primary concern. If I had not been assured that the building was safe we just would not have gone back in.

While all decisions as to moving back into the building were my responsibility, I took advice from a number of sources including four of my senior team – Barry Appleby, Phil Marshall-Lee, Mark Ross and Joanne Ballantyne in particular. I also kept in regular contact with Fairfax's CEO Allan Williams and Fairfax's legal counsel Sara Hard about the steps we were taking to review options and to obtain engineering advice. The decision to move back to The Press building after the 8 September aftershock was the subject of a broader management meeting on 16 September to which I've already referred. The decision to move back into the building on January 10 2011 did not involve a full-scale management meeting but rather discussions with the

small number of managers who were working at the time. The bulk of the team remained on annual leave, but in making my decisions I ultimately relied on expert advice that the building was safe. After the building failed I learnt by reading the Holmes interim report of 3 February 2011 that the building was not earthquake prone before the September events. I noted the reference to the building clearly being less than 33% of full code loads after the earthquakes of September and December but we were never provided with a copy of that report prior to 22 February.

Following this I have considered what my response would have been had I seen that report and I'm conscious that this is said with the benefit of hindsight. However, I am certain that I would have convened a meeting with my deputy Barry Appleby who was handling property related issues, Genellen, Holmes Consulting and quite likely another engineering firm such as Harrison Grierson in order to get complete clarity as to the significance of the full code load in terms of the safety of the building. I could do no more than speculate on what the outcome of that discussion might have been."

Q. Thank you Mr Boyle. I just have one supplementary issue I'd like to deal with please. Do you recall the Royal Commission raising with you an issue identified by a David Lynch?

A. I do.

Q. And perhaps if we can bring that up. That's BUI.CAT0320018. – and Mr Lynch's email starts on point 3 madam registrar. Just while that's coming up Mr Boyle who is David Lynch? What role does he have?

A. David works for Fairfax IT, one of a number of people who work in the Christchurch building who have group functions.

Q. Right and what was the nature of Mr Lynch's concerns?

A. Well I, I note that his main concern was that he felt that the door closest to him that he was trying to exit the building from had, in fact, automatically locked shut which clearly distressed him. He needed to find another way out of the building.

Q. So he was saying was he that he thought there was some sort of security system failure?

A. That's correct.

Q. And so what did you do in response to that issue being raised with you?

5 A. I immediately had a discussion with Barry Appleby who looks after property matters for us and with Joanne Ballantyne our HR manager. Joanne confirmed that that door was indeed stuck as she went through the building after the earthquake on 22 February and she, she was trying to get it open and couldn't. We then, Barry then had a discussion
10 with Andrew Dale our chief building warden and he confirmed that as should be the case when the fire alarms sound that the doors do open and he confirmed that was the case. To get better clarity on the matter we then called George Piper who was our maintenance foreman who was in our employment on 22 February and George confirmed a
15 number of matters and particularly with respect to his, working his way through the building in the mid-afternoon of 22 February with people from the Fire Service and they confirmed that all the doors that should have been opened were with the exception of that door on the first floor which they themselves had tried to get open but couldn't. We would
20 have to conclude from what George said and what Andrew Dale said that it was a, a, clearly a matter where the building had moved and the door had just become jammed. It wasn't a, it wasn't an issue where a system that we had in place hadn't released those doors as they should.

25 Q. All right and could we possibly bring up page 1 of that document please? And Mr Boyle is that an email from you to the Royal Commission in which you set out the findings of your enquiries?

A. It is.

COMMISSION ADJOURNS: 11.27 AM

30 **COMMISSION RESUMES: 11.45 AM**

CROSS-EXAMINATION: MR ZARIFEH

- 5 Q. Mr Boyle, just a few questions to clarify some matters. Firstly in paragraph 6 to 8, you deal with the sale process in 2007 and you referred to the LIM which contained a reference to the building possibly being earthquake prone, can you just take us to that relevant page. I think it's point 28, so it's WITBOY0004.28. It will get brought up on the screen. And if the second bullet point could be highlighted please. Is that the reference you're referring to?
- A. Yes it was.
- 10 Q. "Site with a possible earthquake prone building". Thank you. The Holmes report that you referred to in paragraph 6. Is that at page 118 of your material, or part of it's at 118 and I think the part that you're referring to, if that can be brought up please, and the fifth paragraph down highlighted please, starting "although."
- 15 Q. "Although no formal assessment has been completed on this building it is almost certain to be earthquake prone, with specific concerns about the lack of overall strength, and the lack of confinement reinforcing to the columns. We understand that the Council has recorded that this building is likely to be earthquake prone." Was that the section you were referring to?
- 20 A. Yes.
- Q. And I understand from paragraph 8 and what you said that you weren't involved in the sale process back then or weren't aware of these two matters?
- A. That's correct.
- 25 Q. Paragraph 10, you referred to Lewis and Bradford inspecting the Press building on the 6th of September and then said on Lewis Bradford's instructions the payroll area of the building, north-west corner, was strengthened. What was your understanding as to what was done?
- A. That was the bracing and the bolting that was undertaken in that corner.
- 30 Q. Then you referred in paragraph 12 to Lewis and Bradford recommending work to be undertaken including temporary steel work to the parapet, inspection for loose bricks and immediate bracing and

securing of the north-west corner. Is that what you were referring to before?

A. It's the same thing.

5 Q. All right, you said they also recommended an in-situ shear wall in the north-west corner to be installed within two to three weeks.

A. Mhm.

Q. And you said at para 13 that Harrison Grierson agreed but didn't put any timeframe on that?

A. That's correct.

10 Q. Now what was your understanding as to whether or not that in-situ shear wall was ever constructed?

A. It wasn't constructed.

Q. It wasn't, and do you know why it wasn't?

15 A. Based on the discussions that I had with the two Ganellen guys, Michael and Nick, they said that –

Q. Is that Michael Doig and Nick Jennings?

A. Sorry Michael Doig and Nick Jennings.

Q. Right.

20 A. They said that the engineers had inspected that bolting and bracing procedure and they concluded that it was satisfactory and stable until we vacated the building in early 2011, at which point they would then effect a permanent solution.

Q. Right, and when you said the engineers, who were they referring to, were you told?

25 A. They were referring to Lewis Bradford and also to Holmes.

Q. Well do you know when this was – you were told this?

A. It would have been, I don't know exactly when but from my recollection it would have been probably perhaps a month later, perhaps in the middle of October.

30 Q. And so was it at a point after Holmes had become involved?

A. Well I think Holmes had become involved prior to them winning the tender as I understood it, because they had been looking at that building prior to that so whilst I think their tender, they won the tender process in

the middle of November, I think they had some involvement with the building prior to that, was my recollection.

Q. And did you have direct contact with those engineers on this issue or not, or did you just rely on what you were told?

5 A. No, we were just dealing with Ganellen on that one.

Q. And how clear are you in terms of your recollection as to which engineers it was that you told – you were told had said that?

A. I'm very clear that Lewis Bradford had been involved, based on –

Q. Had been involved in passing on that information?

10 A. Correct.

Q. And just finally, or perhaps just paragraph 21 before the final point, you said that you were aware that the building had been red-stickered following Boxing Day?

A. Mhm.

15 Q. And you said partly because of the parapet on the building behind?

A. That's correct.

Q. Were you aware of why else it had been red-stickered?

A. Because there needed to be some bracing work on the south wall and some further work required at the eastern end of the north wall.

20 Q. And where did you get that information from?

A. We got it both from Michael Doig's email to me of 27 December and in discussions that I was having with Michael and Nick from Ganellen because I was – they took me through the building as well.

25 Q. Now the final point I wanted to clarify was paragraph 25. You said that after the Boxing Day repairs that the Press reoccupied the building 10 January?

A. That's correct.

30 Q. The – a certificate is completed and forwarded to the Council to enable the red sticker to be removed and the Building Act notice and we're going to hear evidence, we've got the certificate, it's dated the 12th of January. Can you just tell us how it came to be that you're moving in on the 10th before that certificate was forwarded to the Council?

5 A. Yes I can, on the basis of the engineering report that we had from – given to us by Ganellen which was in turn given to them by Holmes, on the 7th of January we took our decision to move back in over that weekend and have the staff in by the 10th. Ganellen had let me know at that point that Holmes were going to attend to the certification issue with Council and, so we were operating on the knowledge that the building had clearly been declared safe to occupy and so we took a decision to move back in over that weekend to start occupation on the 10th.

Q. Right.

10 A. Now in hindsight I look at that and say, well technically you didn't follow the administrative process to the letter of the law, but we only took the decision to move back in once we knew there was a definitive engineering statement that said it was safe to occupy.

15 Q. And that definitive engineering statement, is it a site report dated 7 January that you're referring to?

A. Correct.

Q. We'll just get that brought up, BUICAT0320010.396. Is that the document?

A. Correct.

20 Q. And so you were given a copy of that?

A. Correct.

1155

25 Q. And under observations and comments it says, "Securing works to south wall have been completed. North wall strengthening to pillar and building. Corner stairwell loose plaster's been removed. Collapsed parapet and central atrium from adjacent building remaining loose. Sections of parapet to be removed down to floor level. Notify building owner of works required to be completed. Once the above works had been completed the building will be safe to occupy. We're informed by Nick Jennings of Ganellen that this has been done (7 January)." So it was on the basis of that report which included confirmation from
30 Ganellen that the above works had been completed?

A. That's correct.

Q. But obviously clearly as you've said in hindsight before the Council had actually removed the red sticker?

A. That's right.

CROSS-EXAMINATION: MR ELLIOTT

5 Q. Could I have document BUI.CAT032.0010.220 please which is the plan Mr Boyle we've been looking at. Just one or two very brief questions. That's the top floor of the building. Am I right in saying that your office was located at T11?

A. Yes.

10 Q. Under the turret?

A. Yes.

Q. And was that area of the office to the right of the dividing wall a management area?

A. Largely. There was in T3 the payroll team that had been previously located in T24 and were relocated there and the other, T10's the boardroom, T9's another meeting room, T8's a kitchen facility and there are management offices from T11 through to T14.

15 Q. Were there people in that section of the building at 12.51 on 22 February?

20 A. Yes.

Q. Did they all get out?

A. Yes.

Q. Are you aware whether the roof collapsed?

A. I believe part of the roof collapsed over T11.

25 Q. Were you there at the time?

A. No I was in an office immediately on the floor below that speaking with our editor.

30 Q. Mr Zarifeh asked you about the north-west and we've been told that T24 is the payroll office. I'm just going to show you a photograph, document BUI.CAT032.0010.260. The bottom right photograph could be enlarged. It's not that hard to see but is that the work you're referring to at the north-western wall?

A. It is.

Q. And was that work in place after the September earthquake?

A. Yes that was -

Q. And before Boxing Day?

5 A. Yes that was put in on 6 September.

Q. Those coloured bolts. Did you see similar bolts in place anywhere else along the northern wall?

10 A. Just on the, and perhaps if the plan comes back up. There were bolts on the other side of that window that were immediately into the café area which I think was T25. So you'll see the wall between T24 and T25. There were bolts on either side of that wall on the, sorry either side of that wall on the north wall. It was effectively a bracing system to stabilise that north wall.

15 Q. We, we have photographs of that, the inside and outside of the north-western area. I just want to ask you about the cafeteria which is I think in document BUI.CAT032.0010.261, bottom right-hand photograph. Is that the cafeteria?

A. Yes it is.

20 Q. And are we looking out through the window to the north, towards the north. Would that be right?

A. Yes that's right.

Q. And His Honour asked earlier on about a balcony.

A. Yes.

25 Q. So we can see that balcony just outside and it appears from the plans that there were four glass doors in the cafeteria area. Would that be right?

A. I couldn't say if there was exactly four but there was a number of doors there.

Q. So did you refer to some bolts being in place in the cafeteria?

30 A. Yeah if I, if I'm seeing this picture correctly just on the, just this side of that glass wall which divides the cafeteria to the payroll area, behind it I believe there's a bolt, a (inaudible 12:00:48) bolting system just

immediately there to the left of that western-most door going out of the balcony.

JUSTICE COOPER:

- 5 Q. You could use the mouse.
A. Thank you. About –
Q. Yeah.
A. About there I think.
Q. Right.
10 A. I think that's a bolt there. A yellow bolt.
Q. Yes.
A. There's a corresponding one on the other side.
Q. Yes.

CROSS-EXAMINATION CONTINUES: MR ELLIOTT

- 15 Q. And you're indicating the lower part of the western wall in the cafeteria.
Is that right?
A. Yes if you, if you, I'll try and use the mouse. If you go into here which is
inside payroll there's the bolting and the bracing that you put up before
in the previous picture and then here's the, here's a bit on, it just comes
20 into the cafeteria which has another bit on the other side of it.
Q. I see. That's a glass wall between the –
A. That's a glass wall that divided the previous payroll office with the
cafeteria.
Q. Thank you. Were there people injured in the cafeteria area on
25 22 February?
A. Yes there were. Yep there were. There was a number of people had a
range of injuries. Some included, I know one woman Lynne had quite a
bad gash on her knee. Tim Cronshaw suffered some injuries as a result
of falling debris and it was that area where a number of people were
30 evacuated immediately by both Press and Ganellen staff.

Q. And just finally for the sake of completeness, back to the plan please. T26, there's reference in the documentation to the avenues area. Is T26 The Avenues -

A. It is.

5 Q. – section. Was that occupied following Boxing Day?

A. Not until I believe after January 24 when there was some further securing works that were done on that, particularly around where the toilets are. So we had –

10 **JUSTICE COOPER:**

Q. The women's toilets?

A. Sorry, yeah, the T29 areas.

Q. Yeah.

A. So we had as a precaution vacated Avenues at that point and they were
15 working from the manager's home.

CROSS-EXAMINATION: MR LAING, MR WOODS – NIL

CROSS-EXAMINATION: MR HANNAN

Q. Mr Boyle at paragraph 46 of your witness statement you refer to reading
a Holmes interim report of 3 February 2011 that the building was not
20 earthquake prone before the September events. Now Mr Hare from
Holmes Consulting will give evidence later in this hearing and he'll say
in fact that document was not an interim report but a memorandum to
some planning consultants about background information required for
the purposes of getting resource consents for remedial work. Now I
25 take it you're not in a position to disagree with that?

A. No I'm not.

Q. And you also in that part of your brief of evidence say that you noted the
reference to the building being less than 33% of full code load. Mr Hare
will say that that reference was to the building without the interim
30 remedial and bracing work having been done on it. You're not in a
position to disagree with that either I take it?

A. No I'm not.

1205

RE-EXAMINATION: MR FERRIER – NIL

**QUESTIONS FROM COMMISSIONER FENWICK AND JUSTICE COOPER
- NIL**

5 JUSTICE COOPER:

Mr Boyle thank you for your very comprehensive statement.

WITNESS EXCUSED

MR WOODS CALLS:**MICHAEL QUENTIN DOIG (SWORN)**

Q. Thank you Mr Doig, you confirm your full name is Michael Quentin Doig?

5 A. It is.

Q. And you're the New Zealand development and business director of Ganellen Pty Limited?

A. That's correct.

Q. And have you prepared a statement for the purpose of the Commission?

10 A. I have.

Q. Do you have it there?

A. I do.

Q. Could you start and read that statement to the Commission please starting at paragraph 2.

15 **WITNESS READS STATEMENT**

A. "I have a Bachelor of Commerce in Administration and a Bachelor in Tourism Service Management and over 12 years' experience in the commercial property industry. Ganellen is a construction and investment company that manages the redevelopment of various commercial assets within the Christchurch CBD, originally purchased from Fairfax Media Limited in 2007. This included the grade 1 listed Press building at 32 Cathedral Square, also I'll refer to as The Press building, on behalf of the owner 32 Cathedral Square Limited. Additional assets under management included 146 Gloucester Street, 20 148 to 154 Gloucester Street, 156 to 158 Gloucester Street and 25 160 Gloucester Street on behalf of their respective ownership entities. On behalf of Ganellen I wish to express our sincere sympathies to the family and friends of Mrs Lindsay and those employees of The Press who were injured in the building on the 22nd of February 2011.

30 Neither 32 Cathedral Square nor Ganellen obtained an engineering report on The Press building before it was purchased by 32 Cathedral Square Limited. My involvement with Ganellen commenced in June 2010 was I was appointed to manage the development of the four-

phased mixed use regeneration scheme known as The Press Precinct. The first phase of this project was construction of an eight storey commercial building at 156 to 158 Gloucester Street. That was to become the new corporate headquarters for The Press newspaper. The second phase of The Press Precinct was the redevelopment of The Press building. Prior to the September earthquake we'd investigated a variety of different end uses for the building including sympathetic refurbishment into A grade commercial offices, five star hotel, Strada office suites to name a few.

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Ganellen commissioned the following reports in respect of the redevelopment of The Press Building: Baker Kavanagh Architects, a conversation plan dated October 2009 by Fulton Ross Team Architecture and Heritage Management Associates Limited which included a building condition report by Fulton Ross Team Architecture dated September 2009. To our knowledge no form of detailed structural analysis had been undertaken on the building to ascertain its capacity against the current building code. To my knowledge the only earthquake strengthening prior to the September earthquake was the steel reinforcing and bracing of the parapets on the roof many years ago. I was aware based on the findings of the conservation plan that the main parapet over the entrance and finials on the roof were removed in the 1960s in the interests of earthquake safety. This report similarly contained no mention of any additional strengthening.

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After the September 4 earthquake I was informed by Phil Marshall-Lee of The Press that Christchurch City Council (CCC) had inspected the building the same morning and given it a green sticker. To my knowledge The Press took reoccupation of the building that day on the basis of that initial assessment. I inspected the building with Ganellen's contracts manager Nick Jennings on Monday the 6th of September and we were both immediately concerned about the damage sustained to the north-western corner of level three known as the payroll office. We immediately requested Ash Wilson of Lewis Bradford, consulting engineers, on our adjacent construction site at 158 Gloucester to come

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to The Press building to undertake a basic inspection. Mr Wilson immediately restricted access to the payroll office and cleared an area of level two immediately below the payroll office. Under the instructions of the engineer the damaged wall was braced by a steel lattice system with works completed by Ganellen in the late evening of the 6th of September. Lewis Bradford inspected and accepted the works on the 7th of September and instructed that access to the area was to remain restricted until a permanent solution could be effected”.

5
10 Q. Mr Doig if I could just interrupt you there. You'll see the plans come up on the screen?

A. Mhm.

Q. With your mouse could you indicate where that work you've just described was carried out?

WITNESS REFERRED TO PLANS

15 A. This wall section here.

JUSTICE COOPER:

Q. North wall of T24 and north-west corner of that wall in T25?

A. That is correct.

EXAMINATION CONTINUES: MR WOOD

20 Q. Thank you if you would carry on with your statement.

WITNESS CONTINUES READING STATEMENT

A. “Lewis Bradford further instructed Ganellen to remove the iron railing from the turret on the south-western corner, as many of the fixings had sheared. These works were completed on the 7th of September. On the 8th of September The Press vacated the building after a particularly sizeable aftershock. Lewis Bradford were called in to inspect the whole building on the 9th of September. They noted further deterioration to cosmetic and structural elements. On the 9th of September The Press reinstatement committee was formed, constituted primarily of myself and Phil Marshall-Lee plus other senior members from Ganellen and Fairfax on various occasions. The purpose of the committee was to enable full disclosure of all information pertaining to the effects of the

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earthquake and remediation action undertaken and ensure the timely and safe return to The Press to their building.

5 Ganellen instructed Baker Kavanagh Architects to undertake a full photographic dilapidation survey of all architectural elements. This survey was undertaken on the 10th, 14th and 15th of September whilst the building was unoccupied with a final report received on the 26th of September. On the 13th of September wall-linings were removed to enable more detailed examinations of the central shear wall on levels one, two and three, the interior of the south-western turret on level three and the area on level two directly below the payroll office to enable detailed inspection. In all instances Lewis Bradford were happy that damage was minimal and would not prevent reoccupation. Lewis Bradford instructed that the parapet above the main entrance be secured by steel bracing and access to the entrance below was restricted until these works were completed on the 15th of September.

10 The Press employed structural engineers Harrison Grierson to undertake a peer review of the building. Particular focus was afforded to the damaged areas. Harrison Grierson noted concern about the cracking to the north-eastern wall on level three outside The Avenues office. This area had already been inspected by Lewis Bradford and was deemed to be structurally sound with no remediation required.

20 On the 16th of September John Higgins, Neil Carrie, and Kate Askew of the Christchurch City Council building recovery office inspected all of the works undertaken to date. The Council authorised the repair of cosmetic elements that had been requested by The Press including re-plaster and painting of internal cracking in the main stairwell. Resource and building consent was recommended to repair structural damage to the north-western wall of the payroll office.

25 Lewis Bradford provided written authorisation that the building was fit for reoccupation on the 16th of September. In response to Harrison Grierson's concerns, interior wall linings were removed in The Avenues level three office and the interior and exterior of the wall was inspected by Craig Lewis and Ash Wilson of Lewis Bradford on the 18th of

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September. The engineers deemed the structural integrity of the wall to be intact and created numerous monitoring points to check for further deterioration. Lewis Bradford provided written confirmation of their findings stating that the building was fit for reoccupation. This letter was forwarded to The Press on the 20th September. Cosmetic repair work was undertaken to all interior wall linings and plaster cracking in the central stairwell upon the request of The Press. The Press reoccupied the building during the week commencing the 20th of September. A detailed inspection of all external stone work was undertaken by EPI Construction after the building was re-occupied with a report provided to Ganellen on about the 28th of September that all elements were secure. This was included as appendix E to the Lewis Bradford structural damage report dated October 2010, referred to below.

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- 15 A. On the 30th of September Lewis Bradford submitted the first full structural evaluation report stating that the building had performed surprisingly well. The report recommended that further detailed structural assessment be undertaken prior to effecting permanent repairs to damaged structural items to return the building to recommended levels. In response to this recommendation Ganellen instructed Lewis Bradford on the 7th of October to undertake a more detailed structural assessment to include the following – structural defects, all cracks to masonry/concrete stonework but not limited to, specification, remedial actions to rectify these works, individual photos of all cracks, defects linked to the building drawings. This report was provided to Ganellen on the 13th of October and formed the basis of our initial insurance claim and was used to tender recommended works to a series of trusted subcontractors. In early October Ganellen elected to incorporate the base refurbishment of the building along with resource consent and building consents for structural remediation. We appointed Baker Kavanagh, Planit Associates and Heritage Management Associates to assist us with the preparation of the application for resource consent to submit to Council. Cosgroves were appointed later,
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- 25
- 30

sorry, Cosgroves were appointed at a later time as services consultants. Pre-application meetings were held in Ganellen offices with Historic Places Trust on the 13th of October and Council on the 14th of October to discuss concept plans and earthquake issues. Both entities were
5 taken on an inspection through the building after each meeting concluded. During the final week of October we were contacted by Dave Margetts of the Historic Places Trust extending the assistance of their specialist structural engineer, Win Clark, who was visiting Christchurch from Wellington. I made arrangements for Ash Wilson of
10 Lewis Bradford to take myself, Win Clark, Dave Margetts and Jenny May of Heritage Management Associates through the building. The purpose of the inspection was to detail the damage sustained to the building and discuss recommended repair methodologies in the context of the building's category 1 heritage listing. During this inspection Mr
15 Clark indicated that Holmes Consulting Group had a modelling technique specifically suited to strengthening and repair of unreinforced masonry buildings and we should speak with them prior to affecting any permanent structural repairs on the building. I met with John Hare, director of Holmes during the week commencing Monday the 1st of
20 November where he introduced a non-linear time history model and we inspected the building together. John indicated that Holmes had prior involvement with the building during ownership of The Press. Ganellen made the decision to tender the ongoing structural involvement with the building and asked Lewis Bradford, Holmes and Newcastle (Australia)
25 based engineer Tony Izzat to submit proposals. It appeared that Holmes' non-linear time history model would provide a better structural solution for the repair of the building than a standard linear ETABS analysis and Holmes was formally appointed on the 10th of November and not June 2010 as stated by Spencer Holmes on page 3 of their
30 submission. On the 10th of November Lewis Bradford and Tony Izzat were informed that they had not been successful with their tender. All documentation prepared to date was turned over to Holmes. Holmes undertook numerous inspections of the building during November and

December as they prepared their model and provided their initial findings on the building on 23 December. They recognised that in the building's existing configuration the building's performance was 50% of the existing building code and would sit outside the Council's earthquake prone building policy.

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Following the Boxing Day earthquake the building was red stickered and The Press were required to move their operations out of the building. Holmes inspected the building on the 26th of December and noted further damage to the north wall at level 3, damage to the central shear

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wall at level 3, damage to the base of the brick turret at roof level and damage to the brick piers of the south wall on levels 1, 2 and 3. They instructed Ganellen to remove wall linings and loose plaster in all these areas to enable a more detailed inspection to take place. They further noted the significant damage caused by adjacent buildings, in particular

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the large section of the neighbouring Worcester Tower, the Britten building, a parapet that had fallen into The Press building light well with further dislodged masonry remaining creating a significant fall hazard.

Once necessary linings had been removed Holmes completed a more detailed inspection on the 27th of December and instructed Ganellen to

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prop and shore the damaged piers upon the south face using profile cut timber and 4 x 2.5 tonne straps. Similar shoring was required to the eastern-most pier of the north wall of level 3 outside the Avenues office.

Loose plaster was to be removed from the central shear wall on level 3 and the fire door eased to enable access but no further strengthening required. Holmes paid significant attention to the previously damaged

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north-western corner of the payroll office where the cracks were observed to have moved a further 10 millimetres. The engineers were satisfied that the steel bracing was still secure and no further strengthening or securing works were recommended in that area.

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Similarly Holmes closely inspected the north-eastern wall outside the Avenues office, however no displacement was observed. The neighbouring building owner was contacted regarding the dangerous parapet above the stairwell and this was removed by their contractors.

Andrew Boyle of Fairfax attended the Holmes initial inspection of the building post Boxing Day and was kept constantly informed throughout the remediation works and had full access to the engineers throughout this period. Similarly Ganellen and Fairfax worked together to devise a series of cosmetic treatments to ease staff's peace of mind upon

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reoccupation including the canvas drop cloths in the central stairwell. All works were signed off by Holmes Consulting on the 7th of January and the building was deemed safe to reoccupy. The Press reoccupied shortly thereafter on the basis of written confirmation from Holmes.

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Holmes undertook the responsibility of liaising with Council to remove the red sticker listing from the building. On the 12th of January Ben Dare of Holmes emailed an earthquake occupation certificate application to James Clark of the Council's Building Recovery Office stating that the building is now secure and safe to reoccupy and that the existing red safety notice can be removed."

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Q. Mr Doig if I could interrupt you there. I'll just take you to that document, it's BUI.CAT0320010404. Is that the document you just referred to at paragraph 44 of your statement?

A. That is correct, yep.

20

Q. And if you could read into the record the third paragraph starting with "based."

A. "Based on this we believe that the building is now secure and safe to reoccupy and that the existing red safety notice can be removed."

Q. Thank you. I see that's addressed to Mr Jennings. He's one of your colleagues at Ganellen. Is that right?

25

A. That's correct.

JUSTICE COOPER:

What's the date on that?

30

MR WOODS:

12 January 2011.

EXAMINATION CONTINUES: MR WOODS

Q. Mr Doig if you could continue at paragraph 45 please?

WITNESS CONTINUES READING STATEMENT FROM PARAGRAPH 45

5 A. "The Boxing Day earthquake was deemed to be a separate event by our
insurers and therefore an additional insurance claim was required.
Ganellen accordingly instructed Holmes and Baker Kavanagh to
undertake a second set of structural and architectural damage surveys
of the building. Both reports included a detailed photographic record of
10 all damage to structural and cosmetic elements. These in turn were
compared against the original set of reports from the September
earthquake to ascertain additional damage. Both Ganellen and Holmes
continued to monitor damaged areas during the continued moderate
aftershocks of January. Following an inspection by the engineer on the
15 21st of January threaded rods were applied to secure damaged brick
piers on the north wall of the light well outside the female toilets on
level 3. Throughout these events Holmes worked diligently on finalising
their non-linear time history model to provide us with the permanent
structural concept to submit to Council. I understand that the model was
20 constantly refined to take account of additional damage that was
sustained during Boxing Day and subsequent aftershocks.
On the 28th of January Holmes sent through their proposed structural
concept for the building. On the 3rd of February Holmes produced
supporting information for the application for resource consent in
respect of the building's capacity measured against the building code.
25 These documents were part of our draft Resource Consent that was
submitted to both Council, Melinda Smith; and Historic Places Trust,
Dave Margetts, by Planit Associates on the 10th of February. The
Holmes memorandum dated 3rd of February is incorrectly referred to by
30 Spencer Holmes Limited as being dated 3rd of March in their statement
on page 6. Matt Bonis of Planit met with Mel Smith at her house on the
18th of February when she indicated there was no apparent issues with
our application. It was the intention of Planit to tidy up some loose ends

and submit the final Resource Consent application the following week. Our final act prior to the earthquake on the 22nd of February was made by Alistair Boyes of Holmes who on the 21st of February made arrangements with Fulton Hogan to undertake a series of invasive testing on structural elements of the building during the 14th to the 18th of March. This included, but was not limited to, brick shear tests, cavity coring and concrete strength testing, the purpose being to assist Holmes to further refine their non linear time history model.

The February 22nd earthquake was significantly larger and more devastating than its predecessors. At the time I was having lunch with other colleagues on Gloucester Street. After the shaking stopped we quickly ran down the street to clear out our building site and help assemble members of the Press. Having been informed by Press employees that the roof above the cafeteria had collapsed and staff members were inside, I ran back up to the Art Gallery where I managed to find a member of Civil Defence, stressing the need for assistance from USAR. At the same time Nick Jennings, Mitchell Blunden and Casey Donovan of Ganellen along with some of our sub-contractors re-entered our newly constructed building and jumped across onto the collapsed roof of the building and assisted many of the Press employees out of the wreckage.

Three hours later USAR had established a team on site and our staff finally left the building after making a significant contribution to the rescue efforts.

On the 3rd of March Holmes submitted a preliminary seismic assessment report to Ganellen and Christchurch City Council to comment on the further damage that had occurred in the February 22nd earthquake and make a recommendation for repair or demolition. As the building had partially collapsed an internal assessment was impossible, however Holmes based their report on an external review of the structure, anecdotal evidence of a USAR engineer who was in the building during the event and their own findings and recommendations.

The report noted the following. The upper level had collapsed entirely on the fourth floor; most of the parapets were immediately dropped with the exception of the south wall parapet which has subsequently been removed by USAR; the corner tower roof had toppled back onto the 4th floor with the masonry under it completely collapsed; the south façade had suffered further cracking and damage; the west façade had also cracked and has an outward lean over the central portion above the roof level; internally it is understood that the main brick shear wall is severely cracked with significant permanent offsets at all levels in the region of up to 50 millimetres wide. The rear light well had suffered further considerable damage also and it is understood to be severely compromised. Holmes felt the building was irretrievably damaged and recommended demolition. This was summarily accepted by Christchurch City Council and demolition consent was granted shortly thereafter.

Q. Thank you Mr Doig. Just two matters for clarification please. If I could bring up document BUICAT0320010496. You will have heard Mr Boyle's evidence this morning in respect of the Holmes interim report of 3 February. That's the document that's been called up. If you could just tell the Commission your understanding of the context of this report.

WITNESS REFERRED TO DOCUMENT

A. Certainly, this report was sent to our planning consultant as part of supporting information to be provided to Christchurch City Council with our Resource Consent. My understanding of the reference which is actually highlighted there on the final sentence, final paragraph, is that it referred purely to the structure of the building and not to any of the temporary shoring works that had been effected upon the instructions of the engineer.

Q. Mr Doig, the reference you're referring, could you just read that?

A. Yes, "Although a formal assessment has not been completed it is clear that the building's residual strength following these earthquakes is less than 33 percent full code loading."

Q. And for the record could you just explain again what that document is, it's from Mr Hare to?

A. To Matt Bonis who is our planning consultant.

Q. And dated 3rd February?

5 A. Correct. The same memorandum was submitted to Ganellen finally on the 10th of February along with all our resource, draft Resource Consent application that was provided to Council on that same day.

10 Q. Thank you, just the second point, if I could call up BUICAT0320010523. This is a document dated 2nd of February 2011 from the Christchurch City Council to Ganellen in Sydney, and it's a section 124 notice on 32 Cathedral Square. Do you recognise that document?

A. I do, yeah.

Q. Do you recall when you received that?

15 A. When I would have received it would have been I would say probably five days after that. I believe it was on the – it would have been about the first week of February.

Q. Sorry, if we take you back to page 522, I think it makes that obvious.

A. There was a – it was actually forwarded to me via email, the letter was sent directly to my Head Office in Sydney.

20 Q. Yes, and there's an email there at document 522.

A. Yep.

Q. And you received that on the 10th of February?

A. Correct.

25 Q. And then document 527 is an exchange of emails from you on the 10th of February with Mr Hare at Holmes?

A. Correct.

Q. If you could just explain what you were doing with that document?

30 A. I simply wanted to understand what the nature of the letter was. It appeared to be a pro forma letter sent out to all building owners, and sought the advice of our engineer on how best to handle the letter. As you can see there he took responsibility for dealing with Council in the letter. He seemed confident that the process was already in motion.

Q. Thank you Mr Doig.

A. I might, just to add one thing, the final sentence of his response there. I believe the word inscribe should actually be inactive and it may be thanks to an Iphone. Predictive text messaging.

CROSS-EXAMINATION: MR ZARIFEH

5 Q. Mr Doig, you said that you became involved with the Press building or with Ganellen perhaps in June 2010?

A. That's correct.

Q. So you weren't involved when the building was purchased by Ganellen?

A. No.

10 Q. You heard Mr Boyle's evidence, paragraphs 6 to 8 about the sale and the reports that were put out to any perspective purchasers?

A. Yes.

Q. That was a report from Holmes and also a LIM. You heard some questioning about those documents?

15 A. Yes.

Q. Presumably Ganellen would have had those documents on its file or its records?

A. That is correct, they would have received the documents.

Q. Were you personally aware of those before this hearing?

20 A. Not – before the hearing I was.

Q. Before preparing for the hearing?

A. Before preparing for the hearing I was, but prior to the earthquakes I wasn't.

Q. So prior to the September earthquake?

25 A. Prior to the September earthquakes I wasn't.

Q. Right.

A. There was an awareness internally that a detailed structural evaluation would have had to have taken place as part of our ordinary works on the building. We had discussed the structural capacity of the building when investigating alternative uses for the building, such as upgrading that maybe required for a hotel use.

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Q. When was that, that discussion?

A. That would have been prior to September.

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Q. And so Ganellen would have been aware from what you say that the Holmes report considered that the building was almost certain to be earthquake prone?

5

A. That was never – certainly never discussed internally that that was the case. It was our understanding that we would have needed to have – possibly needed to upgraded the structure were we to change use, but that in its existed capacity was fine for occupation.

10 Q. Right, I'm not looking at the occupation, I'm just saying –

A. Oh sorry, it was –

Q. – knowledge of it being earthquake prone.

A. – that it was not earthquake prone, my apologies.

15 Q. So Ganellen considered that it was not earthquake prone prior to September?

A. That's correct.

Q. When you say Ganellen, is that Ganellen or yourself, because you weren't aware of those documents?

20 A. We'd – it was discussions that we'd had internally, when we were discussing the – I think I mentioned the commercial refurbishment of the building. There was no discussions focused around the upgrading of the structure applied at that point in time in its existing use. We did discuss that upgrading may be required where the building converted to a hotel use.

25 Q. All right. So when you purchased – after you purchased the building was there any thought given to, given its age and its construction, to whether it was earthquake prone or not?

A. Not to my knowledge.

Q. And any thought given to having that assessed?

30 A. At that time not to my knowledge, no.

Q. Now I just want to take you to the letter from Lewis and Bradford that you referred to, 16 September 2010. It's document 0010.355. That's the letter from Lewis and Bradford from that date reporting to Ganellen?

A. Yes.

Q. And I'll just get the next page brought up so you can see page 2, 356, correct?

A. That's correct.

5 Q. The paragraphs I wanted to ask you about were firstly paragraph number 2 on that page.

A. Mhm.

10 Q. It says "a full inspection and review of all existing stone to the perimeter frames is to be completed as soon as possible to ensure there are no loose stones affecting long term public safety".

A. That's correct.

Q. Now if we can just go back to 354, page 354. This is an email that appears to be an email that enclosed that letter. Correct. Is that an email enclosing the letter we've just been looking at?

15 A. That's correct.

Q. And it talks about the rewording the letter altering the immediacy of the checking of the stone work. Can you just tell us, and it says this work still needs to be completed as soon as possible, just tell us why that had to be altered, it says to suit the craneage requirements. See that, I am just wondering if you could explain that?

A. I couldn't actually recall.

Q. You can't remember.

A. Not for what the craneage requirements were.

25 Q. All right, well I'll ask Mr Wilson. If we can go back to 356 then the letter, 16 September.

A. Yes.

30 Q. In paragraph 3, number three, that refers to the, "a new in-situ shear wall is required to provide a more long term and durable solution to the northwestern area (This area to be cordoned off to the second and third floors locally using hoarding to allow walls to be constructed) in the next two to three weeks", correct?

A. Mhm.

Q. So that was the – part of the securing work that Lewis Bradford were telling you as the owners on the 16th of September should be done?

A. The securing works were the steel ladder system that we put in place. It was a statement referring to what they believed may needed to be undertaken for a permanent solution for the walls.

5

Q. So for a more long term and durable solution?

A. But it – correct.

Q. Now I think on that same day that you got that letter, were you already aware of that recommendation for the letter or not, in your discussions with Lewis and Bradford?

10

A. We were aware that they had indicated that a more permanent solution would need to be affected in that place.

Q. Right.

A. However they were constantly, I mean all the engineers constantly monitored that area and they were perfectly comfortable that the temporary bracing that we put in place was still securing the wall section there.

15

Q. I just want to show you another document. It's 0010.54 and just while we're waiting for it, this is a document, a Council document that records a meeting I presume on the 16th of September 2010 and I presume you were present –

20

A. That's correct.

Q. – with a number of Council officers at the site, at the building?

A. Mhm.

25

Q. You see at the bottom of the page it says applicant which is Ganellen on behalf of the owner?

A. That's correct.

Q. “Applicant confirmed that Lewis Bradford were currently putting together an engineering report that would be made available when completed. This report is being peer reviewed”.

30

A. Mhm.

Q. It's the Lewis and Bradford report, correct?

A. Mhm.

- Q. If we look at the next page, page 2 of that document please. Again it refers to – page 2, the last full paragraph of that the page “starting repair and stabilisation”, if that could be highlighted please. So refers to the repair and stabilisation of the northern façade and the remedial stabilisation works in that first sentence, correct?
- 5 A. Mhm.
- Q. And then it says “looking at new concrete skin on interior wall”. That's the reference to the in situ shear wall is it?
- A. Correct.
- 10 Q. “Applicant to provide plans and details of methodology as to what is being proposed and this will then be assessed to confirm whether resource consent and building consent required”.
- A. Correct.
- Q. Correct. So the applicant was presumably yourself on behalf of Ganellen?
- 15 A. Correct.
- Q. What happened in relation to that work, so that in-situ shear wall or skin as it was referred to there, did any of that happen that you were indicating or not?
- 20 A. The permanent works didn't happen. They were considered as part of our resource consent which I referred to in my statement. Initially we were working with Lewis and Bradford on it and subsequent to a meeting with structural engineer Winn Clark that was brought there from Historic Places Trust, we were recommended to look at various other options when entertaining those permanent structural solutions.
- 25 Q. So once Lewis and – once Holmes' tender was accepted in November –
- A. Correct.
- Q. – did Lewis and Bradford essentially drop out in terms of advising you?
- A. That's correct. Yeah.
- 30 Q. So the –
- A. All information that they'd worked on to date was provided to Holmes.

Q. To Holmes. I understand that, but the in-situ shear wall that they had recommended be constructed in the next two to three weeks in that letter we looked at, that was obviously not commenced and not done?

A. No.

5 Q. Because you went with the Holmes recommendations. Is that a fair way of putting it?

A. It was indicated to us by the engineers that any sort of heavy structural repair works that would go to the building needed to be considered as part of the overall model of the building.

10 1245

Q. Right.

A. We were led to believe that, were we to simply put a large stiff element up in that point it could create other fail points within the building. Hence why we instigated this process of the non-linear time history model so that we could actually effect structural solutions in the building and see how the building would react to all known earthquake records.

15

Q. So it was on the Holmes' advice that –

A. That's correct.

Q. – didn't need to be done but it could be dealt with in terms of the permanent solution –

20

A. Correct.

Q. - that was being worked on?

A. Yeah.

Q. You said in paragraph 43 that the building was re-occupied by The Press and you would have heard me questioning Mr Boyle about that. On the 10th of January Mr Boyle said and clearly that was before the red placard had been removed by the Council. Were you aware of that at the time or not?

25

A. As I indicated Holmes took on the responsibility to removing the red sticker. I wasn't sure how that process would happen. I assumed it to be a simultaneous thing until I had received that email on the 12th I wasn't aware that it hadn't been lifted, so I believe it was just going through their own internal motions of getting this sorted out.

30

- Q. And just finally you referred after reading your brief to this report from Holmes of the 3rd of February that was used for the resource consent application and to the building being less than thirty-three percent of code following September and Boxing Day earthquakes, correct, that was the reference?
- 5
- A. Correct. Do you want me to expand on that again or...?
- Q. What I was going to ask is you said that your understanding was that was not taking into account the remedial or bracing works?
- A. Correct. We had in fact been told by the engineers during inspections that the bracing works that we had put in place in certain instances would have actually created greater strength than the original element that was there.
- 10
- Q. All right, well that was what I was going to ask you. So where did that information come from – from Holmes?
- 15
- A. From Holmes, yeah.
- Q. From anyone in particular at Holmes?
- A. Ah, John Hare.
- Q. And so you had probably answered the question. With the bracing or remedial works that had been done post September and then post Boxing Day, were you actually told of what percentage code it would be with that taken into account?
- 20
- A. We weren't told what percentage of code that would be if taken into account but you will recall there was an email, I believe it's actually Ben Dare's one, to counsel which states that the strength of the building had been returned to pre the Boxing Day.
- 25
- Q. That's the 12th of January?
- A. Correct and verbally the understanding was that we were returning it to the fifty percent of code.
- Q. Sorry, verbally the understanding...
- 30
- A. There was no indication to us that the building with the bracing system was in an impaired position than what it was previously.
- Q. So just repeat the last bit.

A. There was no indication to us that the building was structurally impaired post the securing works that had been undertaken so the securing works had returned the building to the strength pre the Boxing Day earthquake.

5 Q. Right and you mentioned a figure, what was that?

A. Ah, fifty percent of the code.

Q. And who told you that it was returned to fifty percent of code with the remedial works?

A. Ah, John Hare.

10 Q. And did that give you comfort in terms of the building?

A. It gave me comfort that we were doing all that we could to ensure the preservation of the building and safety of occupants, yes.

Q. Right, finally you referred us to the letter from the Council dated the 2nd of February and then you emailed it to John Hare and said is this a standard letter?

15

A. Correct.

Q. And you referred us to the email from John Hare to yourself where he said that he would look after it essentially?

A. Yeah.

20 Q. Do you know what happened as a result of that or not?

A. No.

Q. So you just left it with him?

A. Correct.

CROSS-EXAMINATION: MR ELLIOTT

25 Q. Mr Doig just on one of those final points that Mr Zarifeh mentioned I was just going to ask for that letter of 3 February 2011 to be brought up – BUICAT 032.0010.496 and as that's coming up I'll just ask you a question or two.

30 You've referred in your evidence to the note from Mr Dare in which the building was described as safe to occupy on the 7th of January and I take it that what you were wanting from Holmes Consulting was their

opinion about whether the building was safe to occupy and so you received this letter of 3 February 2011 around that date did you?

A. Referring to this memorandum, no. We received it on the 10th.

Q. On the 10th of February.

5 A. From Matt Bonis, our planner, as part of all our supporting information that was provided for our draft resource consent. It was not sent to me by Holmes Consulting.

10 Q. And if we just highlight the bottom two paragraphs there. There's a reference to temporary shoring being installed to the worst affected areas in order to provide a measure of security for safe occupation and then there's the comment about it is clear that the buildings residual strength is less than thirty-three percent. That combination of things perhaps doesn't provide the same level of comfort as the words "safe to occupy", would you agree?

15 A. If taken in its sole context then yes I would agree.

Q. And I'm just wondering, did that trigger a specific conversation between you representing the owner and John Hare as the engineer whereby the safety issue was reconsidered?

A. No.

20 **CROSS-EXAMINATION: MR LAING**

Q. Can I take you back to the events immediately prior to the certificate from Holmes of 12 January. Did you advise The Press that they could re-occupy the building or was that something that they made their own minds about?

25 A. We advised The Press.

Q. What date was that?

A. I believe it to be the 7th of January.

Q. So on the 7th of January you told The Press that they could re-occupy the building?

30 A. That's correct.

Q. Were you aware at that stage of the implications of a red placard?

A. Ah, I'm aware of the implications of a red placard, yes.

Q. Is that what you're saying now or was that your knowledge at the time?

A. Correct, at the time it was.

Q. And so you were aware that a red placard prevented occupation of the building?

5 A. Ah, strictly speaking yes we were aware of that. We very simply asked the engineers who completed all the works is it safe, can The Press re-occupy which they responded yes. We acted on the instruction.

Q. But at the same time it seems that your evidence is that a building could not be re-occupied unless the red placard was removed, correct?

10 A. Correct, however I'm not sure how that process actually occurs. I left that for John Hare to work on, Holmes Consulting to work on.

Q. So we have clarity about this, you told The Press that they could re-occupy the building on the 7th of January?

A. Yes.

15 Q. Yet at the same time you knew there was a process for removing a red placard and you also knew that process had not yet been followed. Is that correct?

A. Correct.

CROSS-EXAMINATION: MR HANNAN – NIL

20 **CROSS-EXAMINATION: MR FERRIER**

Q. Mr Doig you refer at paragraph 16 of your statement to working closely with Phil Marshall-Lee of Press. You say, "On the 9th of September the Press Reinstatement Committee was formed constituted primarily of myself and Phil Marshall-Lee plus other members from Ganellen and Fairfax on various occasions." So Mr Marshall-Lee was representing The Press in its dealings with Ganellen in relation to re-entry, is that correct?

25

A. That's correct.

Q. And would you characterise The Press's approach through Mr Marshall-Lee as being one of caution?

30

A. Absolutely.

Q. And in reliance on engineers' reports?

A. Yes.

1255

5 Q. And mindful of obligations in respect of their employees' health and safety?

A. Of course, yes.

Q. And also mindful of the staff's concerns, potential concerns about their own safety?

A. Very much so.

10 Q. Conversely would I be right in characterising the post-Boxing Day dealings between The Press and Ganellen as primarily being undertaken between yourself and Mr Boyle?

A. That's correct.

15 Q. And you say at paragraph 43 that The Press reoccupied shortly thereafter on the basis of written confirmation from Holmes.

A. Correct.

Q. So would it be fair to say that a similar approach was taken by Mr Boyle as taken by Mr Marshall Lee in September?

A. Absolutely.

20 Q. Have you Mr Doig seen the statement by Mr Hare that's been provided to the Commission?

A. I've read it, yes.

25 Q. Mr Hare says at paragraph 20, "We were advised by Ganellen that The Press company as tenant was pushing hard to gain reoccupation of the building following the Boxing Day event." Do you recall seeing that statement?

A. I do recall.

Q. And what was your response to that statement when you saw it?

30 A. I, I, I don't think that Andrew was pressing hard to, to regain occupation. I think like all of us we were working to understand the damage to the building and, and effect solutions.

Q. Right. Just turning to the report of Holmes Consulting then on 3 February 2011 which we'd been discussing which is BUI.CAT032,

here we have it. Thank you. And we've heard explanations for the statement that, "Although a formal assessment has not been completed it is clear that the building's residual strength following these earthquakes is less than 33% full code load." So that's, that's a statement without the remedial works, is that right?

5

A. That's correct.

Q. That's right, okay and is it that stopped you from passing that onto The Press or was there some other reason?

A. No it was not related to the immediate, the safety of the structure. It was simply supporting information for a resource consent. Had, had it been of, of importance I'm sure it would have been directed directly to us so that we could pass onto the The Press.

10

RE-EXAMINATION: MR WOODS

Q. Mr Doig you were asked in respect of the, the state of the building and its compliance with the code and you said that you'd been told by Mr Hare that it was at 50%. Could I take you to a document WIT.HAR000626. Mr Doig I'll show you an email from Mr Hare to you dated 23 December 2010 where Mr Hare attaches an interim report and a testing brief. That's before you now. If you could just have a look at that.

15

20

A. Mmm.

Q. And is that where you got your figure of 50%?

A. That's correct.

Q. So if you could just read the second paragraph there starting, "The report?"

25

A. "The report has now picked up the additional runs we did overnight with a few changes. Essentially the building is currently configured, ie without the north wall window reinstatements, as good for 50% of code. With the windows fully reinstated the strength drops to around 33%, ie the building is not currently earthquake prone but would be close with the proposed changes. Even if they do reinstate heritage," sorry, "given

30

the current rules and alterations you would have no choice as a minimum but to add back the strength you've removed."

Q. So the reference there to the north wall window reinstatements. Is that a reference to the temporary work?

5 A. No, no it's, it's actually a reference to levels 2 and levels 1. The building 2 as referred to in Andrew Boyle's statement was built directly against the original Press building and at that time the brick windows were bricked up as in-fill sections. It was our intention as part of the redevelopment of the site to demolish that portion of the building and
10 reinstate a laneway behind the building and put windows back into that building, windows into those areas I should say.

Q. The second issue was the date The Press moved back after the Boxing Day quake. If I could look at document HAR0006.44. This is a memorandum from Holmes Consulting Group dated 7 January 2011.

15 A. Mmm.

Q. And you'll see the final bullet point there. If you read that please.

A. "Once the above works have been completed the building will be safe to occupy. We have been informed by Nick Jennings of Ganellen that this has been done. 7th of January 2011."

20 Q. And had this, the information in this report been relayed to you by the 7th of January?

A. Correct, yeah.

Q. And what had you told The Press about going back into the building and the state of the building?

25 A. That the building was safe to occupy and they were free to go back in.

QUESTIONS FROM THE COURT: JUSTICE COOPER, COMMISSIONER FENWICK – NIL

WITNESS EXCUSED

30 **MR ZARIFEH ADDRESSES THE COMMISSION**

COURT ADJOURNS: 1.04 PM

COMMISSION RESUMES: 1.46 PM

MR ZARIFEH CALLS:

5 **ASHLEY JOHN WILSON (SWORN)**

Q. Mr Wilson is your full name Ashley John Wilson?

A. Yes.

Q. And do you have a Bachelor of Engineering Honours, Civil Engineering. Is that from Canterbury University?

10 A. That is correct.

Q. Thank you and you are a chartered professional engineer?

A. Yes I am.

Q. And I think you have over 12 years' experience working as a structural engineer?

15 A. That is correct.

Q. Are you employed by Lewis Bradford Consulting Engineers?

A. Yes I am.

Q. How long have you been with Lewis Bradford?

A. Since its inception in 2003.

20 **MR ZARIFEH ADDRESSES THE COMMISSION – AUDIBILITY OF WITNESS**

EXAMINATION CONTINUES: MR ZARIFEH

25 Q. Mr Wilson as you know I want to ask you about your involvement with The Press building, 32 Cathedral Square. Can you tell us Lewis Bradford's involvement with the building. When did it first commence?

30 A. Our engagement commenced on the 6th of September in the morning. I was working for Ganellen as the structural design engineer on their new building on Gloucester Street and following that inspection Mike Doig and Nick Jennings requested that I come over to inspect an area of the heritage Press building.

Q. So that's two days after the 4 September earthquake?

A. That is correct.

Q. Had you had any involvement before that?

5 A. We had been copied in the architectural plans. Ganellen were looking at some redevelopment options and they'd sent us through the architectural plans from 1906 and they'd also provided us with the Fulton Ross heritage report. I think there was a report from some archaeologists as well.

Q. Now just tell us in brief terms what the nature of your inspection on the 6th was. Where did you go and how detailed did you go?

10 A. The nature of my inspection on the 6th of September was actually quite limited. I was informed by Ganellen that the building had already been green placarded and it had had a level 1 and a level 2 inspection and following some inspections of the payroll area by Ganellen staff they requested I come in to have a look at it and they were concerned about it.

15

Q. So what were you, what were your instructions? What were you asked to do or to turn your mind to?

A. Initially it was to come in and have a look at specifically at the north-western corner of the payroll office where some significant diagonal tension cracks were present in the unreinforced masonry wall to that area.

20

Q. And were you subsequently asked to do a full assessment of the building?

A. A full assessment, a full visual inspection commenced on the 7th. So my initial involvement was to have a look at the damage to the payroll office and also they took me up onto the roof to have a look at the turret where some steel, well some existing iron work had suffered some damage. So I instructed some repair works, some temporary securing to the north-western wall and also the removal of the iron works. That was the extent of my inspection that day. Then subsequent to that they asked if I could complete a further visual inspection for damage in terms of cataloguing the damage that had occurred to the building as a result of the September 4th earthquake.

25

30

Q. Right and did that take place I think on the 10th and the 14th of September?

A. That is correct.

5 Q. Now did you direct any kind of stabilising or bracing to that northern wall on the (inaudible 13:51:24)?

A. That is correct. On the 6th of September when I first inspected that wall I was aware that the building was green placarded and fully occupied and I saw that there were some diagonal, significant diagonal tension cracks in the unreinforced masonry and I undertook some temporary securing work to reinstate the strength of that unreinforced masonry wall area.

10

Q. And I'll just get you to have a look at photographs – BUI.CAT0320010.47, perhaps .46 first please.

WITNESS REFERRED TO PHOTOGRAPHS

15 Q. If we can just focus in on that photo. These are photos taken from a Ganellen report on the earthquake. Now can we see the diagonal cracks that you're talking about?

A. Yes.

Q. Just explain that to us please.

A. The diagonal tension crack has occurred where lateral load has been applied to the top of the wall and the wall has suffered some minor, well some tension failure of the unreinforced masonry in that location. At that time I did not note any permanent displacement but there was definitely some cracking through that wall element and the adjacent wall element to the east.

20

25 Q. Okay and then if we look at page 47, that series. Now focus in on the top one first please. Is that the outside area of that interior shot we were looking at?

A. That is correct.

30 Q. And I think there's an arrow pointing to what's referred to as diagonal shear cracking, correct?

A. Diagonal tension cracking, shear cracking, correct.

Q. So that's what, the corresponding cracking on the outside of the building to what we've just looked at?

A. That is correct.

Q. And I just want to ask you about the measures that you put in place to brace that. If we look at the second photograph on that page. Just tell us what that is?

5 A. That is the temporary securing works that were completed to that corner. I was aware approximately of the form of the building as Ganellen had sent us through some prior information but when they had sent us through that information we were never requested to actually do anything with that information, actually complete any detailed
10 assessment so. I had seen the plans, I'd also been in the building a few times because for the new Press building we held design team meetings in the boardroom area at level 3 for a period of three or four months. So when I was called down to the existing Press building on the morning of the 6th of September I was not actually given any prior notice. Basically I
15 was conducting an inspection on the new Press building and Nick Jennings and Michael Doig said could you come across and complete a visual inspection of this area, so unfortunately I didn't have plans but I could see that there was some damage to this wall area. At that point in time there was still a vertical load carrying capacity in that wall but I
20 wanted to instruct some securing works which would reinstate the structural integrity of that wall and what I was looking at was preventing any out of plane movement in a potential significant aftershock by clamping the unreinforced masonry elements together. I was also
25 looking at reinstating the lateral load capacity by adding in some lattice steel frames with high strength anchor bolts into unreinforced, sorry into un-cracked concrete elements above and below those walls.

Q. Well just dealing with what we can see in that photo?

A. Yes.

Q. So they are bolts that go right through the masonry?

30 A. That is correct.

Q. And on the other side, what's there, a washer?

A. They're actually a dywidag, which is a high strength anchor bolt and then there's a quite a large plate on the internal face. On the external face they actually go through to some structural steel angles.

Q. And then there's a bolt on the inside, is that the yellow –

5 A. The yellow cap is actually a protective safety measure just to – it's a threaded washer that winds on to clamp and then the plastic cap prevents any cuts or injuries from people who may be working in that vicinity.

10 Q. And how many of these bars if I can call them that, bar arrangements were there on that wall?

A. There were eight dywidags there but then there were also a number of other high strength rods which were put through, there's an angle to the left-hand side of that photograph which was also bolted to an angle on the external face of the wall.

15 Q. You can use your – the mouse in front of you and just show us what you're talking about please?

A. So there's also an angle here on the left-hand side of that wall and on the corresponding position on the outside face there was also some – some structural steel work and the elements were bolted right through.

20 Q. So the two steel – pieces of steel were connected?

A. That is correct.

Q. To the wall. All right.

JUSTICE COOPER:

25 Q. So you've indicted the area above the man in the yellow jacket on the left-hand side?

A. Yes.

EXAMINATION CONTINUES: MR ZARIFEH

Q. And these bars with the four bolts through them.

30 A. Yes.

Q. We've – see two there and then there's one to the right in that photo.

A. That is correct.

Q. And I think there was another one beyond that?

A. That is correct. That is the one that could be seen from the cafeteria. There were – I believe there's a floor plan shown in our report, 110.220 and that floor plan is actually slightly incorrect because it does not show the window which exists in the space T24. So that window is the window that we can see in the ...

5

Q. So on our plan that we were looking at before, 220?

A. Yes.

Q. You're saying that – where is this window?

10

A. The window would be where the photo references 1.3.8 and 1.3.9 are almost directly in between those. It was kind of central in that wall element.

Q. All right, but it's not shown on that plan?

A. That is correct, yes. These were plans that were taken from the Fulton Ross Team Architecture Market extra report.

15

JUSTICE COOPER:

Q. The man in the yellow jacket seen through the window, is he standing on some scaffolding or something?

20

A. The roof of building 2 is immediately adjacent to this.

Q. Oh, is it.

EXAMINATION CONTINUES: MR ZARIFEH

Q. I think it can be answered by the next photo below, if you go to that. Just talk us through that please and tell us what we're looking at?

25

A. That is the exterior face of the temporary structural steel securing works.

Q. So is that on the other side of what we've just been looking at?

A. That is correct. That's on the external face of the north wall in the north-west corner.

Q. And is that the outside area of the cafeteria on the left?

30

A. That is correct, yes.

Q. And is that a different level from the level that we can see below the window, what looks like a floor?

- A. That's the level 3 floor roughly where that black beam element is.
- Q. Just point with your mouse please.
- A. That's the level 3 floor approximately there.
- Q. All right, and the grey area beyond that, is that an outside area or what?
- 5 A. That is building 2. No that's not an outside area, the balcony handrail is shown in blue there. That's the roof of building 2, I believe it's called.
- Q. So a separate building?
- A. That is correct.
- Q. So just talk us through these pieces of steel that we see on the outside
- 10 of the building?
- A. To reinstate the lateral load carrying capability of the unreinforced masonry elements I was looking to prevent any out of plane movement by clamping the wall together using these structural steel angle sections and also to utilise some lattice frame action to aid in taking horizontal
- 15 loads down into the floor below.
- Q. And am I correct that the most load, if that's the right way of putting it, would be at the top and bottom of these angled pieces where they meet the horizontal?
- A. The top and bottom of these angles (inaudible 14:01:10) –
- 20 Q. So the top of the angle, that there, and at the bottom?
- A. Yes they act –
- Q. That would be where the most stress was?
- A. – they act as a frame yes so the load travels through the diagonals and down into the fixings into the concrete element below.
- 25 Q. And with the one on the right –
- A. Yes.
- Q. - why did you not have a piece, a longer piece like you have on the left with the diagonals in between it?
- A. Unfortunately due to safe access for welding the drop to the right-hand
- 30 side of that edge along there is approximately three storeys and to actually get a welder in there was very difficult so there's an angle on the inside face running in down here where we tried to clamp the two elements together and fix them.

Q. And am I correct that that would, the fact that there wasn't – you weren't able to have a piece of iron going the full length as you have on the left, that would affect the strength of it?

5 A. Yes it would affect the strength slightly. It required a slightly different load path in terms of relying on bolts through the wall to transfer some load into masonry elements below the cracks and also rely on some of the clamping force available from the floor and beam return area above.

Q. So was there anymore that we can't see on the left in terms of outside bracing?

10 A. No, those were the two areas that were braced up. The remaining unreinforced masonry elements along that wall line were at the time of our inspections relatively undamaged and they in my opinion did not require any further work. I was really looking at reinstating the cracked elements, although they still had a vertical load carrying capacity.

15 Q. Despite the cracks?

A. Despite the cracks, yes.

Q. Because you hadn't seen any movement?

A. That is correct.

20 Q. Just, you said a moment ago although you didn't have plans you were given some information by Ganellen. What was that, some written information?

A. No, I received the Fulton Ross September 2009 Heritage report, and the archaeological report from someone, along with the original 1906 architectural plans which we copied through to the Commission.

25 Q. Okay, but you didn't have structural plans for the building is what you're saying?

30 A. No, I believe we actually asked Mike's predecessor, a former employee of Ganellen called Aaron Roberts, to search out some information. At the time we were working for Ganellen on their new Press building and I believe that they had already had some discussions with relevant heritage consultants because they were very keen to retain the building.

Q. Now those measures that we've just been looking at, that north wall, were they temporary measures?

A. They were temporary measures, obviously the cracks would be a long term concern with the durability, weather proofing, wind et cetera.

1405

5 Q. Right. And did you report to Ganellen on the 16th of September in a letter where you referred to those works that we've just been looking at? I'll get it brought up, that's point 355?

WITNESS REFERRED TO LETTER

Q. Is that your letter. You can look at the second page you'll see your signature?

10 A. Yes.

Q. You recognise that?

A. Yes.

Q. All right and in that letter you were setting out what you'd done following the September earthquake?

15 A. Yes.

Q. Correct? Including the visits that you've talked about and one there in the second to last paragraph on the 9th of September? Correct?

A. Yes.

20 Q. If we look at the next page please. You've said at the top there that there were three further areas of securing work required: temporary steel work, secure stone parapet, correct?

A. Yes.

Q. And a full inspection review of the stone existing stone to perimeter frames?

25 A. Yes.

Q. And "thirdly a new in-situ shear wall is required to provide a more long term and durable solution to the north-west corner area of western corner area. This area is to be cordoned off to the second and third floors locally using hoarding to allow the walls to be constructed in the next two to three weeks". Correct?

30

A. Yes.

Q. So that, dealing with number 3, that in-situ shear wall on what you were recommending was to replace these temporary securing works that you've just taken us there?

A. Ah, that is correct.

5 Q. All right and you said there that "to be constructed in the next two to three weeks". Just tell us why did you put that?

A. Um, that was a possibly an ambitious timeframe. I was really looking at making the client aware that that a more long term solution was required. As I, after, after reading that I think I realised that it was
10 actually a bit more of a complex proposition than I'd initially thought because those securing measures were an interim solution and I was, ah, comfortable with them in terms of, ah, retaining the lateral load capacity to that area. However, to instigate a, an in-situ shear wall to that area is a very permanent solution into what was a, um, very
15 significant heritage building. Um, to actually instigate a permanent solution to that area required a wee bit more detailed analysis to really, ah, determine what the actual loads were coming into that element, and also to look at other areas of the building that may need some upgrading. Consideration also needed to be given to the significance of
20 the building whether it was an importance level 2 building or whether because of its heritage status it was an importance level 3 building and that difference corresponds to an approximately 30% increase in load so obviously putting in an in-situ shear wall immediately without giving due consideration to the performance of the building as a whole would not
25 have been a, a sound proposition.

Q. Okay. So you mentioned you'd have to calculate load bearing of that element what do you mean that wall, that northern wall?

A. Yes it would require further detailed analysis.

Q. Okay had you done that at that stage?

30 A. No. No we had not, we had not been engaged to complete any detailed analysis. Our engagement at that point in time was to complete visual structural inspections of the building and review any earthquake related damage.

- Q. Okay so I understand what you're saying about perhaps being ambitious to be done in two to three weeks but were you envisaging that the bracing, the temporary bracing if I can call it that, would have been replaced by something more permanent in a reasonably short time?
- 5 A. Um, I think due to the complexities of actually conducting a detailed structural analysis on a building like this where there is a lack of structural information it requires a lot more investigation and testing to determine existing material properties. I believe that Ganellen were firmly committed to retaining and upgrading the building but they wanted
- 10 us to focus on the insurance and damage related to the September earthquake first keeping in mind that there was always an intent to complete a detailed analysis of the building.
- Q. Right but they were concerned too weren't they to ensure that the building was safe?
- 15 A. That is correct.
- Q. Right.
- A. Installing an in-situ shear wall to that area would not necessarily have solved the problems immediately unless due consideration was given to how that insitu shear wall would perform in relation to the building as a
- 20 whole.
- Q. Right.
- A. There's no point in putting in an extremely strong element if you're going to transfer damage to other areas.
- Q. I understand that but presumably when you said at paragraph 3 that a
- 25 new in-situ shear wall should be installed you were implying that the necessary calculations would be done or considerations of the rest of the elements would be done at the same time?
- A. Ah, that is correct as part of a, an overall detailed analysis.
- Q. All right, so how long were you envisaging that the temporary bracing
- 30 then would be a viable solution? How temporary was it?
- A. Um, that's a good question. Realistically the amount of corrosion and damage to that in the short term would be relatively minimal. The issues would be with weatherproofing and moisture coming into the

building and damaging further areas below. So I didn't actually put a specific time frame on, on that.

5 Q. All right when you, so well what I'm getting at is it seems from looking at your letter that certainly at that stage you were envisaging that in the next two to three weeks that could be replaced. I understand what you're saying about that perhaps being ambitious in hindsight, but that seems to have been what you were anticipating then?

A. Yes I was anticipating that a, um, a detailed structural or seismic assessment would roll in relatively quickly.

10 Q. Right.

A. Once the structural damage had been catalogued and...

Q. And if you had instructed, if you – your instructions had carried on then perhaps your firm would have done that?

15 A. Ah, I believe so although ultimately it would have been on the instructions of our client.

Q. I understand that. So you said before about not having done any load calculations how were you able to determine whether that temporary bracing or what load it would provide?

20 A. What I was looking to do was have a look at what I thought would be the strength of those existing unreinforced masonry elements and replace a significant proportion if not all of that strength with the lattice steel framework bearing in mind that the unreinforced masonry was still a vertical load bearing element.

Q. Right. Did you do any calculation to support that?

25 A. Ah, no they were really back of the envelope, um, ah, installed items based on previous experience with unreinforced masonry buildings.

1415

Q. Right, so you couldn't say how much of the load they could take or they would have taken. It would just be a guess on your part?

30 A. Ah, it would be an educated guess based on experience with similar buildings within Christchurch and similar unreinforced masonry properties. I did have a look at the width of the cracks and the quality of the mortar in those areas and also the quality of the brickwork and did

some rapid back-of-the-envelope calculations to determine what could replace those elements.

Q. Because it was temporary in nature was that relevant to how much you went into it and your calculations?

5 A. Ah, yes. I mean if it was to be a permanent solution then it would be a much more significant process in terms of actually installing and calculating, applying for a building consent, all that type of thing. So this was always a temporary securing measure to reinstate the lateral strength of those elements.

10 Q. And are you talking about pending something like an in-situ shear wall or...

A. Yes.

Q. – more steel?

15 A. It would be highly unlikely that an external steel system would be approved to that area because of the Heritage rating on the building. So something significantly more sympathetic and aesthetically pleasing would be required there.

20 Q. All right I understand what you say about the back-of-the-envelope for the temporary nature of what you were detailing. Did you look at the roof diaphragm and consider how that would operate and look at the shear walls or the walls that the roof was sitting on at that level or not?

25 A. On the 6th of September I did not specifically look at the roof diaphragm when those works were instructed. However, following subsequent inspections on the 10th and 14th of September at that time I actually went through the building with plans and had a look at what I believed were the main lateral load resisting elements and also looked for damage to those main lateral load resisting elements including the floor diaphragms, the unreinforced masonry walls and also had another look at those securing works.

30 Q. And looking at that diagram you've referred us to 220, am I right to say that the main load carrying walls are that northern wall that we've been talking about?

A. Yes.

Q. The back wall, the eastern wall and that central dividing wall just to the right of half way?

A. Yes.

Q. Is that correct?

5 A. Yes there would be some frame action from the perimeter frames but given the likely stiffness of those frame elements it would be less than the wall elements that you have described previously.

Q. So did that change any of your considerations about the temporary bracing that you installed?

10 A. No. At that point in time during my observations in September the remaining elements had performed very well. There was very little notable damage apart from damage to the stonework to the perimeter frames and structural damage to the eastern wall in the northern portion so I was looking at if I had reinstated the strength of the wall elements to
15 the north wall then the other two areas were really the eastern wall in a local section and the stonework to the perimeter frames.

Q. You mean if you'd been kept on for a permanent solution, is that what you're saying?

A. Ah, no. Those were the areas that I determined had structural damage.

20 Q. All right if I can refer you to another document, .359. This is letter from you dated 20 September to Ganellen. This is after the north-eastern wall was stripped. I think Harrison Grierson had suggested that would happen. Is that right?

A. Yes I believe so.

25 Q. And you had examined that. Can you see that letter?

A. Yes.

Q. And you were happy that the existing cracking that was visible to the exterior was no larger, correct?

A. Correct.

30 Q. And under your "Conclusion" you said, "We believe the building is fit for occupation. However, we recommend that monitoring readings are taken daily and recorded."

A. That is correct.

- Q. And you've said in the next paragraph, "Note this inspection work has been of a general nature and is an initial evaluation to ensure this building is fit to occupy. No detailed seismic assessment work has been undertaken." Is that last sentence a reference to what you said before that you didn't do any load calculations?
- 5
- A. That is correct but also the client again was aware of the requirement for a detailed seismic assessment –
- Q. I understand.
- A. – and we were reinforcing that.
- 10 Q. So I just wanted to ask you about the test that you applied then to come to the conclusion that the building was fit for occupation. What test were you applying?
- A. The test that I was applying was based on the installation of the temporary securing works and the areas of structural damage that I had seen to very localised areas of the eastern wall that I believed the structural integrity of the building remained intact and was in a very similar condition to prior to September the 4th earthquake.
- 15
- Q. All right as opposed, as you've said, to any assessment of its actual strength?
- 20 A. That is correct.
- Q. And did you complete more fuller report in October?
- A. Yes, a structural damage report.
- Q. A structural damage report and did that bring together the findings, your findings and conclusions?
- 25 A. Ah, that report was primarily to catalogue the structural damage that had occurred to the building in terms of forming a document that Ganellen could use for tendering purposes for repairs to the building.
- Q. And under the "Conclusion" at page 214 you said, "Generally The Press Heritage building has performed surprisingly well in this earthquake considering the large floor plates, heavy construction and the age and condition of the structure. However, considerable damage has occurred throughout the building which varies in type and severity up the building height." Correct, the first paragraph?
- 30

A. Correct.

Q. And then the third paragraph, I won't read it, but it refers to the structural damage in three areas and the north-west and north-east brick walls that we've been looking at, part of those?

5 A. Yes.

Q. Looking at that plan, T24 and T25, we've dealt with those two areas, correct?

A. Yes.

1424

10 Q. And the bracing. What about T26, what was the damage there?

A. I believe in my report I note some areas of poor quality mortar and also some cracking to the brick wall elements. The areas of poor quality mortar with loose brick work were actually confined to an area to the left-hand side of T27 and the right-hand side of the window out of T26.

15 It was quite a localised area which from discussions on site with George Piper I believe there was actually an old flue that came up out of the adjacent Britten building and some of the fumes over the years had kind of slightly eroded the masonry, unreinforced masonry locally at that area. So that was the loose brick work. That had a significant pre-
20 existing condition in my opinion and then the other item was the cracking to the northern portion of that eastern section of wall and the cracks to that area were significantly smaller than the north wall, very, very narrow. We installed some monitoring points along those cracks and no further movement occurred during the time we were involved in
25 the job. I believe that area of the wall still retained a very similar load carrying capacity. The area of loose and poor quality brickwork as a relatively localised area as I mentioned of about 500 mms long over a wall that was about 11.5 metres long so less than 4% of the, of that element and the adjacent areas of wall on the eastern line were
30 essentially undamaged at the time of our inspections.

Q. Now you said about this document being used for the tender process. That occurred and Holmes Consulting Group was the successful tender?

- A. This was a, this was a tender document that was prepared for pricing the repair works for insurers. I don't know what happened with it after we submitted it to Ganellen.
- 5 Q. You submitted it, your firm submitted a tender in terms of permanent solution and structural strength assessment?
- A. That is correct.
- Q. And so did Holmes Consulting – and Holmes Consulting was awarded that work?
- A. That is correct.
- 10 Q. So after that point, I think we heard from Mr Doig that all the documentation had been received, in other words your reports and letters were forwarded onto Holmes?
- A. That is correct. Well sorry I, I don't know that.
- Q. Well you heard him say that?
- 15 A. I heard Mike Doig say that.
- Q. What I was going to ask you is did you have any further involvement in terms of advising on the building after that?
- A. No, our engagement ceased on the 1st of November and then we submitted an unsuccessful proposal on the 8th.
- 20 Q. Right and so no inspections of the building or anything like that?
- A. No. The, I believe that when my office director Craig Lewis was completing some building inspections for the Christchurch City Council post-Boxing Day he actually told the Ganellen staff to contact Holmes Consulting Group. I believe that, because he was in town doing
- 25 inspections for the Christchurch City Council they were looking at getting him across but our engagement had ceased so we –
- Q. When was that?
- A. That was the 27th of December. Hence I see John Hare's been involved.
- 30 Q. Mr Boyle, The Press manager said, and you would have heard this I presume if you were here, said that after, this is paragraph 14 of his brief, "After re-inspection of the bracing work by both Lewis Bradford and Harrison Grierson I understood that the engineers considered the

bracing was satisfactory until The Press moved out of the building permanently to go to its new building.” Do you recall that?

5 A. I don't actually recall that. There was some discussion around that with Ganellen and as I said the intent of that bracing was to reinstate the strength of those wall elements and I believe following the aftershock on the 8th of September where it didn't move and also the subsequent aftershocks throughout our involvement there was no further movement to that area. So I believe it actually performed in line with my expectations up to that point.

10 Q. You didn't see it after the Boxing Day earthquake did you?

A. The last time I actually set foot in the building was the 27th of October when I was taking the Historic Places Trust through.

15 Q. So do you recall a conversation with Ganellen then to the effect that those temporary works, securing works that we've talked about would be satisfactory until The Press moved out?

A. I probably relayed that information to them via a phone conversation saying that my temporary securing works I believed had reinstated the strength of those elements. So therefore they thought that because the building was in a similar structural condition as to prior to the earthquake that it would suffice.

20 Q. And you didn't have any idea of how long that was going to be, they were going to be relied on at that stage?

A. No I didn't but the obvious expectation was that because we were completing the new building by early, early to late February that The Press would move in so –

25 Q. You knew it might be till then?

A. It might be till then, yep.

30 Q. You don't need to get back the photo but you recall on the bracing on the exterior of the northern wall. You've got the diagonal pieces of steel between the parallel pieces on the left-hand side as we looked at the photo and shorter parallel on the right, on the right-hand side. Did you think of putting horizontal pieces of steel to connect up at the top of and bottom of those where the diagonal met the vertical?

- A. I, there was a concrete beam across the top there which was uncracked and I believed that that had the ability to act as a transfer element across between those two –
- Q. At the top?
- 5 A. That is correct.
- Q. So was that the top of both, where both diagonals met?
- A. The top of where both diagonals met?
- Q. On each side, we'll get that photo back up. Page .47. The bottom photograph, correct?
- 10 A. Yes.
- Q. So my question was did you think of putting horizontal steel at the top of the one on the left, at the top of where the top diagonal meets the vertical and at the bottom again?
- A. The top diagonal meets the vertical.
- 15 Q. So to connect the top right-hand side of that vertical, looking at the left one -
- A. Yes.
- Q. – with the other vertical brace. To connect the two vertical braces at the, where the horizontal meets?
- 20 A. Both braces, both vertical braces were connected into the existing uncracked concrete element across the top of the wall.
- Q. Right.
- A. And they were connected in with high strength anchor bolts. So I was using that existing concrete element to transfer load into those vertical –
- 25 Q. And which is the beam you're talking about. Is that the white section?
- A. That's the, yeah, grey section through there.
- Q. Grey, right. What about the bottom?
- A. At the bottom there's a similar beam element although it's covered in a black Butynol membrane from a gutter across that join between this
- 30 heritage building and building 2 to the north. So those elements were taken down and lapped into that existing concrete element below the wall and anchored in with high strength bolts.

Q. Just finally you said you didn't do any load calculations or strength assessment so you weren't able to tell or work out what percentage of code the building had post the September earthquake?

A. No.

5 Q. Or post your temporary bracing and remedial works?

A. The only calculations I did were to have a look at the strength of those existing elements and to reinstate them using this existing structural steel bracing.

1435

10 Q. But that's looking at them and the damage done rather than load calculations?

A. That's trying to bring the building back to a similar structural condition as to prior to September the 4th.

Q. Sorry –

15 A. Well all I was doing was saying, "Here's an element, what do I think the strength is, what do I need to replace that strength," that was it.

CROSS-EXAMINATION: ALL COUNSEL – NIL

QUESTIONS FROM COMMISSIONER FENWICK:

20 Q. Just one quick question, in that figure sorry which was on the floor, 0010.47, you're showing the bracing in the bottom figure. Did that extend below that level?

A. No. No it did not.

Q. So it was just at the level 3 to level 4, the roof level?

25 A. That is correct, below that element was a solid undamaged unreinforced masonry roof which extended along for considerably past this.

Q. Yes. You're carrying the load by that bolt through the wall from the left-hand brace at the end of diagonal, no sorry the right-hand set of braces you've got the vertical member on the far side of the wall so that's
30 clamped through the wall by that high tensile bolt.

A. Yes.

Q. Any evidence after the earthquake of how that particular bit of structural steel worked?

A. After which earthquake?

5 Q. February the 22nd, I'm wondering did anyone recover that steel to see how it performed?

A. I believe that based on photos within that police report, that area of the roof slab is and has remained separated from the floor. That's about all I can tell from the photo.

Q. Sorry, the roof slab separated from the –

10 A. That area –

Q. – from the wall.

A. – of roof slab has remained separated from the level 3 floor below.

Q. Right, so it implies something else failed to let it drop. Thank you very much.

15 **QUESTIONS FROM JUSTICE COOPER - NIL**

WITNESS EXCUSED

MR ZARIFEH CALLS:**ANDREW JAMES THOMPSON (SWORN)**

- 5 Q. Mr Thompson, is your full name Andrew James Thompson?
- A. That's right.
- Q. And you are – you have the qualification of Bachelor of Engineering?
- A. Yes.
- Q. And you're a chartered professional engineer?
- 10 A. That's right.
- Q. I think you graduated in 1993 and you've got some 18 years' experience?
- A. That's right.
- Q. And you are with the firm Harrison Grierson?
- 15 A. Yes, that's right.
- Q. Were you, or was your firm asked by the Press following the September earthquake to have a look at the Press building?
- A. That's right. On the 14th of September.
- Q. And did you visit the Press building and inspect it?
- 20 A. I did on the 15th of September 2010.
- Q. Now what was the purpose of your inspection that day?
- A. The purpose of my inspection was to do an independent visual inspection of the building structure and to do a structural safety assessment report based on our observations on behalf of the Press.
- 25 Q. So you've heard Mr Wilson from Lewis Bradford give evidence and you're aware when you came in and became involved that Lewis Bradford had been and inspected the building?
- A. Yes I had.
- Q. And that was on instructions from the owners?
- 30 A. Yes.
- Q. So was yours a peer review or a second opinion. Is that how you'd term it?

- A. Well it wouldn't be a peer review because we never actually saw any of their work or peer reviewed any of their paperwork, so it would be more of a second opinion.
- Q. Right, just to –
- 5 A. Independent, independent opinion (overtalking 14:40:44).
- Q. To satisfy the Press?
- A. Yes.
- Q. How would you describe then your inspection, how detailed was it?
- A. It was I suppose similar to a level 2 inspection, I say similar, probably, 10 would probably more that spent more time in the building than probably a level 2, but similar in nature, visual only and not detailed, no testing, no analysis, basically visual only.
- Q. And you prepared a brief report following that visit?
- A. Yes I did.
- 15 Q. And it's point 52, 0010.52, recognise that document?
- A. Yes, that's it.
- Q. And you've said there in the second paragraph, or you've referred to your inspection as a structural safety assessment?
- A. Yes.
- 20 Q. So safety in terms of the occupants?
- A. Occupancy safety, yes occupant safety.
- Q. And what tests were you applying then?
- A. There was no testing, it was very much a visual inspection.
- Q. What standard then, how were you approaching the issue of safety?
- 25 A. I was looking at it, looking for – looking for damage to the building, so what damage had been to existing structural elements, so it was very much looking at what were the important structural elements and how had they been damaged.
- Q. So in line with what we've heard other engineers and how they applied themselves to a building to see if there had been any significant structural damage –
- 30 A. That's right.
- Q. – after the earthquake?

A. Mmm.

Q. So no strength assessment or anything like that?

A. No, that was not part of our brief.

5 Q. And you set out the damage and your findings there, you said at the bottom of that page, the second to last paragraph, "We conclude that the building is structurally sound and safe to occupy with the exception of the areas identified above, and we agree that the green building status is appropriate."

A. That's right.

10 Q. And one of the areas identified above was this north-west corner that we've just been dealing with Mr –

A. Yes.

Q. – Wilson on, you looked at that area and saw –

A. Yes I did.

15 Q. – what had been done in that area?

A. Yes.

Q. Well you've heard me and I'm going to ask you the same questions, but you've heard me talking to Mr Wilson about that. Do you disagree with any of that, any of the conclusions he came to?

20 A. No, no, I was –

Q. Have you got anything you can add from what you saw?

A. No, I cannot, no.

Q. How long did you envisage those temporary repairs would be, or should be for?

25 A. I was under the impression from discussions I had onsite that it was going to be two to three weeks.

Q. Right, now who were they with?

A. That was with Barry Appleby who was escorting me around the building.

Q. Barry Appleby from the Press?

30 A. From the Press.

Q. Right.

A. And some members of Ganellen who were there also at that time.

Q. And we can probably assume that that may have come from the Lewis Bradford report where it's mentioned, two to three weeks?

A. Possibly could have been, yes.

Q. Did you have any discussions with anyone from Lewis Bradford or not?

5 A. Yes I did, I spoke to Ashley early in my inspection, by cellphone, and we were talking about another part of the building on the pigeon loft.

1445

Q. Okay, is that in the ceil- in the roof?

10 A. That was, that was part of the roof yes. I think it was that central portion which I think didn't collapse.

Q. That we saw in that photo earlier on?

A. Yes, mhm.

Q. Okay. And you were aware of what was at that stage envisaged in terms of replacing that wall with a shear wall?

15 A. Not entirely no I was, I was given the information that the repair works that I saw there that day were temporary. I was told that it was going to be two to three weeks until a more permanent solution was, was to be put in and I took their word for it and was quite happy that, that the temporary repair works were going to be replaced in a, in a short period

20 of time.

Q. Right so when you say you took their word for it, what were your thoughts at the time in terms of that temporary bracing?

25 A. I thought the temporary works appeared to be well put together, and the workmanship appeared to be, appeared to be good and I had no concerns over the ability of it to, to keep that, that piece of wall together for a short period of time.

Q. All right. And I presume like Mr Wilson you didn't do any calculations in relation to the load that that wall or that bracing –

A. No.

30 Q. – would have to carry?

A. That was not part of my brief no.

Q. And apart from that one day when you visited did you have any further inspections post Boxing Day or anything like that?

A. No I did not.

CROSS-EXAMINATION: ALL COUNSEL – NIL

QUESTIONS FROM COMMISSIONER FENWICK, JUSTICE COOPER – NIL

WITNESS EXCUSED

MR HANNON CALLS:**HENRY JOHN HARE (AFFIRMED)**

Q. Yes your name is Henry John Hare, you're a director of Holmes Consulting Group Limited, you have a Bachelor of Engineering Civil
5 degree with honours and you're a chartered professional engineer?

A. Yes.

JUSTICE COOPER ADDRESSES COUNSEL – WITNESS TO READ FROM PARAGRAPH 7

Q. Yes if you would read your brief of evidence from paragraph 7 please
10 Mr Hare and there will be one or two points where I'll stop you and ask you some supplementary questions and then again at the end.

WITNESS READS BRIEF OF EVIDENCE

A. "I on behalf of HCG provide this brief of evidence in response to the
15 Canterbury Earthquake Royal Commission's request for details of HCG's assessment of the building known as The Press building situated at 32 Cathedral Square, Christchurch. HCG has had a long association with The Press Company, the previous owner of The Press building. HCG had previously offered to complete and earthquake prone building review for The Press Company in 2006. At that time HCG informed The
20 Press Company that several buildings on site including The Press building were likely to be earthquake prone. I attach a copy of the applicable letter filed dated 14th February 2006 and fax word file from HCG dated 12th May 2006, documents WIT.HAR.0006.12."

Q. You don't need to read those numbers out.

25 A. I don't thank you.

Q. No. No.

A. "The study was not commissioned to my knowledge. The original
30 hardcopies of these documents are not currently available as our records from that time were affected by the 22nd February 2011 earthquake but the documents would have been sent on or about that time. HCG was subsequently brought back to the building by Ganellen Property Limited who purchased the building from The Press Company sometime following 2006. This happened in late 2010 after the

September earthquake. HCG was initially engaged in November 2010 by Ganellen as the building owner to carry out a strengthening study of The Press building. The instructions came about as a result of a referral from the Historic Places Trust. A copy of the proposal is attached. It is signed by both parties and dated 15th November 2010. At the time HCG was informed that the main objective of the study was to develop potential strengthening solutions for The Press building as part of a site redevelopment programme. HCG was engaged to provide among other things: an analysis of the building to evaluate building strength, details of strengthening options, supporting material for resource consent application, building consent and construction documents in relation to the selected strengthening solution and construction monitoring services as an when the project was to be implemented. The building consent documentation was to include our recommendations for the repair of any observed damage to the building following the Darfield earthquake on 4 September 2010. Ganellen advised that prior to HCG's involvement assessments of damage to the buildings following the 4th September 2010 earthquake and temporary repairs had been performed by Lewis Bradford Associates (LBA). LBA's previous damage observations were made available to HCG at that time giving HCG a reasonably comprehensive indication of the damage that had occurred during the Darfield earthquake. Prior to the Boxing Day earthquake a number of site visits were undertaken by HCG personnel in order to gather information for the strengthening study. I cannot advise the exact dates of these visits or how many were made but they were made for the purposes of the strengthening study and not with the express intention of reviewing post earthquake damage or repair. However, during the course of these visits we noted the damage and concur generally with the findings of the LBA review."

30 Q. And I'll just pause you there, if we could have document 0010.373 please.

WITNESS REFERRED TO DOCUMENTS

Q. Now if you'll just look at that. That is isn't it at least the second email down a letter, an email from you to Michael Doig attaching an interim report that you'd produced as a result of the study work you'd done to that point?

5 A. Ah, yes, that's correct.

Q. And if we can go over to the next page please 373. I'm sorry 374 and then across to 375. Let's just come back to 373 if we could please. Now would you tell the Commission in broad terms what were the conclusions that had been reached on the study to that point, and you might also like to explain just what point the study had reached in terms of its analysis?

10 A. Right, well first of all the point that we'd reached was that effectively we had produced a full non-linear time history model of the building and we'd done some early runs of that to get a, to gain an initial impression of the capacity of the building and to gain an impression also of what strengthening may be required. So at this stage we hadn't had the chance to run through a full review of what we had done but these were certainly giving our first impressions of where things were. We were looking, as you will see in the first paragraph of the email at a couple of different configurations for the building relating to the possible reinstatement of the balconies at the north end below what was currently at that time the roof of the adjacent building to the north and we had at that stage the preliminary findings were that the building was in fact not earthquake prone in its original undamaged configuration.

25 1455

Q. Now can you comment to the Commission on your reaction to that finding because you had earlier expressed a somewhat different view?

30 A. Well, yes we were, I was at least perhaps a little surprised by that conclusion. Obviously it was a preliminary finding and therefore we wanted to do further testing of that but it would be fair to say that our earlier recommendation that the building might be earthquake prone was just that. It was a preliminary view without the benefit of any full analysis or investigation at that time.

Q. Now this is probably a convenient moment for you to tell the Commission what happened in terms of further progressing that study?

A. Well we continued to refine the programme, refine the model at least so as to be sure that we did have a good representation of the building and at the same time to further refine the strengthening proposal that we were preparing for the building. Obviously we were side-tracked along the way with aftershocks that occurred on Boxing Day and thereafter but it didn't materially affect the strengthening solution and we were putting that documentation together when unfortunately the 22nd of February event struck.

Q. And if we can look please at document 0010.538. Now that is a report, seismic evaluation of Press Company building seismic strengthening. The date on it is 18 February 2011 and across the front is stamped "Draft". Can you tell us what's the status of that document. When was that actually issued?

A. Ah, the document was issued some time later, well after the event because as I say it was taken over by the 22nd of February earthquake. The status of that document was that the Alistair Boys who had been completing the work had gone through the analysis and the report and that was ready to be reviewed internally prior to completion and hand over as a final document.

Q. So that report represents the status of the analysis as at 18 February. Is that a fair way of putting it?

A. Yes it does yes.

Q. And what were the, and I suppose they would still have to be regarded as 'interim' conclusions as at that point?

A. Relatively unchanged from our earlier advice I think. We had determined that the capacity of the building in its undamaged condition prior to September was in the region of forty-five percent I think of full code loading at that time. We had investigated the alternatives for the north wall looking at whether we could reinstate the balconies and we had come up with a strengthening solution for that which would also

have taken into account the repair of the damage which would happen at the same time.

WITNESS CONTINUES READING BRIEF OF EVIDENCE FROM PARAGRAPH 17

5 “On Sunday 26 December 2010 at 1.12 pm (after the Boxing Day
quake) I was sent the attached email by Mario Evangelo, the Ganellen
Contracts Director, requesting me to contact Nick Jennings and to
arrange to visit The Press building to assess damage to the building
following the Boxing Day event. I visited The Press building on Boxing
10 Day. At 10.31 pm on Boxing Day I sent the attached email to Mario
Evangelo confirming a discussion I had with him earlier that day about
the extent of the damage. In that email I set out recommended repairs.
I subsequently met with both Michael Doig and Nick Jennings on site on
more than one occasion to review the damage from the Boxing Day
15 earthquake. HCG did not receive any written form of instruction.
Ganellen verbally instructed HCG through myself to provide
recommendations for any immediate securing and stabilisation works,
and to incorporate any further repair works into the Strengthening Study
documentation. Ganellen verbally requested HCG to supply, if possible,
20 details of any immediate temporary repair works which could be
undertaken to allow for the temporary occupation of the building until the
tenant was able to relocate into the new building next door. We were
advised by Ganellen that The Press Company, as tenant, was pushing
hard to gain re-occupation of the building following the Boxing Day
25 event but HCG and Ganellen agreed that re-occupation could not be
allowed until the required repairs had been implemented. As far as I am
aware, this was adhered to.
Post 26 December 2010, HCG’s records show there were four separate
formal post earthquake site visits. The purpose of the visits was to
30 inspect damage to the building following the Boxing Day earthquake and
aftershocks. On each occasion HCG was asked to advise on temporary
repairs and, where relevant, to review the completed work.

Site visit on 27 December 2010. The first site visit is recorded to have taken place on 27 December 2010 and undertaken by myself. I attach a copy of the Site Report produced. The Site Report sets out the extent of the damage observed and the repair works recommended. A typed
5 copy of the report was sent to Ganellen on 12 January 2011 but a carbon copy was left on site with them on the date of the visit. In particular, damage was observed to the piers on the north and south faces and to the central wall of the building, consistent with east-west movement and some minor pounding on the adjacent Worcester Towers
10 building. In addition, damage from the Worcester Towers parapet dropping into the light-well on the east side of The Press building was observed. Further removal of linings was undertaken in a few locations on the south wall in order to reveal the extent of cracking and damage. I do not recall when all of this work was completed but some of it was
15 done at the time of the first visit while I waited. It was concluded that although damage, temporary repairs could be undertaken to substantially restore the pier strength of the north and south façades which were considered the critical lateral load bearing elements. Instructions were left on site on 27 September [sic] 2010 for immediate
20 shoring and repair work to be undertaken, with further elements of the temporary repair works instructed to be undertaken over the following weeks. The Press building was not occupied at this time as far as I am aware. Calculations in support (and other documentation relating to this project) may have been lost as our offices have been largely
25 inaccessible since the 22 February 2011 earthquake. However, I note that the calculations were of a preliminary 'back of envelope' nature, appropriate to immediate shoring work.

Site visit on 7 January 2011. The second site visit took place on 7
30 January 2011 and was undertaken by a colleague, Ben Dare. I attach an email dated 5 January 2011 from myself to Ben Dare asking him to call Ganellen, together with his reply. In his reply Ben agrees to visit the site. I attach a copy of the Site Report produced. This is in both handwritten and typed form. The purpose of the visit was for Ben Dare

to inspect/assess the securing works which had been carried out as per my previous Site Report of 27 December 2010 and to observe any further damage to the building as sustained during the aftershocks following the Boxing Day earthquake. I believe that the work was completed immediately as there is a record of it having been completed on the Site Report that was later typed in the office. Ben Dare recommended further works be completed and advised in his report that only when the works as recommended had been completed would the building be safe to occupy. His report says, "Once the above works have been completed the building will be safe to occupy. We have been informed by Nick Jennings of Ganellen that this has been done (07/01/11)". The handwritten report was emailed to Ganellen on 7 January 2011 and I assume that a carbon copy was left on site at the time as is our normal practice. I attach an email dated 7 January 2011 from Ben Dare to Nick Jennings at Ganellen and myself where he attaches the Site Report and comments that if the additional securing works have been completed the immediate threat to the tenants of the building will have been removed. I also attach another email dated 7 January 2011 (sent very shortly after the first email) where Ben Dare says, "I have just spoken to Nick Jennings and he has confirmed all of the temporary security works have been completed." I also attach a third email dated 7 January 2011 where I inform Ben Dare that he now needs to complete a standard earthquake report form ("Engineers Statement"). On 11 January 2011 Nick Jennings from Ganellen sent the attached email to Ben Dare. He attached a letter from Christchurch City Council dated 29th December 2010 but stamped received on 10th January 2011. I attach the letter which was a notice not to use or occupy your building and to repair your building. The letter attaches a section 124 notice. Ben Dare replied to this email by stating that he would send an occupation certificate shortly. I assumed by this he meant an engineer's statement."

Q. Let me just pause you there. Now this, so this letter attached a section 124 notice that the building should not be occupied.

A. Yes.

5 Q. It's correct isn't it that after the Boxing Day earthquake the building had been assessed not by Holmes Consulting but by Council inspection teams and had had a red placard applied to it?

A. Yes I believe so.

Q. And to your knowledge is this notice following up that red placard process?

10 A. Yes I believe so.

Q. Please continue at paragraph 34.

WITNESS CONTINUES READING BRIEF OF EVIDENCE FROM PARAGRAPH 34

15 A. "Upon completion of the work the required engineer statement signed by Ben Dare was supplied to Ganellen. This was in the required form as directed by the CCC required procedure. The engineer's statement confirmed the measures taken to secure or strength the building. A copy of the engineer's statement sent to CCC dated 12th January 2011 and the covering email of the same date addressed to the Building
20 Recovery Office are attached. On 12th January 2011 in response to the email sent by Ben Dare to CCC attaching the engineer's statement the CCC sent an email to Ben Dare confirming that the building was safe for occupancy and that any placards could be removed. I attach this email sent by Laura Bronner at CCC to HCG.

25 Site visit on 12th or 14th January 2011. The third site visit is recorded to have taken place on either 12th or 14th January 2011 and undertaken by Alistair Boys. I attach a copy of a site report produced. The purpose of the visit was to inspect further damage sustained to the building following a further aftershock. I cannot be sure of the actual date of the
30 visit as I note that the most significant aftershock over that period was a magnitude 5.6 event at approximately 1.00 am on Friday the 14th. It is likely that this is in fact the date of this inspection. The site report sets out details of the damage observed and repair works recommended. I

believe that a copy of the original site report was left on site and a typed copy would have been supplied to Ganellen the following week. As far as I am aware the required works were completed immediately following the visit. I believe that the building may have been occupied at this time.

5

Site visit on 20th January 2011. The fourth site visit is recorded to have taken place on 20th of January 2011 and undertaken by myself. The purpose of the visit was to inspect damage suffered by the building following the 20th of January 2011 aftershock. This was probably the

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magnitude 5.1 event on approximately 8.15 am on that day. I attach a copy of the site report and sketches produced. The Press building was occupied by this time. The site report sets out details of the damage observed noting that my visit was restricted to the area of the upper floor where Ganellen had drawn my attention to a specific issue. Repair

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works were described in that report with the note that sketches would be sent on later from the office. According to our records these sketches were emailed through to Michael Doig at 7.36 pm on Friday 21st of January and I attach that email. I understand from other communication that Ganellen intended to complete the repairs immediately and that

20

they were liaising with the neighbours to get access over their roof in order to do so. I do not recall exactly when that work was completed or when it was reviewed but I recall reviewing the work in progress as we were discussing how best to complete aspects of it. As far as I recall the work was completed on or around the end of the week following the

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20th of January 2011. At around this time we were also assisting Ganellen with their insurance claim. In that capacity they had requested us to complete an update of the LBA damage report that had been completed following the September 4th 2010 earthquake. This review would also serve to inform further the strengthening study which was

30

still proceeding. This work was scheduled to begin on 10th of February. On Thursday 10th of February we were sent by Ganellen a copy of a letter from the Christchurch City Council Building Review Office regarding a section 124 notice and requesting further information

including a post Boxing Day engineers assessment, a timeline and schedule for repair works and details of any work included to date. Ganellen was seeking advice as to what response would be appropriate. I sent an email in response and recall discussing this with Michael Doig noting that as the 12th January statement had been sent into the CCC I felt that Ganellen were complying as far as possible at the time with the CCC requirements.”

5

Q. Now I'll just get you to pause there. Now this letter that was sent to you, so far as you're aware was that about the earlier section 124 notice which had been sent out and received on the 10th of January?

10

A. That was my understanding. I hadn't been aware of any other section 124 notice being issued.

Q. And the required engineers certificate responding to that notice had already been sent to the city council?

15

A. Yes sometime earlier.

Q. By the 10th of February?

A. Well before the 10th of February, yes.

Q. Yes. So what was your view about what this document was that had been received from the city council?

20

A. I felt that it was probably a follow-up action where perhaps something hadn't been recorded in the, in the file but that the work that we were doing was certainly, sorry the work that we had done had already superseded this and therefore we were in compliance.

Q. So, so no suggestion at that time in your mind that there was an outstanding s124 notice which hadn't been appropriately responded to and then lifted?

25

A. No I didn't feel that that was the case and given the other work that we were doing it was surely to have been overtaken by the resource consent in any case.

30

Q. Please continue at paragraph 40.

WITNESS CONTINUES READING BRIEF OF EVIDENCE FROM PARAGRAPH 40

A. “Also around this time we began discussing more permanent repair work to the central stair well, stair wall, and I met Michael Doig and I was on 11th February to initiate that process. It is my understanding that The Press building was occupied sometime after 12th January when Ben Dare sent his engineer’s statement to CCC. It had complied with the terms of the CCC re-occupancy requirements to the best of our knowledge at the time. Although there had been further damage subsequently the same level of repair was completed and some of the further work was simply an enhancement of the work that had been done. Our understanding at the time was that the occupancy was temporary as The Press company were to move into a new building. From that time the building would be closed for strengthening and redevelopment. Photographs taken during HCG site visits have been copied to disk and are attached.

Strengthening Study. HCG’s strengthening study proceeded and we issued preliminary sketches and specification notes on or about 28th of February 2011 and resource consent support notes on or about 3rd of February 2011, copies of which are attached. Our full post Boxing Day damage review and detailed evaluation was underway at the time of the earthquake of 22nd of February.”

Q. Now just pause there. You refer in paragraph 43 to the support notes on or about 3 February 2011. If we can go to that document, that’s WIT.HAR.0006.96. That seems to be incorrect. Sorry. Let’s try CAT.032.0010373. No, I’m sorry that’s incorrect also. My apologies.

JUSTICE COOPER:

What are you looking for Mr Hannan?

MR HANNAN:

I’m looking for the email 3 February or the memo 3 February from Holmes to Planit, Sir.

JUSTICE COOPER:

Yes it's the same document, suffix 130.

EXAMINATION CONTINUES: MR HANNAN

Q. Now just have a look at that document Mr Hare. Firstly can you tell us what this is?

5 A. Yes. The first act if you like of the strengthening work was to get a resource consent to allow the strengthening works to take place and so Matt Bonis had been appointed to project manage the resource consent application and this was a series of notes prepared for him to assist in putting that package together.

10 Q. Mr Bonis is a, is a planner, is that correct?

A. Bonis, yes.

Q. So this is in support, a memo to him to provide him with some information to do his work in terms of working towards obtaining a resource consent for the strengthening work?

15 A. That is correct, yep.

1515

Q. And this was not a document which was intended to provide advice to Ganellen as building owner about the particular state of the building, is that correct?

20 A. No, it was purely for Matt Bonis' use.

Q. Now the paragraph at the bottom of the page, if we can have that highlighted please? Just comment on that paragraph please and what you're intending to convey there?

25 A. Yes, it's important to keep this in context, the, as noted in the paragraph above that in fact, we had done quite a lot of temporary securing works on the building following up with the work also that LBA have performed and I guess the point of the resource consent was to remove the temporary works and replace them with the final works. We were simply saying that if you took away that work then the building would be
30 reduced to less than 33 percent as a consequence to the damage, but obviously that was compensated for by the securing works.

Q. So at this stage you're strengthening study that's been running since the 15th of November 2010 or thereabouts has yielded some information for you?

A. Yes.

5 Q. And that's fed into – that's fed into this document?

A. Yes, it has the first part of the document. The final statement in the last paragraph there was really a fairly more of qualitative assessment on my own part, so we were really looking at the assessment which has been done, the analytical assessment being done was working on the
10 basis of the building in its undamaged form.

Q. I take you to another document which is BUI.CAT032.0012.1 and that is the independent assessment of the earthquake performance of 32 Cathedral Square prepared by Spencer Holmes Limited, consulting engineers. You've seen this document?

15 A. I have yes.

Q. If we can go please to .7 and just about half way down the page, "We are of the opinion," paragraph beginning "We are of the opinion." So this paragraph says, "We are of the opinion that even if the walls had not been damaged under the 4th September 2010 and 26 December 2010
20 earthquakes, their collapse would have occurred under the severity of shaking that occurred during the 22 February 2011 earthquake." Do you have any observations on that opinion?

A. I would totally agree with that. We were looking at the building, we concluded that the building had strength of about 45 percent of code and we're talking about severity of shaking as Peter termed it, that
25 somewhere in the region of 180 to 200 percent of code. It was completely overwhelmed by that unfortunately.

CROSS-EXAMINATION: MR ZARIFEH

30 Q. Mr Hare I don't pretend to understand the time history analysis that you talked about, but if you can help me, can you essentially put in whatever variables you like relating to the building and then get a strength assessment?

A. Essentially yes.

Q. So is that why you can say in that point you were dealing with a moment ago from the memo of 3 February, that's why you can say what the strength would be with the temporary bracing or securing measures and without it?

5

A. Well the strength with the temporary securing and bracing measures is really assuming that the temporary securing works were restoring a building to its capacity as it was prior to 4 February, ah, September.

Q. Right.

10

A. Whereas my assessment as I think I said afterwards was more of a qualitative review that clearly without those securing works it would be somewhat less and I took a punt on it being less than 33 at that point, but as I say all of that work had been installed with a view to bring it back up to its capacity, original.

15

Q. The other thing I wanted to ask you about was you'll remember the plan that was being referred to at page 220 and it will come up in a minute, .220. It's a plan of the third floor and I'm just wondering if you can help me. In my understanding there's this wall, dividing wall between T17 and T14, runs east to west?

20

A. Oh yes.

Q. Right, and there's obviously a wall at the back on the east side?

A. Yes.

Q. And there's this northern wall that we've been looking at in some detail this afternoon?

25

A. Yep.

Q. Is that – are those the walls that were taking the load?

A. Well every wall will resist some load.

Q. But they were the essential ones?

30

A. In proportion to its stiffness we felt that although the diaphragm would have some capacity, there would be sharing of load if you consider the east-west direction on that central wall that you've nominated between T14 and T17, and also at the north end, but also to a degree at the south end and some of the incidental walls formed by the light well, so

each one of them would play a part. In the north-south direction that wasn't quite so clear cut because you had on the east side of the building quite a long stiff wall and on the west side quite a lot of openings so that it wasn't quite so evenly distributed.

5 Q. Right, and what about the roof diaphragm? Is that one complete piece or is it divided where that wall is showing, the dividing wall?

A. My recollection of the building is that it would have been divided at that wall.

10 Q. And would that affect calculations as to how the building would perform in an earthquake?

A. To a degree but it wouldn't be the governing criteria.

Q. What would be the governing criteria?

A. Oh, clearly the strength of the piers.

15 Q. And when you say the piers are you talking on them at the north and south end?

A. In particular those yes.

Q. And they're the ones that had to be strapped. Is that what you're talking about, post Boxing Day?

20 A. Post Boxing Day there was strapping to the north piers and also on the south wall at some of the lower levels.

25 Q. Now I understand that Holmes were involved – previously been involved with the Press building – but in terms of post September earthquake work, Holmes came in after the Lewis Bradford initial assessments in that October report with Lewis Bradford, and so the temporary securing work that I think you were here listening to Mr Wilson, remember the work that I referred him to, that would have been done by the time you became involved, and did you make any assessment of that once you became involved and inspected the building and the efficacy of it?

30 A. Not in a detailed sense, I had a general look at it and (inaudible 15:23:05).

Q. You have to keep your voice near that microphone, it's just on your left collar so keep your, you might have to look away from me.

A. Yes, I did that and I concluded that it was probably during the September the first time (inaudible 15:23:21).

Q. Right, so did you make any load calculations to work out if it in fact was – had restored that north wall to its previous strength?

5 A. No I didn't.

Q. Sorry, so you didn't?

A. No I didn't.

Q. Did you think that that was something that should be done or were you going to incorporate that in your – the long term study?

10 A. Well clearly all those piers were going to be incorporated into the long term study so the repair of those we had reviewed, the LBA proposal which was pretty much exactly what we would have done for that particular element and when we did the strengthening subsequently that would always have been wrapped into that.

15 Q. Right, how crucial did you see that north wall in terms of the buildings' ability to resist an earthquake or a significant aftershock.

A. Well certainly it was an integral part of the building.

1525

20 Q. And you heard the questions that I put to Mr Wilson, about the way those bars were bolted in and you talked about a concrete beam across the top and at the bottom as well and that that was giving it support because they were bolted into that. Have you got any comment to make about that?

25 A. Um, no not really, we, I certainly observed how it had been done and felt that it was one engineer's response to it. I wasn't, um, I didn't disagree with what he'd done but, ah, it looked to have been achieving what it was supposed to.

30 Q. Okay, he was clearly of the view at the time that it was temporary in the sense of some weeks. Did you form any view as to how long those, that temporary measure in relation to that north wall should be left like that or could be?

A. Well I think our view was somewhat formed for us by virtue of the fact that the, the strengthening work would effectively commence after the,

the other building was handed over and The Press were able to move out. Um, I guess you could look at the criteria being used for the repair works and say that they were going to be durable for at least the amount of time which would be required for that and therefore once having

5 satisfied those criteria it would be able to last that long.

Q. Right. I think there's a comment in Mr Smith's report that you've just referred to about the, he calls it "the delay in construction of the in-situ shear wall" the north?

A. Mhm.

10 Q. Did you see that, well firstly did you consider that as Mr Wilson had that that was a, the type of permanent solution for that wall, for that north end?

A. Ah, well certainly the, the permanent solution that we were proposing had in fact exactly that concrete up that wall but it could only have been

15 part of the permanent solution because the design and detailing of that had to be an integrated design for the whole building and so we couldn't, while we could've done that work early I guess we had to complete the whole design to make sure it could be integrated.

Q. Right and do I take it from that that or relevant to that is that you can't just I think as Mr Wilson said you can't just put a wall in and ignore other

20 elements and what affect it might have on it, the stiffness might have on other elements of the building?

A. I agree with that completely.

Q. Okay but is what, that's part of what you're referring to?

25 A. Yes exactly.

Q. Okay, the Heritage aspect of the building. Did that play any part in terms of the long term solution?

A. Ah, yes it was a consideration. Obviously the, at that stage at any rate the H, both HBT and the heritage people from the Council had been

30 there, were aware of the work that was proposed and were taking a keen interest in the, in the outcomes.

Q. Okay so in terms of a wall being built at that end. It wasn't going to be a problem from the Heritage side as far as you're aware?

A. Ah, we hadn't gotten to that point yet. I guess that was the point the resource consent application.

5 Q. Right. So from your inspections and including the damage post Boxing Day because of course Mr Wilson who installed those or had those, that bracing installed wasn't there after Boxing Day but from your inspections were you comfortable that the, there was sufficient strength in that north wall bracing together with the other repairs and bracing that had been done to give the building enough strength to withstand expected aftershocks?

10 A. We were comfortable that it had restored that wall to as near as practical to its existing strength prior to the earthquakes and obviously we were working through a process of determining long term fix and also what the capacity of the building would be without, sorry what the capacity of the building was existing.

15 Q. Right. So when Mr Dare signed that CPEng certification 12 January?

A. Mhm.

Q. That was obviously certifying that the parapet damage had been removed or parapet hazard from the next door building?

A. Mhm.

20 Q. But it was also certifying that the building as a whole, it's structural integrity had been returned to I think it said on the form "pre-Boxing Day level"?

A. Yes.

25 Q. I appreciate you weren't signing it but you were obviously involved in it. Were you happy that that's, that was the position?

A. Ah, yes that was the intention of the works that we'd instructed.

Q. Right. And obviously that's the wording of the CPEng certificate that's sought?

A. Mhm.

30 Q. And it's standard wording isn't it?

A. Yes.

- Q. So presumably if resource consent and building consent was going to have to be obtained the temporary securing was going to have to last for some considerable time, some months?
- 5 A. Ah, yes. That was you know a programme hadn't been determined for that.
- Q. Right. And you were aware that The Press were leaving the building around March of 2011?
- A. I was.
- 10 Q. Right. And presumably you were comfortable with the temporary measures that had been put in place being effective until at least then?
- A. Ah, yes.
- Q. Yes. I understand that you didn't envisage what happened, what happened on the 22nd of February happening?
- A. No.
- 15 Q. I presume that's in your thinking you were not considering that kind of, those kind of forces and accelerations that we saw in February?
- A. I don't think anybody was.
- Q. No. What do you recall considering in terms of aftershocks when you were assessing the building as being likely?
- 20 A. Well the general consensus I think and the general, um, rule of thumb if you like that people work to tends to be that you'll get aftershocks of an order of magnitude less than the original shock and so to that end we'd be talking about more of the same if you like that we'd had probably in Boxing Day arguably.
- 25 Q. Right and you were confident that the state of the building could withstand those?
- A. We were confident that at that level of shaking yes.
- Q. So with your analysis were you able to work out what the strength of the building was before the September earthquake?
- 30 A. That's exactly what we did yes.
- Q. That was the 40 to 50%?
- A. Yep.
- Q. Right, post the September earthquake?

A. Well I guess we could've made an attempt at that but we actually weren't trying to do so. It was never part of the intention of what we were doing.

5 Q. And then, so you were just looking at post both September and Boxing Day?

A. Yes our focus was on the strengthening solution for the building.

Q. Right and so it was still with the temporary measures in place were still above code or above the 33%?

A. We felt it was above 33 yes.

10 Q. But you weren't sure exactly where but somewhere above there?

A. Well all analysis has a level of you know uncertainty –

Q. Hard to compare it?

A. – but it was there or thereabouts yes.

15 Q. I just want to quickly, I don't know if Your Honour wants to take the adjournment, I just wanted to put some, we've had some written statements of eye-witnesses about damage?

A. Mhm.

Q. I just wanted to quickly put some of those to you just to get a comment on them?

20 A. Sure.

Q. Some of them I appreciate may not have structural significance but I just wanted to deal with it.

JUSTICE COOPER:

Yes go ahead.

25 **CROSS-EXAMINATION CONTINUES: MR ZARIFEH**

Q. The first one you would have heard Naomi Magee or maybe you weren't here this morning, but Naomi Magee gave evidence and talked about, she was looking at that diagram that's on the screen, her desk was, you see the area T16.

30 **WITNESS REFERRED TO DIAGRAM**

Q. That was an enclosed area internal wall, glass walls to the right and above where T16 is?

A. Yes.

Q. And her desk was in the corner so the right-hand corner where the, where the corner of that interior wall, those interior walls are. She talked about damage to the main stairwell. So that's where T1 is, you see that?

5 A. Yep.

Q. There was cracking around the doorframe which started off low down on either side of the door and went up and around the door. Do you recall that?

A. Yes I do.

10 Q. Any comment about that in terms of structural integrity?

A. Ah, yes we've look at that and tried to gauge the impact of that on the strength of the building as a whole and concluded that although there was cracking there, it was of a failure mode which could move a considerable distance before we get concern about the stability of the wall and therefore we didn't feel that impacted on the building, building capacity overall.

15

1535

Q. Okay and I think, I'm just trying to find it but I think there was mention of damage to the wall at the internal stairs post Boxing Day?

20 A. Yep.

Q. That, from your site reports that you referred to that didn't appear to have been specifically addressed. Was it or not, that shear wall?

A. No again that's an extension of the same damage we just discussed –

Q. Right.

25 A. – in my view and so we talked about that, that that was something that we would commence later on but it wasn't the priority repair in the sense of restoring the building strength as we discussed.

Q. The other one she mentioned was at T22, bottom left of the diagram. Cracking at the northern end of their office. It was an internal wall and it was diagonal cracking. There's actually a photo of it above a doorway. I'll just get the photo brought up, .449. The top photo. Do you see the cracking to the left of where it says "Fire Exit?"

30

A. Yep.

Q. Do you recall that in that area I've mentioned, T22?

A. I don't recall it specifically but –

Q. Any comment about what you can see?

5 A. Yeah that's, in my belief, well my view it's a non-structural wall, didn't contribute to the lateral strength so not critical.

Q. And just finally she referred to damage in the women's toilet on the third floor, top floor, on the eastern side of the building, the doors didn't shut properly and there were windows that were boarded up. So that's the T29 area, at the top of the eastern wall. Do you recall that?

10 A. Yes I do recall some of that. I couldn't comment on the exact location of it but there was one element in there which had some structural significance which is in fact the south wall of the toilets where we, we instructed some strengthening repair work through there which was installed.

15 Q. To counter that cracking?

A. The structural part of it, yes.

Q. I'm just looking at another statement, a written statement from Conrad Fitzgerald. He talked about the internal wall in the cafeteria with bolts in it. That was part of the bracing obviously?

20 A. Yep.

Q. There's a statement from a Julia Rodgers who was the credit hub manager on that floor. What I wanted to ask about her evidence is that she spoke of the new Press offices next door and the Novotel Hotel in the Square when they were constructed and the vibrations on The Press building and just raising an issue of whether that might have affected the building structurally. Can you make any comment about that?

25 A. It's always a vexed question when that sort of thing happens. The general feeling about that I think is depending on the exact nature of the vibration is that you'll feel it but it won't really be causing a lot of structural harm. It will depend on the frequency and nature of materials
30 but I think it's unlikely to have had any material effect on the building.

Q. And was it something you would have expected to see when you were inspecting it – if it had been a permanent, permanent damage that might have affected the structure?

5 A. You would have had to have had a look sort of before, during and after that construction work but certainly when we've done that sort of work in the past unless there's actual undermining it's very rare that damage occurs in the vicinity.

10 Q. Thank you. Stacey Herbert is another written statement that we've received. She said inside the café which was to the right of the payroll office, so that's the, you know where that area is, cafeteria, T25.

A. T25, yep.

15 Q. "Facing out to Gloucester Street there was major cracks in the bricks which you could see through." Now I appreciate that you weren't there when the bracing was put on that north wall but in terms of that bracing and the cracks in the bricks from your inspections what can you say about restoring the integrity of that, those cracks?

20 A. Well as an engineer, particularly with brick work it's really a matter of gauging when you, when you go and see the damage what sort of crack it is. At the risk of getting technical, the cracks there had what we call a step pattern. So it's a bed joint sliding failure which is to say that the bricks are actually shearing in their, in their joints as opposed to cracking right through the brick and so our response accordingly, in case of a bed joint shear failure it's something which is not exactly ductile but something which can move quite a long way before it will
25 cause any subsequent problems. In the case of a tensile failure going right through the bricks it can move very little and so we would tend to look at that. The fact that you can see through a wall with a step joint doesn't mean the wall is unsafe. It means it's probably a little alarming though for people who are not sure what they're looking at.

30 Q. All right and so you were happy with what you saw. There wasn't cause for alarm due to the structural integrity?

A. Happy provided it had that temporary securing restraint on it.

- Q. Yes which was on of course when you saw it. Just finally on these comments. A Mr Brook has put in a written statement. He was a fire fighter with the New Zealand Fire Service and he says that on the 26th of December, so Boxing Day, he was, he went to the building and he said that while he was looking at the south wall a man approached him and identified himself as the engineer responsible for The Press building. “I did not recognise him and do not know his name. We discussed the condition of the columns and I said I was concerned about the fact the columns appeared to have shifted out of alignment. The engineer disagreed. He told me that he thought the columns had not moved.” I'm just wanting to know was that you. I thought it might well be you given your involvement. Do you recall that?
- 5
- 10
- A. I don't recall that conversation but I recall looking at the south wall on that date and certainly we did, we were very careful to remove some linings on the inside because there was some cracking there which I was concerned about getting to the bottom of and we did subsequently put some shoring in place for some of those piers.
- 15
- Q. Right so even though you can't remember it, you were happy about the structural integrity of that south wall?
- 20
- A. I'm happy that we reviewed that and made some changes.
- Q. Just finally, something I meant to ask you before but talking about this north wall. On the 12th of January was, that was the day Mr Dare dealt with the certification post the Boxing Day remedial works you referred to a site report of that same date that I presume is Alistair Boys, ALB are the initial on it.
- 25
- A. Yep.
- Q. And that noted on it that the north wall L3 western pier, “Cracks open approximately 10 mm, existing steel bracing does not appear to fully restrain pier.” Do you recall that – and there's, I'll get it brought up, 59 –
- 30
- A. (inaudible 15:43:03).
- Q. WIT.HAR0006.59.
- A. I know the one you mean, yes.

Q. It'll come up in a second. "Shoring required to western pier between door and window." There it is. Do you recall that?

A. Yes.

5 Q. What I want to ask you is, what was done as a result of those observations?

A. Well as you say that was instructed by Alistair Boys but to my knowledge that work as instructed was installed, that's my understanding of that. I think –

Q. Do you know what it was?

10 A. Sorry what the –

Q. What the work was?

A. It was the, there were some additional pieces of timber put in this case up, up beside the door and the window with some strapping around and that was to basically restrain the piece of brick which appeared to slip outside the line of the steel which had been put in.

15

Q. And that's the wood we can see behind the metal or it looks like behind on the diagram?

A. It's, it's either side. The horizontal pieces you can see are the two and a half tonne straps going around the whole thing to bind it all together.

20 Q. How was the wood attached to the wall?

A. It wasn't. It was simply clamped on by the straps.

Q. Okay and is there any photo in those photos you've produced that shows that wall and the additional work that was done there?

A. I am not 100% sure but I don't think there is.

25 **COMMISSION ADJOURNS: 3.44 PM**

COMMISSION RESUMES: 4.00 PM

CROSS-EXAMINATION: MR ELLIOTT

30 Q. Mr Hare, I'm going to just address with you the issue of assessment of risk and communication of risk by Holmes as engineers to its client, the owners, of this building. Firstly you'll be aware that Mr Dare's report uses those words, 'safe to occupy.'

A. Yes.

Q. I may have referred you or one of your employees to the following words during the PGC hearing. I'll do it again here. There's a report produced by the New Zealand Society for Earthquake Engineering entitled 'Building Safety Evaluation following the Canterbury earthquakes', and there's a comment in that that there is a growing body of opinion that's saying something is safe is inappropriate. It has been said that saying something is safe means that it is risk free, but given uncertainties nothing is risk free so nothing should be called safe. Do you agree with those comments?

A. Yes I do.

Q. Do you agree that Mr Dare should not have used the words safe to occupy therefore in his report?

A. Well I think you'd have to look at what was happening across the city at that stage and so any use of the word safe in that context was really very much in a context of the what had been accepted, which was the restoration of the building to its pre-earthquake strength and I guess that was in effect code for that that had happened. In retrospect I think for members of the public in general, those – all that terminology really needs an awful lot of looking at to make things a lot clearer.

Q. Would you agree that the type of explanation that Holmes Consulting really should have given would have been something along the lines, "That we cannot say this building is safe to occupy. All we can do is assess the extent of the risk and tell you what that is?"

A. I would certainly agree with the benefit of hindsight that that's where we all as a profession need to be going in a situation like this, and I can only repeat that once again, at the time that people certainly didn't have any idea what was around the corner for them and that that was the standard wording which has been used in those days.

Q. All right, well as you can appreciate one of the key points I suppose about this building that people would be trying to understand is how it went from being red stickered to re-occupied following Boxing Day in particular and from your point of view that process involved as well as

providing the letter from Mr Dare with safe to occupy, Mr Dare also produced a certificate which went to the Christchurch City Council which resulted in the removal of the red placard?

A. Correct.

5 Q. I just refer you to firstly the Building Act notice. It's BUICAT032.0010.379, and if the words under particulars could be highlighted. So according to the notice from the Council's point of view at least, two separate points. "One, the building has been damaged and there are structural defects to the building. Number 2, Council records
10 show general brick cracking including south façade. Neighbours parapet on east side – risk of falling on Press." Did you see that Building Act notice when it was issued in December 2010?

A. I'm not sure if I saw that precise one, but there's nothing in that that surprises me. That was all known issues.

15 Q. Document BUICAT032.0010.384. Just highlight the top paragraph please. This appears to be an email from you to Mr Doig of Ganellen on 29 December and I'm just going to read out a sentence or two and ask you to explain what you meant. You said, "The red placard is a section
20 124 notice and basically applies to the full site, not just the affected building or part of the building. I've tried to rationalise this with CCC but so far no dice." Can you just explain please what you mean by we tried to rationalise this with the Council but no dice?

A. Well I think essentially the issue here was that we had one large site with multiple buildings on it and so although with reference to the notice
25 you just showed me that was essentially talking about the one building only, the fact remained that that may have been applicable or could have been applied to the buildings all across the site and so I had to be sure that we knew exactly what was going on and that we weren't inadvertently making comments about one building and having it
30 incorrectly applied across the site. In point of fact to the best of my knowledge and as far as I was able to ascertain at the time I think it was only about the Press building itself.

Q. So do you understand the Building Act notice is applying to the structural position of the Press building as a whole or just some part of it?

5 A. Well going back to the wording on the notice itself, it makes reference to things which can only have happened to the Press building, as I noted, because the section 124 notice applies I think to the full address or to the whole site, it could be applied across every building on the site. We hadn't had any discussion or knowledge of what had been done on those other buildings in detail and so I just needed to be sure that as I
10 say, in dealing with the Press building we weren't missing something on some of the other buildings.

Q. I appreciate that you didn't sign the certificate yourself, Mr Dare did.

A. Mhm.

15 Q. But from Holmes Consulting's point of view was the certificate provided to the Council directed to a part of the Press building rather than to the structural position of the building as a whole?

A. It was directed to the whole of the Press building.

20 Q. So does that mean that in giving consideration to providing the certificate either you or someone else in Holmes Consulting gave some consideration to the structural integrity of the Press building as a whole, as opposed to particular parts, that may have been damaged?

A. Well certainly in arriving at that point we had to assess the building as a whole but the repairs obviously were restricted to areas where there was significant damage.

25 Q. Yes, document BUICAT032.010.527. Just highlight the top section please, top paragraph. You may recall there was a follow-up letter from the Christchurch City Council to the owner dated 2 February 2011 and there was some evidence earlier on I think that that resulted in an approach to you by Mr Doig. Do you recall this?

30 A. Yes I recall that, I think that there was a, effectively a repeat of the correspondence came through which was essentially directed at the same questions which have been asked previously and as I note there I was going to check with Vincie Billante at the City Council that that was

in fact the case. I appear to have been the victim of spell check down there somewhere, but to my knowledge as far as I was able to ascertain they were talking about the same thing.

5 Q. I think just in fairness to you I should highlight for you what the email to you said. If we just highlight the next section below that highlighted section.

A. Yes, that is as I would have expected.

1610

10 Q. I just wanted you to explain what you meant by, "I think this is something that I may be able to make go away for a while."

A. Um, purely in the sense that we had, having done with the Council what I thought was required, what I understood was required to be able to have people back in the building with the engineer's statement I was assuming that this was a repeat of that and as I say something that
15 needed to be corrected in the Council's systems and knowing full well that in a relatively short time we'd be making a resource consent for strengthening application which would overrun all this anyway.

Q. I see. I can – are you familiar with the engineer's certificate?

A. Yes.

20 Q. Would you like me to bring that up in front of you. I'll just pose a question and see if you can answer it. The certificate is directed to whether the works which had been carried out restore the building to its pre-Boxing Day state?

A. Yes.

25 Q. Is that right? And that's, it's primarily directed towards repair of damage which has been observed?

A. Yes.

Q. By the 3rd of February when you had weren't to Planit?

A. Mhm.

30 Q. By that point at least you'd completed a full assessment of the building?

A. We were most of the way through that yes.

Q. And you were suggesting various versions, various repairs and reinstatement works to the building?

A. Yes.

Q. And I take it that work would have improved the structural capacity of the building to withstand seismic forces?

5 A. Oh well, it was directed to a totally different brief if you like and that was sweeping up both the repairs to the building fabric which was partly about strength but more particularly about just maintenance and repair to the heritage fabric, and then including with that strengthening and we had discussed whether the target would be 67% or whatever proportion of code that we were looking at but certainly that was a level of strength
10 well in excess of what, at much higher level than what we would consider for earthquake-proneness or anything like that.

Q. This is a matter which the Commission has heard a great deal about and perhaps we touched on this during the evidence in the PGC building but just for the benefit of those who are here listening to the
15 evidence on this building, the, the, if I can say damaged-based test which underlies the engineer's certificate for the Council is a different test to the question of what is the structural capacity of a building. Would you agree?

A. Very different. Yes.

20 Q. So that the damage test underlying the Council's certificate is more around the question of not whether a building is good or bad if I can put it that way, but whether it is no worse than it was before the earthquakes?

A. Or whether it can be made no worse yes.

25 Q. The question which your client was interested in was in terms of knowing the suitability for occupation was the question of the capacity of the building, would you agree, and not necessarily the test the Council was posing in its certificate?

30 A. I think you've got to view that very much in the context of the way that such buildings have been treated over a number of years. The earthquake prone building legislation which is really the only thing in the Building Act which covers that general question I guess sets 33% as the threshold which would be not so much regarded as safe but certainly

5 reviewed as earthquake prone and yet the mere fact that we'd had
buildings in an earthquake prone condition for many years whilst we
waited for something to happen is an indication if not exactly that people
regard them as safe but certainly that people were prepared to tolerate
10 them in that condition for a long time. I think in any event for this
particular building we had certainly surprised ourselves to find that it
wasn't in fact earthquake prone in that condition and therefore you know
the bigger issue becomes for February 22nd that that event was so much
larger that it overwhelmed not just that building but many others and so
15 whether it was slightly above or slightly below that line is almost
irrelevant unfortunately.

Q. You refer to the size of the earthquake and you touched upon that
question in your earlier evidence and referred to Mr Smith's report. It is
right to say though that this building could have failed in a similar way in
20 an earthquake producing ground accelerations much lower than what
were experienced at 12.51 on 22 February isn't it?

A. Ah, yes, that certainly could be concluded and it's important to note that
there's an implied precision with some of these numbers that people
give which is – probably indicates more than in fact we should but
25 clearly that particular earthquake on February 22nd was so much larger
that you know that was almost irrelevant.

Q. I'm just trying to help people who want to understand the reasoning
underlying Holmes Consulting's advice I suppose that the building was
suitable for occupation, and am I right in saying that at least by the
30 3rd of February you had identified that the percentage of code loading of
this building was 40% minimum?

A. Somewhere between 40 and 50 yes.

Q. Fifty percent.

JUSTICE COOPER:

30 The expression used is 45 to 50 in the Bronner's memorandum.

MR ELLIOTT:

I thought there were two separate directions Your Honour.

MR HARE:

I think it was 45 in fact in east-west direction and 50 in the north-south
5 perhaps.

JUSTICE COOPER:

There were but the lowest was 45 I thought. Shall we check that?

MR ELLIOTT:

10 Yes please Your Honour.

JUSTICE COOPER:

It's suffix 130. You're right it's 40 to 45 for east-west actions and 50 in north-south actions.

CROSS-EXAMINATION CONTINUES: MR ELLIOTT

15 Q. Thank Your Honour. You're just distinguishing between the different directions of earthquake shaking that a building could experience?

A. Mhm.

Q. There and you're saying that in one direction it could be 40 to 45% of full code loading and in the other 50% but I suppose in assessing suitability
20 for occupancy you'd been looking at the lowest figure in terms of assessing risk of collapse?

A. Um, in assessing the building capacity yes we would tend to take the lowest figure obviously, earthquakes know no rule so they would take the weakest point.

25 Q. And at 40% would that result in the building being at risk if there were ground accelerations at ground level at .3 g or so?

A. Um, yes it's always as I said it's, we've got to be careful to be too
30 scientific about this because these numbers are assessed against a code which is a reasonable theoretical document but certainly you know less than what happened on February the 22nd but still more than the test for an earthquake prone building.

Q. I certainly want it to be emphasised that these are theoretical figures. I suppose the point I'm making – well I'll pose this question, you may have already said it, in indicating the building was suitable for occupation was it inherent in your Holmes Consulting's decision-making that it'd've got through the Boxing Day 'quake and it could conceivably get through another of about the same accelerations at that site but above that it may fail?

5

A. Yes at that stage we would cert- obviously we felt that the Boxing Day earthquake although of course some damage that was all relatively readily repairable in the short term, exactly how much larger an earthquake would be required was sort of a, would have required a good deal more analysis than was able to have been done on that short timeframe.

10

Q. So the element of risk if you like in that statement is how big is an aftershock going to be or more importantly what ground accelerations will it produce at this site?

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A. Yes.

Q. And that was an unknown?

A. Unfortunately yes.

20 1620

Q. I suppose that really brings me to the main proposition I wanted you to consider which is really based on the philosophy that it shouldn't be an engineer who makes a decision about that risk but it should be the people who are taking the risk of there being an aftershock and my question really is, in hindsight at least, do you think that Holmes Consulting shouldn't have said this building's safe to occupy. It should have recommended the building stay closed after Boxing Day so that it could advise its client and therefore those in it what the levels of risk were so they could make the decision about what level of risk they would bear?

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A. I certainly agree with the first part of the statement. I think the word "safe" really needs to be not exactly struck out of the dictionary but certainly not used in an engineering context in the way that it perhaps

has been in the past. I am a little cautious, a little more cautious about saying that buildings should be closed down in that way simply because it is easy to look at buildings one at a time but when there's a whole city to consider it makes it a little harder to come up with those sorts of actions or to know indeed when it would stop and so I don't necessarily agree that the test being used at the time was the wrong one. I simply, the main concern is simply that the event itself overtook all other considerations in February because it was so much larger. Obviously we are, as everyone is, distraught with what happened and I particularly feel for the victims of that but I'm not sure going forward I think it needs a lot more consideration bearing in mind that the earthquake prone building legislation itself was never set specifically by engineers. That's a piece of law and that's the same test really that we had previously.

CROSS-EXAMINATION: MR LAING AND MR WOODS- NIL

15 CROSS-EXAMINATION: MR FERRIER

Q. Mr Hare at paragraph 20 of your statement you say that you were advised by Ganellen that The Press Company as tenant was pushing hard to gain re-occupation of the building following the Boxing Day event. I want to suggest to you first of all that it might be something of an overstatement in terms of the information that you were provided by Ganellen. How would you respond to that?

A. I would say with hindsight that it was possibly poor choice of words by me in writing it in that way. I was well aware that the Press had been exploring alternative locations without a lot of success and it was more a case not that we felt there was any implication they were asking us to cut corners or do anything less than was required, probably more reflective of the fact that we were caught between Christmas and New Year and when we would have all rather been doing other things. There was a lot of work to happen in a very short time.

30 Q. There has been some discussion in your evidence of the 2006 report that you gave to Mr Piper of the Press and also the 2007 pre purchase seismic review that you prepared prior to the sale of the building by

Fairfax. Is it your evidence that the comments in those two reports were really superseded by the work that you had done prior to the Boxing Day event?

A. Yes in respect of The Press building itself.

5

RE-EXAMINATION: MR HANNON – NIL

QUESTIONS FROM THE COMMISSION – NIL

10 **WITNESS EXCUSED**

MR HANNON CALLS**BENJAMIN RICHARD DARE (AFFIRMED)**

Q. Your name is Benjamin Richard Dare. You are a Project Engineer employed by Holmes Consulting Group?

5 A. It is and I am.

Q. And you hold a Bachelor of Engineering (Civil) Degree with Honours?

A. I do.

Q. You are a Chartered Professional Engineer?

A. I am.

10 Q. And professional membership with the Institution of Professional Engineers of New Zealand?

A. I do.

Q. And six years' experience in structural engineering in New Zealand?

A. That's correct.

15 **WITNESS READS BRIEF OF EVIDENCE COMMENCING FROM PARAGRAPH 3**

"I, on behalf of HCG, provide this brief of evidence in response to the Canterbury Earthquakes Royal Commission's request for the details of HCG's assessment of the building known as The Press building situated at 32 Cathedral Square, Christchurch.

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Post-earthquake assessment – 7 January 2011. On Wednesday 5 January 2011 John Hare sent me an email asking me to call Nick Jennings at Ganellen about some shoring work that had been carried out at The Press building. John suggested that I read the related Site Report dated 27 December 2010 that was on his desk. I replied to this email saying that I would try to visit the site the next day. I attach a copy of these emails. I telephoned Nick Jennings sometime after this email correspondence and arranged a site visit for 7 January 2011. This was my first active involvement with The Press building so I also telephoned John Hare to get some relevant background information on the building. Prior to my site visit on 7 January 2011 I also had a look through The Press building file which included John Hare's Site Report recording the site visit that he had undertaken on 27 December 2010. I attach a copy

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of that Site Report. The Site Report set out the extent of the damage that John had observed on 27 December and the repair works he had recommended. I understood from John Hare's Site Report that immediate shoring and repair work had been undertaken post his visit on 27 December 2010.

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I visited the site on 7 January 2011 and was on site for at least one hour. I recall that the site carried a red placard because I remember having a discussion with Nick Jennings about the location of the placard on the building. I attach a copy of the Site Report I produced. This is both in handwritten and typed form. The purpose of the site visit was for me to inspect and assess the shoring and securing works which had been carried out in accordance with John Hare's Site Report of 27 December 2010 and to observe any further damage to the building that might have been sustained during the aftershocks following the Boxing Day earthquake. I observed during my site visit that the work recommended by John Hare to the south wall, the north wall and the stairwell had been completed. I also observed that the parapet from the adjacent building, the Worcester Tower, had collapsed into the light-well of The Press building and that a concrete lintel beam below the parapet had sustained a series of moderate sized cracks that should be inspected further. I recommended the building owner of the Worcester Tower be notified of these issues given that it would have been very difficult for the full extent of this damage to be seen from within the Worcester Tower. This was basically a "heads up" that the engineers working on the Worcester Tower needed to deal with the collapsed parapet before it collapsed any further and possibly became a threat to The Press building. Although not related to the strength of the building per se I also recommended that temporary waterproofing be installed following the removal of the loose sections of the parapet. The majority of my site report was completed on site.

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When I returned to the office later on in the day I sent an email to Nick Jennings at Ganellen attaching my site report of the same date. In that email I said to Nick, and I quote, "If the additional securing works have

5 been completed, the immediate threat to the tenants of the building will have been removed and it should be safe to occupy on Monday.” I then received a phone call from Nick Jennings. Nick told me that the loose sections of the parapet had been removed and temporary waterproofing had been installed. I then made a clear note at the foot of my site report that, and I quote, “We have been informed by Nick Jennings at Ganellen that this has been done, dated the 7th of the first, 11.” I then sent a follow-up email to John Hare stating, and I quote, “I have just spoken to Nick Jennings and he has confirmed all of the temporary securing works have been completed.” I also asked John Hare in this email, how we arrange the removal of the red placard that had been placed on the Press building. John Hare sent me an email back on the 7th of January 2011 instructing me to complete a standard earthquake report form engineers’ statement, I attach this chain of email correspondence.

10
15 On 11 January 2011 Nick Jennings from Ganellen sent the attached email to me. He attached a letter from Christchurch City Council, CCC, dated 29 December 2010. It's stamped received on 10 January 2011. I attached the letter which was a notice not to use or occupy your building and to repair your building. The letter attaches a section 124 clause 20 1(c) notice. I replied to this email by stating that I would send an occupation certificate shortly. By this I meant an engineers’ statement. On Wednesday 12 January a signed engineers’ statement was supplied to Ganellen and James Clark at the Building Recovery Office at CCC. This was in the required form as directed by the CCC required 25 procedure. The engineers’ statement confirmed the measures taken to secure or strengthen the building. A copy of the engineers’ statement sent to CCC dated 12 January 2011 in the covering email of the same date addressed to the Building Recovery Office are attached.

30 On 12 January 2011 in response to the email I sent to CCC attaching the engineers’ statement, the CCC sent an email back to me confirming that the building was safe for occupancy and that any placards could be removed. I attached this email sent to me by Laura Bronner at CCC. I forwarded this email to Nick Jennings. It is my understanding that the

5 Press building was occupied sometime after 12 January when I sent my engineers' statement to CCC. It had complied with the terms of the CCC re-occupancy requirements to the best of my knowledge at the time. I had no further contact with the Press building after 12 January 2011.

CROSS-EXAMINATION: MR ZARIFEH

Q. Mr Dare, you said that your first active involvement was your visit on the 7th of January?

10 A. That's correct, following the correspondence I had with John Hare and Nick Jennings.

Q. Yes, so you hadn't inspected the building before that?

A. No, I had not.

Q. And in fact was that the only day you inspected it?

A. It was.

15 Q. Had you completed a certificate of that nature before?

A. I had not.

Q. And presumably that's why you had to ask John Hare what was required?

A. Correct.

20 Q. Did you appreciate that when you were signing that certificate you were certifying that, firstly that the remedial work had been completed?

A. I was.

Q. And that you had inspected that on completion?

A. I had.

25 Q. I have inspected the work on completion?

A. Yes. That's correct, there was the minor outstanding issue of the parapet from the adjacent building which I had instructed to get removed. I didn't inspect at the completion of that, but based on the previous performances of Ganellen carrying out our instructions I was happy to accept that that work had been undertaken.

30

Q. All right, so just so we're clear, you were aware of the site report from Mr Hare of 27 December following the Boxing Day aftershock?

A. I was.

Q. When you went on the 7th of January you inspected the works that had been done to follow-up on that?

A. I did.

5 Q. And they had all been completed bar the parapet removal?

A. Yes, that was an additional point that I noted, in addition to assessing and checking that the work specified by John Hare had been completed, I also completed my own assessment of the building to identify any further damage that occurred following the December 26th event.

10 Q. And so you required that to be done?

A. Yep.

Q. And it was just that last point that you relied on Nick Jennings' confirmation that he'd done that?

A. Yes.

15 Q. Did you also appreciate that when you were signing that certificate you were certifying that the structural integrity of the building had been restored to pre-Boxing Day level?

A. I was aware.

Q. You were aware of that?

20 A. I was.

Q. Just tell us when you went on the 7th, what did you look at?

A. Predominantly the shoring works to the piers on the north and south walls where they had been secured as per John Hare's, sorry dated 27th December.

25 Q. Right, to ensure that had been done?

A. That had been done in accordance with the

Q. And you obviously –

A. – recommendation.

Q. – you obviously looked at the parapet that you made certain requirements of?

30

A. I did.

Q. Did you look at the rest of the building or not?

- A. I did, I – along with Nick Jennings and another of his colleagues whose name I can't recall at this time. We completed a walk around of the building at the time Nick pointing out to me any areas that he'd identified damage. That was predominantly restricted to where the parapet had fallen into the light well and also myself making my own observations.
- 5 Q. And so how did you satisfy yourself that the structural integrity had been returned after those remedial works?
- A. I was happy to accept that the measures specified by John Hare were adequate to achieve that.
- 10 Q. Because he'd inspected it previously?
- A. Previously, yep.
- Q. Okay. And when you – you completed the certificate or sent it to the Council on the 12th of January?
- A. I did.
- 15 Q. You weren't aware of Mr Boys' inspection on that same day?
- A. I was not, although I think reading into what – listening to John's previous testimony there was possibly some uncertainty about the date of that and it may have occurred in fact on the 14th.
- Q. The 14th.
- 20 A. Following the aftershock of that morning.
- Q. You're right, yes. And you said that as far as you were aware the Press moved in sometime after your certificate had been sent to the Council?
- A. I wasn't aware that they'd moved in any earlier.

CROSS-EXAMINATION: MR ELLIOTT

- 25 Q. Could I have document WITDAR0001.23 please. Is this your – well I think this is your certificate Mr Dare?
- A. It is.
- Q. Now firstly the document notes reference to the earthquake of 26 December 2010.
- 30 A. That is correct.
- Q. Were you aware that as far as I understand it the Council form in fact refers to the earthquake of 4 September 2010?

A. I was not. I was under the impression that the red placard placed on the Press building was as a result of an independent Council inspection following the Boxing Day event, not the September 4 event.

1640

5 Q. I see and so that –

JUSTICE COOPER:

I think to be fair that standard form refers to the 4 September earthquake and subsequent aftershocks doesn't it?

10

MR ELLIOTT:

Yes. I'm sorry Your Honour I'm seeing probably one or two. I'm not sure what's standard actually.

15 **JUSTICE COOPER:**

Sorry?

MR ELLIOTT:

10 I'm not sure what's standard actually. I've seen forms I think referring to 4 September and also referring to 4 September and Boxing Day.

JUSTICE COOPER:

Right well –

CROSS-EXAMINATION CONTINUES: MR ELLIOTT

25 Q. I don't intend to direct any criticism here. I think Mr Dare you're saying that you, you were focussed on that Boxing Day earthquake and so you took the form with 26 December on it and that was the form you, you signed?

A. That's correct.

30 Q. The, the bottom two paragraphs of the form refer to where the structural integrity and/or structural performance of the building or part of the building was materially affected and then goes on to talk about securing

measures and then in Part B it refers to potentially dangerous features such as chimneys, parapets and walls. So am I right in saying that you gave consideration before signing this document to the structural integrity of the building as a whole?

5 A. That's correct.

Q. And that included the north wall?

A. It did as one of the areas that had been highlighted as having sustained damage.

10 Q. Were you aware at that point that the northern wall was a critical load bearing element?

A. I was.

Q. Am I right in saying that the top section of that wall which was made of bricks and mortar was less thick than the wall at lower parts of the building?

15 A. I'm not aware of that. I wasn't fully aware of the dimensions of, or the elements in that area. That may be true but I personally was not aware of that.

20 Q. Were you aware when you did your inspection and signed the document of Lewis Bradford contemplating that a new shear wall would be put in place at the north-west corner?

A. I was not.

25 Q. I'm just going to ask for a photograph to be shown to you. These are documents which are referred to in the City Council's brief of evidence and I'm just going to make sure that I'm understanding when they were from. So firstly document WIT.MCC.0026.21. In fact we'll just look at this one. According to the Council's statement these were photographs taken by a Council planner on 14 January 2011. As far as you recall does that photograph demonstrate the state of what appears to be the exterior of that north-west section?

30 A. It's hard to identify the exact location of that given you can only see a very isolated portion of it.

Q. In that case I'll show you WIT.MCC.0026.19. Is that the exterior of the north-western section?

A. I believe it is.

Q. And if you look, we've got the V shape of the steel and there's a section which it appears the previous photo related to. If you look at the cracking in that area?

5 A. Yep.

Q. And I'll just refer you back to that and see if you agree that we're talking about cracking in that area. It's document 26.21. Do you agree that's the, the area we're talking about?

A. It appears to be so.

10 Q. And were you aware of what appears to be Mr Hare's comment in relation to that area that there was 10 millimetres of additional movement, that being the western side of the wall?

A. I was. That was an area that John Hare had both highlighted to me when I spoke on the phone and also from myself reading his site report as an area to pay particular attention to and I did observe that.

15

Q. So am I right in saying that at that north-western section there had been 10 millimetres of movement in that and other cracks caused by the Boxing Day earthquake?

A. Correct, you're safe to assume that.

20 Q. But Mr Hare didn't recommend any securing work in relation to that north-western section did he?

A. He did not.

Q. So there was no securing work carried out there?

A. Not additional to the previously specified and completed Lewis Bradford works.

25

Q. If there was this additional width in the cracking was it right to say that the building had been returned to its pre-26 December state?

A. I personally didn't undertake any of the previous assessments to ensure that so it's hard for me to comment accurately on that really.

30 Q. I think it's just that you signed the, signed the document saying that where works had been carried out et cetera.

A. I was happy that both the, the works that John Hare had specified were to his, they had been completed to his specification and also from

viewing the Lewis Bradford remedial works I also believed that they were still carrying out their intended best performance to strengthen temporarily that section.

5 Q. So even though there was additional widening at that point you didn't consider that the structural integrity of that part of the building was materially affected I suppose is what you're saying?

A. Not to a critical level, no.

10 Q. Mr Hare has already addressed this to some extent but you may appreciate that for the lay person to see a crack, especially one that you can look right through and see daylight, that is of particular alarm and people may be wondering how it is that you could certify a building as having not suffered any material structural degradation in light of that. Can you explain why it is that a building can sustain that extra cracking but not be structurally –

15 A. I think just for reinforcing what John Hare had previously stated. The mechanism of the cracking there is limited to the bedding joints between the bricks themselves as opposed to through the, the brick units and thus they have the ability to move a reasonable distance apart or to crack without significantly reducing the capacity of the element.

20 Q. And you said in your statement there that there was an email where you said to Nick, "If the additional securing works had been completed the immediate threat to tenants of the building will have been removed." How did you calculate what the immediate threat to tenants actually was?

25 A. In terms of, can you elaborate in terms of calculate, what do you mean by that?

Q. Well I'm just inferring that when you said, "Immediate threat will have been removed," that you underwent some sort of methodology in arriving at that opinion and I'm just asking you what it was.

30 A. Okay there was no calculation per se. It was more the, that the damage we had identified post the December 26 event had been secured and shored to a level where the elements affected were reinstated to a capacity of at least what it was prior to that event and also other

elements such as the parapets which did present a hazard to any occupants of the building if they remained up, they were potentially unstable, that all of those elements were removed thus removing the threat that they posed to occupants of the building.

5 Q. So you weren't assessing any immediate threat against possible ground accelerations?

A. I don't quite follow how the works or the stuff I observed would have an effect on ground accelerations?

10 Q. Well my point is that the works observed would mean that the building has a strength, a capacity to bear a certain level of ground accelerations and would one not then need to compare that to the possible ground accelerations to determine what the threat was?

15 A. We were, as we've affirmed before, we were confident that with the securing works that were completed that the building would have a capacity to meet any imposed forces due to an event or ground acceleration similar to what had occurred on 26 December and how John Hare had previously stated it's hard to say without further analysis exactly what level it could sustain.

1650

20 Q. And would you agree in hindsight at least that really you should not have used the words "safe to occupy" in your communications with your client?

25 A. In hindsight following the, the tragic events of the 22nd of February I, I would agree that "safe" would not be the most appropriate word to, to use, yes.

CROSS-EXAMINATION: MR LAING AND MR WOODS – NIL

CROSS-EXAMINATION: MR FERRIER

30 Q. Mr Dare I want to take you back to your inspection. Perhaps we could bring up document WIT.DAR.0001.15. Do you see Mr Dare that that's a series of emails starting with one from you on the 7th of January at 1.41 pm to two gentlemen from Ganellen, at the bottom of the page?

A. Yes.

- Q. And you say that if the additional securing works had been completed the immediate threat to the tenants of the building will have been removed and it should be safe to occupy on Monday. Your conditional statement, "If the additional securing works have been completed," how does that stack up with your statement that you, in your site visit report, that you had been informed by Nick Jennings of Ganellen that this had been done?
- 5
- A. I believe this email was actually sent prior to me receiving the phone call from Nick Jennings confirming that the works had been completed.
- 10 Q. Okay and so then the next email up is, at 11.44 am from you to John Hare confirming that you'd just spoken to Nick Jennings and he says that all of the temporary securing works have been completed and you say, based on this, "I imagine the building should be fine to re-occupy come Monday morning." So is it the case that so far as you were concerned at that point the engineer's certificate could be issued immediately?
- 15
- A. It was. I was confident that the securing works that had been, we had specified to be completed had been completed in accordance with our recommendations and I was just trying to ensure that all required paperwork by Council was completed in accordance with their requirements.
- 20
- Q. Right but, but you didn't know what documents were required for that purpose did you?
- A. Not at that point.
- 25 Q. No so you sought advice from Mr Hare and he provides that in the next email up, timed at 3.25 on the 7th of January.
- A. That's correct.
- Q. So at roundabout half past three you had all you needed but the top email is your response to Mr Hare, "I'm out at the airport about to jump on the plane back to Queenstown so won't be able to get anything out this afternoon. Sorry." So you were saying to Mr Hare that you wouldn't be able to send the certificate out on Friday.
- 30
- A. That's correct.

Q. So the 7th is the Friday, 8th and 9th is the weekend. The 10th is the Monday. The certificate didn't issue on the 10th did it?

A. No.

Q. Okay. Is there any particular reason for that?

5 A. None that I can recall. It may have been due to other work loads. I am based out of the Queenstown office, had other commitments to meet there and was working on them at the same time as I was trying to meet the commitments in Christchurch.

Q. Sure and likewise the certificate didn't issue on Tuesday the 11th?

10 A. No.

Q. No but on, perhaps we could bring this up, WIT.HAR.0006, sorry, I'm reading you the wrong reference, WIT.DAR.0001.22. That's an email from you to the Christchurch City Council is it attaching a copy of your earthquake occupation certificate?

15 A. That's correct.

Q. Right and that's timed at 9.44 am on the Wednesday?

A. It is.

Q. Right and perhaps if we can then go to WIT.DAR.0001.25. That's the response from Ms Bronner at the Christchurch City Council confirming that, "The building is now safe for occupancy, any placards can be removed and business can resume. Please advise the owner." And that's timed at 2.37 pm isn't it?

20

A. It is.

Q. So same day service from the Christchurch City Council?

25 A. Correct.

Q. I appreciate Mr Dare that this involves a large amount of conjecture on your part but there's nothing is there theoretically to say that if you hadn't, if you had sent your certificate to the Council on the morning of the 10th that the confirmation that the placard could be removed would not be received later that day?

30

A. It would be dependent on the person at Council's workload for that day I imagine.

Q. Sure but at least theoretically.

A. Theoretically that could be possible.

RE-EXAMINATION: MR HANNAN – NIL

**QUESTIONS FROM JUSTICE COOPER AND COMMISSIONER FENWICK
– NIL**

5 WITNESS EXCUSED

MR LAING CALLS**STEPHEN JAMES McCARTHY (SWORN)**

Q. Your full name is Stephen James McCarthy? You have given evidence to the Royal Commission previously?

5 A. I have.

Q. Would you start reading your written brief of evidence at paragraph 6 please?

WITNESS READS BRIEF OF EVIDENCE FROM PARAGRAPH 6

10 A. "Events between 4 September 2010 earthquake and 22nd February 2011 earthquake. On 5 September 2010 a level 1 rapid assessment was carried out and the building received a green placard. The assessment form noted that there were cracks of, signs of cracking on the west wall arches and south wall columns and recommended that the owner assess the cracking. I understand that on 5 September 2010 a
15 level 1 rapid assessment was also carried out on The Press, on The Press building at 148 Gloucester Street. A Council heritage advisor, Neil Carrie, who was involved with this site has advised that the complex consisted of three buildings, 148 Gloucester Street, 32 Cathedral Square and The Press Hall. An aerial photo illustrates the
20 different buildings. Therefore it appears that the two level 1 rapid assessments carried out on 5 September 2010 would have related to two separate buildings. A level 2 rapid assessment was also carried out on The Press building, Cathedral Square on 5 September 2010 and the building retained its green placard. On 6 September 2010 a level 2
25 rapid assessment was carried out and a green placard remained. The assessment form noted that a crane was required to repair the turret and that access to one stairwell was prohibited until a masonry wall had been repaired. A building enquiry record states that a site visit to review the extent of the internal damage to the heritage building was arranged
30 by John Higgins, the Council's Resource Consents Manager, for 16 September 2010. Ms Askew, a Council planner at the time, Mr Carrie, the Council's Heritage Advisor, and Mr Doig, the building owner's property manager, attended the meeting. The Building Enquiry Record

refers to certain works which could be undertaken as maintenance and would not require a building or resource consent, for example replacing broken glass and window frames. The Building Enquiry Record also lists the works that had the potential to constitute alterations to the building and would likely require a building consent and resource consent. The Building Enquiry Record noted remedial stabilisation works that had been undertaken on the northern façade. I understand that Ms Askew and Mr Carrie attended the site on 16 September to consider the implications from a heritage perspective of the damage to, and required repairs for, the building. There was no intention to conduct the structural assessment of the building and no structural engineers were present. However, the Building Enquiry Record states, “The applicant confirmed that Lewis Bradford were currently putting together an engineering report that would be made available when completed. This report is being peer reviewed.” I understand that Lewis Bradford sent a letter to Ganellen Property Limited on 16 September 2010. The letter refers to an inspection on 6 September 2010 and states, “The ironworks to the turret were also instructed to be removed immediately...”. The letter also refers to a temporary structural steel securing which was instructed to be installed immediately at the north-western corner of the third floor. The Council files do not provide any further clarification as to whether the comments in the Building Enquiry Record and the Lewis Bradford letter relate to the matters noted on the Level 2 rapid assessment form, or whether the repairs referred to in the rapid assessment form were carried out. The Council files do not have any record of applications for building or resource consents made by the owner of the building between 4 September 2010 and 22 February 2011. I understand from Counsel Assisting the Royal Commission – Mr Zarifeh, that Harrison Grierson produced a report on 15 September 2010, Lewis Bradford produced a report in October 2010 and Holmes Consulting Group produced a report dated 22 December 2010. However, there is no record that the Council received any of these reports and there is no copy of any of the reports on the Council’s files.

On 26 December 2010 a Level 1 rapid assessment was carried out and the building received a red placard. The Council issued a section 124(1)(c) Building Act Notice dated 29 December 2010. I understand that the section 124(1)(c) Notice was affixed to the building. I attach a photograph which shows the Building Act Notice affixed to the building. A copy of the Notice along with a cover letter dated 29 December 2010 was posted to the building owner's property manager, Ganellen Property Limited.

EXAMINATION CONTINUES: MR LAING

10 Q. Could you go back to your Annexure D. In the middle of that photo there is a red placard. Is that the document you are referring to?

A. Yes it is.

WITNESS CONTINUES READING STATEMENT AT PARAGRAPH 19

15 The Building Act Notice stated that the building had been damaged, that there was structural damage and that it had "general brick cracking, including south façade. Neighbours parapet on east side – risk of falling on Press." The Building Act Notice contained a deadline of 31 January 2011 to carry out work on the building to remove the danger. The cover letter accompanying the Building Act Notice advised the building owner to contact the Council's Building Recovery Office to discuss the building assessment and the particulars in the Building Act Notice before undertaking any steps to remedy the danger and the letter recommended that the building owner contact their insurer. As a CPEng report would also have been required to certify that the danger had been removed, the Council's letter also recommended the building owner seek structural engineering advice from a qualified structural engineer on how to remove the danger.

20
25
30 On 12 January 2011, Ben Dare, a Project Engineer from Holmes Consulting Group, emailed the Building Recovery Office attaching a CPEng certification for the building. Mr Dare stated in his covering email attaching the CPEng certificate that the building was now secure and safe to re-occupy and that the existing red safety notice could be

removed. The Council relied on the certification from Holmes Consulting Group dated 12 January 2011 to conclude that the building was secure and safe to re-occupy following the Boxing Day aftershock. It was the engineer's responsibility to ensure that all matters relating to the structural integrity and safety of the building, including those stated in the Building Act Notice, had been addressed prior to the certification being provided. The file closure form indicated that the Building Act Notice was removed following receipt of this report. The Council's Building Recovery Office subsequently advised Holmes Consulting Group that, based on the engineer's report, the building was considered safe for occupancy. I understand from Counsel Assisting the Royal Commission – Mr Zarifeh, that Holmes Consulting Group produced a report dated 28 January 2011 outlining various repair work proposed for the building. However, there is no record that the Council received this report and there is no copy of the report on the Council's files. Following closure of the Council's Boxing Day earthquake file on 12 January 2011, I understand that during January and February the building owner did discuss with the Council additional repair and refurbishment work which was to be carried out on the building as a result of the September and Boxing Day earthquakes. I also understand that the building owner intended to apply for consent for these works as part of a wider, on-going refurbishment project. A draft application provided to the Council by the applicant sets out various works that had been completed for which retrospective resource consent was required, along with additional works planned for the building. The Council has been unable to locate any record of a final application being received.

Photographs were taken by Belinda Smith, *[sic]* the Council planner involved with the refurbishment project, at a site visit on 14 January 2011. The photographs are attached to an email dated 5 May 2010 *[sic]* from "Ken & Mel" to Melinda Smith. The photographs show some securing and strengthening work which had been undertaken at this date.

Cordons. Council records indicate that a cordon was present on 7 January 2011 but there is no record of when this cordon was installed. The Council's records indicate that the cordon had been removed by 4 February 2011.

5 Application Of Relevant Legislation And The Council's Earthquake Prone Policy. The building was not considered to be earthquake prone prior to the 4 September earthquake. This position is supported by the draft memorandum from Holmes Consulting Group to Matt Bonis (Planit R W Batty & Associates Limited) dated 3 February 2011.

10 **EXAMINATION CONTINUES: MR LAING**

Q. Can you pause there please. Can you have a look at a document WITHAR0006.130. You've seen that before?

A. Yes I have.

15 Q. Was that a document that you relied on in forming a view as to whether the building was an earthquake-prone building?

A. At this time it was, yes.

Q. At which time?

A. At the time I wrote this brief of evidence Sir.

1710

20 Q. Mr McCarthy you were aware that the LIM record which was obtained by the Fairfax group indicated the building was a possible earthquake prone building?

A. Yes.

25 Q. Can you tell the Commission why that would be in the Council's records?

A. There was no detailed engineering evaluation which suggested that the building was above the earthquake prone threshold but that's not to say that it wasn't, and so it was detailed as a possible earthquake prone building in our records.

30 **JUSTICE COOPER:**

Q. Can we just have a look at that document that's mentioned in the evidence, BUICAT032.0010.496.

MR LAING ADDRESSES JUSTICE COOPER:

It should be the same document Your Honour.

5 JUSTICE COOPER ADDRESSES MR LAING:

Unless I've missed something, I'm not sure why it's referred to as a draft in paragraph (overtalking 17:11:26).

MR LAING:

10 I was about to come onto that with my friend, if I can just proceed?

EXAMINATION CONTINUES: MR LAING

Q. Mr McCarthy, you refer to the memorandum as a draft, can you explain why you've done so please?

15 A. It was a communication to – with Mr Bonis, who is a planner preparing a resource consent and building consent application in respect of the future works and so there was the draft memorandum was shared with him. He shared it with us as a draft.

Q. And so the copy of the document that you had on the Council's file was watermarked as a draft. Is that correct?

20 A. Yes it was.

Q. But that went for the whole of the resource, the draft resource consent application I take it?

A. Yes.

25 Q. And it's only fairly recently that you've seen a version of that document which did not have the word draft on it. Is that correct?

A. That's correct.

Q. Thank you, you can now proceed to paragraph 29.

WITNESS CONTINUES READING OF BRIEF OF EVIDENCE

30 A. The draft memorandum states that prior to the 4 September 2010 earthquake, the building had a minimum capacity of 40 to 45 percent of full code load.

EXAMINATION CONTINUES: MR LAING

Q. Can I stop you there please, do you want to add some words after full code load?

A. Yes I do.

5 Q. If I can read the words that you wish to add, "for east-west actions and 50 percent of full code load for north-south actions."

A. Yes.

Q. And now could you recommence at, "and therefore ..."

WITNESS CONTINUES READING OF BRIEF OF EVIDENCE

10 A. And therefore the building was not earthquake prone as defined in the Building Act 2004 and regulations. After the 4 September 2010 and 26 December 2010 earthquakes, the strength of the building was likely to be less than 33 percent and the building could potentially have been considered earthquake prone. This was also reflected in the draft
15 memorandum of 3 February 2011.

EXAMINATION CONTINUES: MR LAING

Q. Now can I ask you to look again at WITHAR.006.130?

A. Yes.

20 Q. When you were preparing your evidence, did – or perhaps we could have the last paragraph highlighted, the one at the bottom.

A. Yes.

Q. And when you prepared your evidence, were you referring to that statement?

A. Yes I was.

25 Q. Now today you've heard the evidence from Mr Hare that those words did not reflect the strengthening work that had been carried out after the initial earthquake?

30 A. As I heard Mr Hare's explanation that interim securing works had restored the overall strength of the building to what it was prior to the September and Boxing Day earthquakes, and I believe that to be the case.

Thank you. Would you now continue at paragraph 31 please?

WITNESS CONTINUES READING OF BRIEF OF EVIDENCE

5 A. The Council did not contemplate any action under the earthquake prone policy. The Council had been in discussion with the owner for approximately three years about the owner's plans to attain, strengthen and re-use the Press building. The owner had almost completed the construction of a new office building to accommodate the occupants of the old Press building and allow work to be done on the old building when the aftershock of 22nd February 2011 occurred. Also under the 2010 policy the owner of the category C building would have had a maximum of 30 years to complete strengthening work unless the building consent application for significant alteration section 2.3.5 of the policy was received by the Council. As already mentioned there is no record of such a building consent application being received before 10 22 February 2011.

15 CROSS-EXAMINATION: MR ZARIFEH

Q. Just a few points, Mr McCarthy, at paragraph 28 you said the building was not considered to be earthquake prone prior to 4 September, what was that based on?

A. That was based on that draft report to Mr Bonis, that we received.

20 Q. And when did you receive that?

A. We received that on the 17th of February.

Q. 17th of February.

A. 2011.

Q. But you said that the building was not considered earthquake prone prior to 4 September, so you're talking about at the time aren't you?

25 A. At the time I'd prepared this brief of evidence.

Q. Okay.

A. But the Council record still reflected it as a possible earthquake prone building.

30 Q. Right, so as at 4 September the Council considered that it was likely earthquake prone, or possibly earthquake prone?

- A. A possible earthquake prone as opposed to likely, I think there's a – something of a distinction there.
- Q. All right, the Council inspections, the level 1 then level 2 in September, did not highlight the damage to the north wall that we've heard about did they?
- 5 A. I don't believe so, no.
- Q. And neither did the level 1 rapid assessment on the 26th, 'cause presumably that was just external?
- A. Yes.
- 10 Q. So apart from the owner obviously getting engineers in and inspecting it, the Council would not have been aware of that would they?
- A. We wouldn't have been, no.
- Q. And the meeting with the heritage people on the 16th of September, was that in relation to heritage issues?
- 15 A. Yes it was.
- Q. That building enquiry record that you referred to.
- A. Yes.
- Q. I presume there wasn't any follow-up from the Council as to whether this in-situ shear wall had been put in as they were being told on that day?
- 20 A. No there wasn't.
- Q. And so is that because it was a heritage rather than anyone from the BETT team or anyone else?
- A. The building had been green placarded and the owner had engaged the engineers and obviously the tenant had engaged engineers to review the building as we recommended in our notices so that was really the –
- 25 that was how events unfolded after that.
- Q. Right, but my question is was it a heritage team, that's why it didn't – follow it up and make sure –
- A. Yes it was, it was.
- 30 Q. – and make sure things were done?
- A. That's correct.
- Q. Right, it wasn't there for safety issues?
- A. No it wasn't.

Q. And just finally the City Council letter of 2 February, remember it came up with Mr Hare, it was sent as a follow-up if you like to the Building Act notice?

A. Yes.

5 Q. Was that an error, sent in error because the certificate had been sent in on the 12th of January hadn't it?

A. I think what happened was the team sent notices to – those letters to follow-up on all the 124 notices so I think it was probably –

Q. So it was just generated anyway?

10 A. Computer generated.

1720

CROSS-EXAMINATION: MR ELLIOTT

Q. Mr McCarthy, just one brief issue today.

A. Mhm.

15 Q. It's just around this issue of the dating on the engineer's certificate of 26 December and I'll just refer you to a document, ENG.CCC.0002F.27.

WITNESS REFERRED TO DOCUMENT

20 Q. And that's, that's from the report produced for the Royal Commission into the building safety evaluation process following 4 September earthquake by the Council.

A. Yes.

25 Q. And under the heading "Process to update a building's status", the bottom section if that can highlighted under "Post state of emergency". If we read those paragraphs it appears that following the state of emergency there was some discussion between the Canterbury Structural Group, the Council and DBH about –

A. Yes.

Q. – the certification form?

A. Yes.

30 Q. That would be used what to change a building's status from red to green?

A. Green, yellow, to green, yes.

Q. And that would include whether it was a red placard imposed under the state of emergency or a Building Act notice imposed following the state of emergency?

A. Yes, that's how it was applied.

5 Q. And that document refers to appendix 21 which is ENG.CCC.0002F.138, I'm sorry .36.

WITNESS REFERRED TO APPENDIX 21

Q. That's the first page appendix 21, the next page is 137.

A. Yes.

10 Q. And if we just highlight the second paragraph, "I've been engaged to provide advice". You may not be able to read it there but I'll just tell you as that's coming up that that document does seem to refer to interim securing and strengthening following the earthquake of 4 September 2010.

15 A. Yes.

Q. And then 4 September 2010 is referred to again in the document further on. So my question is just really on the face of it it does seem that by accepting a form which relates to 26 December 2010 the Council seems to have departed from the process which had been established around
20 what this form should say?

A. I think it was at the time it was developed of course we'd only had the, the one major earthquake and this building had been treated up to Christmas as, as a green building, a green placarded building. Ah, the – um, obviously suffered some damage after on Boxing Day and so I think
25 Holmes was saying this, that damage has been addressed and I think it also by implication recognised that the building was in the same structural state as it was prior to, to September. So while some words might not reflect that, that was certainly the implication we took.

Q. I see so by accepting the document based on 26 December the Council
30 was either assuming that there had been no damage up to that point or that if there had been damage it had been secured to bring it back to its 4 September, pre 4 September state?

A. Yes and I think that was, that has been reflected in what the engineers who prepared this notice ah, state, has stated to the Commission today.

Q. Indeed, but the Council's acceptance of the 26 December base certificate meant that it didn't have a certificate relating to the earlier period?

5

A. That's right.

CROSS-EXAMINATION: MR WOODS

Q. Just one point of minor clarification please Mr McCarthy, paragraphs 24 and 25 of your statement?

10

A. Yes.

Q. You say that you understand that during January and February the building owner had discussions with the Council and that the building owner intended to apply for consent for these works as part of a wider ongoing refurbishment project. Did you hear the evidence this morning given on behalf of Ganellen by Mr Doig?

15

A. From who?

Q. Mr Doig for Ganellen?

A. Yes I did, yes I did.

Q. And he mentioned in there that on the 18th of February Matt Bonis of Planit had met with Mel Smith at her house to discuss that refurbishment and the draft application for resource consent?

20

A. Yes.

Q. And you accept that occurred?

A. Absolutely.

25

Q. Thank you for that clarification.

CROSS-EXAMINATION: MR HANNAN

Q. Can we have document WIT.HAR.0006.130. That's the Holmes memorandum to Mr Bonis of Planit, R W Batty and Associates Limited. Now Mr McCarthy this is really just by way of clarification. You've referred to this as a draft memorandum?

30

WITNESS REFERRED TO MEMORANDUM

A. Yes.

Q. But I take it you're not suggesting that this draft watermark had been applied to it by Holmes Consulting?

A. We received it as a draft. I'm not certain who has marked it as draft.

5 Q. Well you'll accept that what you're now seeing on screen if we can go back to the larger non, non-expanded version please. What we're now seeing on screen which is what's come from Holmes doesn't have the word draft on it?

A. No it doesn't.

10 Q. So at some intermediate stage it would appear the word draft has been applied?

A. Yes.

Q. Possibly by Mr Bonis. If we can go please to document WIT.HAR.0006.53 and this is the Christchurch City Council's section 124 notice?

15 **WITNESS REFERRED TO SECTION 124 NOTICE**

20 Q. Again really by way of clarification on the point of what it was that the council was receiving a certificate for if you'll just under the heading "Particulars", that first paragraph under the heading "particulars" about one third of the way down the page? If we could have that enlarged please? So this says "In accordance with section 121 of the Building Act this building is dangerous as a result of an earthquake which occurred at the property on Saturday 4 September 2010 or as a result of aftershocks following that earthquake"?

A. Yes.

25 Q. So the Council's notice is saying it could be either?

A. Yes.

30 Q. And on that basis a certificate which said "We're referring you to the state of the building as at the Boxing Day earthquake" that having been the earthquake which had resulted in the red stickering of the building would not be appropriate, would it?

A. Sorry can you run that past me again (inaudible 17:27:33).

Q. I'll break it down a bit all I'm suggesting to you and it's really quite simple is that the Council's notice says, "We're putting the section 124

notice on as a result of an earthquake which happened on 4 September or as a result of aftershocks”?

A. Yes.

Q. Notice doesn't say which is the case?

5 A. No it doesn't.

Q. But we know that the notice was issued after the Boxing Day earthquake?

A. Yes.

10 Q. So it wouldn't be inappropriate to suggest that Council might have expected that what it would get would be a certificate addressing the state of the building as at the Boxing Day earthquake?

A. That's correct.

CROSS-EXAMINATION: MR FERRIER AND MR LAING – NIL

15 **QUESTIONS FROM COMMISSIONER FENWICH AND JUSTICE COOPER – NIL**

WITNESS EXCUSED

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

Q. Mr Smith you've prepared a report for the Commission on the failure of
The Press building at 32 Cathedral Square?

5 A. Correct.

Q. And you've, I think sat through the evidence today?

A. Correct.

Q. I just wonder whether you can give us a very brief description of the
building, in particular in relation to its seismic system?

10 A. Can we get a plan up of the building.

Q. Which one do you want up?

A. The floor plan of the third floor would be fine.

1730

Q. That's 220.

15 **WITNESS REFERRED TO FLOOR PLAN**

A. The significant issue of the building clearly was in the upper floor and
the building layout is, is probably less than ideal. There's a fairly
significant wall along the east wall, it steps at the light well and then
continues along at the south end of the east wall. There's the other wall
20 which runs laterally through the building, not quite through the middle of
the building. The middle's about there somewhere so it, it has this sort
of t-shaped configuration. In the transverse direction that wall becomes
quite significant and the long –

25 **JUSTICE COOPER:**

Q. Now can we just, could you just (inaudible 17:30:44).

A. Yes, the transverse wall. Sorry Sir. The transverse wall becomes quite
significant. In the longitudinal direction the east wall becomes quite
significant but in both directions there is a, a distance between the
30 centre rigidity of the building which co-incides with the location of those
walls. So if we go in the transverse direction the centre of rigidity is in
that position but –

Q. So that's in the vicinity –

A. Sorry that's in the transverse wall.

Q. See this diagram Mr Smith is littered with letters and numbers.

A. Yes.

5 Q. So it should be possible to, I follow what you're doing with the mouse but again we have this problem of, of reading this in the future.

A. Yes.

Q. So if you could use the labels on the –

A. Certainly.

Q. – drawing just to tell us where these things are.

10 A. It's the walls between spaces T16 and T15 but extended from the east to the west wall.

Q. Yes.

A. Primarily the centre of rigidity is close to that wall in the east-west direction.

15 Q. Yes.

A. But the centre of gravity of a building is much more centralised on the floor plate which would be somewhere almost central in T16, about where the cursor is. So there is a torsional loading goes into the building under the transverse direction. In the longitudinal direction its more pronounced because you have a predominant stiffness along the east wall and clearly the centre of, and there's a small return in the east wall at that point. Clearly the centre of rigidity is somewhere within the light well, fairly close to the east wall but the centre of gravity of the building is again somewhere central in T16. So there's quite an offset
20
25 between that centre of rigidity and the centre of gravity.

EXAMINATION CONTINUES: MR ZARIFEH

Q. And what is the relevance of that when you're looking at damage?

A. The significance of that is apart from meeting the transverse or longitudinal loads the building has to resist a torsional loading effect and that's when the stiffness of the walls around the outer perimeter become quite significant. That's going along the south wall, along the west wall
30 and the north wall because there's really no other internal loading.

There is a couple of small walls within the light well which do provide some small degree of resistance. So the wall at the west-end of the north wall becomes quite significant and I think this diagram unfairly suggests that's a significant wall.

5 Q. So you're saying –

A. And as we saw there was an opening in the wall, in space T24 approximately mid-length of that wall. Now I think the earthquake quite intelligently decided that that was a weak point and it concentrated the damage in that area.

10 Q. This is the September earthquake?

A. The September earthquake and I think that was a pretty good warning as to the importance of that wall to the structural integrity of the building.

Q. How important was the central wall, the dividing wall there?

A. It was important but less important I believe because it had a
15 reasonable length, there were a couple of openings in it but really the building had reasonably good translational and longitudinal strength other than this torsional effect and the wall at the west end of the north wall became quite important in resisting that torsional and as we saw in the failure the, the roof translated. It split I believe down through on the
20 central wall, that's the wall between T16 and T15 and it translated in a, really an easterly direction and split, the, the roof above the south-west corner of T17 ended up translating in a northerly direction whereas the north-east corner of the roof translated primarily easterly. Similarly the roof over the southern portion, spaces T3 to T11 inclusive through there,
25 that translated from what we can tell in an easterly direction when the diaphragm was split along the internal wall. So I guess the, that wall at the west end of the north wall was really quite important in terms of stabilising the building after the earthquake.

Q. Okay thank you. Well you touched on the structural failure in February.

30 A. Yes.

Q. I just wanted you to tell us a bit more about that and describe it and perhaps relate it to the damage that was seen and that we've hear about post September and Boxing Day?

A. I haven't seen any evidence of damage around that central wall between T15 and T16. I have tried to look through some of the damage reports but it didn't appear that there had been any damage or stress on the diaphragm at that location.

5 Q. But there is some, a reference to damage to that wall isn't there?

A. Yes there is around the doors, T, between T1 and T16. I haven't seen photographs of that but from what I understand it was not diagonally, diagonal cracking and therefore probably not that significant but I think that the fundamental failure I think initiated down that wall, the transverse wall, allowing the diaphragm at the west end of that wall to move in a northerly direction and it sort of rotated really about the, somewhere around about the eastern end of that transverse wall and it meant that the north-eastern corner moved out east and fell off over the edge of the building at that location. The, the roof also split along some of the beam lines in the central area over T16 pretty much.

10

Q. All right. There was mention –

A. I think there's a good photograph it might be worth putting up.

Q. In your reports?

A. Yes it's the aerial photograph of the building.

20

Q. Is that .37?

A. Yes it's, yes, correct.

Q. So BUI.CAT032.0012.37.

A. That, this is looking at the, slightly turned from that previous, that is the south-west corner of the building.

25

JUSTICE COOPER:

Q. Yes, where the turret is?

A. Where the turret is.

Q. Yes.

30

A. Sorry and the, this, the raised portion of the building –

Q. Yes.

A. – is I believe over the stairway close – and the north side of that I understand to be pretty much the line of the transverse wall and you can

5 see there's a sort of a lateral displacement in the, there's a split in the roofing north of that wall. It's not altogether easy but you see some debris has fallen over the east wall where the floor has ended up projecting beyond the wall and a similar effect on the east end of the southern portion where again the roof has broken up where it ended up beyond the east wall of the building.

MR ZARIFEH

Okay.

10 **JUSTICE COOPER:**

Q. That, I don't know what it is but it's, it's some sort of structure that was obviously on the roof at the north-western corner.

A. It's over the stairway.

Q. That appears to have moved itself to the east.

15 A. I think that's over the stairway Sir.

Q. Is it, the stairwell at that other end?

A. Yes.

Q. I recall seeing a photograph that would have had that, um closer to the, the western, the western wall than is shown.

20 A. Yes.

Q. But that would be consistent with the event that you've been describing?

A. Correct.

Q. (inaudible 17:39:55)

25 A. (inaudible 17:39:55) about that point at the, it's the south-west corner of the light well almost.

1740

Q. Yes. Perhaps if we could just have a look at CAT0320004.4. The top photograph there if that could be enlarged. Do you see that darker shaded area at the north-western corner there?

30 A. Yes. I think that structure is that area, the lighter shaded area which you can -

Q. I see.

A. I'm not sure what the dark colour is to be honest, but I think that the stairway I think was in that area of the building.

Q. I see, thank you.

EXAMINATION CONTINUES: MR ZARIFEH

5 Q. So Mr Smith, have we dealt with the structural failure sufficiently?

A. I believe so.

10 Q. All right. Now you raised in your report a number of issues and you've heard evidence today of the damage that was observed following the September earthquake and then the various aftershocks and then including the Boxing Day aftershock, and in particular damage to the north wall and the bracing that had been installed in September to that area, and also to the north and south walls to the piers, and the strapping. In relation to that north wall can you tell us in terms of the eventual structural failure of the building and the roof in particular, the relevance of that shear wall to the north and the damage to it?

15 A. I think that wall was a very significant part of the torsional resistance to the building. There were other – in fact other portions of the building contributed but that was probably the most significant. Unfortunately we don't really know what happened to that when it failed. I haven't seen
20 any evidence to demonstrate the mode of failure of that wall. I think some of the lessons that I reflect on coming out of it are that I think the green sticker level 1 rapid assessment at the start highlights the danger of trying to assess these buildings from a visual walk around it, especially when it's a four storey building. I do think we've got to think
25 more carefully about giving a building a green sticker when in fact there was some reasonably significant damage at the upper level of the building.

Q. Well in fact even the level 2 didn't highlight it, did it? The Council level 2?

30 A. Although there was action taken wasn't it, I believe.

Q. No, no, but I'm just talking about you're saying the level 1 wouldn't have highlighted it, the level 2 didn't either did it?

A. Well you'd hope that level 2 would highlight it, definitely.

Q. Sorry, carry on.

5 A. So, I think also if – there's almost a suggestion in Liz Bradford's comments that they put in place something which they saw as reasonably temporary in the securing of the wall, but it almost infers that they'd like to see something further done and I think we need to be careful to make sure when we give a building a green sticker that we are totally happy this could stay on for some time. I think there's a bit more robustness maybe in that process. In the end this building it wouldn't
10 have made a lot of difference but I think in a lesser earthquake it could have been much more significant.

Q. Right, and you say not made much difference or any difference because of your comment about the walls failing –

15 A. Because they were significant to this earthquake, yes, but I think also that the – when designing that strengthening work it is appropriate that the engineers look more closely at the building and the likely load that would come onto that wall. I think we probably need guidance as an industry as to the level of aftershock that we can expect, otherwise the engineers are left making that decision on their own. I don't think that's
20 necessarily the best answer.

Q. So are you talking about a calculation or an attempt to calculate the load?

25 A. Yes I think if this – this is a fairly important element in the building at the upper level. I think it should be subject to some analysis to be sure that it provides a level of strength that is appropriate.

Q. And are you talking about something more than... I think Mr Wilson talked about it an assessment made and the back of the envelope calculation.

A. Yes I think so, yes.

30 Q. So are you talking about a strength assessment?

A. Correct. I think that the damage to that wall indicated that the building was being stressed at that location. I think some assessment of an

appropriate strength level in the future would be a much preferred option.

5 Q. And you suggest in your report as you have in relation to other buildings, that after a significant earthquake the controlling authorities should establish a minimum strength criteria and require an engineering assessment establishing that the building achieves that. If that had happened here, would that have performed the task that you're talking about in terms of damage post September?

10 A. It would. I suspect it would have made no difference to the end result, but had the building been subjected to a series of lesser aftershocks, it could have made the difference between the building withstanding that or not withstanding it.

Q. Why do you say it wouldn't have made any difference?

15 A. Because I think the severity of shaking in February was such that even if it had been designed, or an element had been designed there for a nominated load would never have anticipated the severity of shaking that occurred.

Q. What about the vertical acceleration in terms of this building's collapse?

20 A. I think the issue of vertical acceleration is an important one. It appears that the upper floors in particular of buildings, unreinforced masonry buildings, it's – almost university suffered from I believe the effects of vertical acceleration. I think in future we are going to have to do something to provide resistance against the detrimental effects of that vertical acceleration. They are low period buildings, they can expect to have vertical acceleration applying at the time of reasonably strong lateral shaking and it is an area we need to attend.

25 Q. Just finally, in relation to the failure of the roof. There's been reference I think by Mr Hare post Boxing Day of some evidence of pounding from the adjacent building?

30 A. Correct.

Q. Were you able to – are you able to comment on whether you saw any of that in photographic evidence?

A. We saw some evidence – I saw some evidence of damage to an adjoining building which could easily be explained by pounding. We didn't have a chance of seeing it close up to confirm that, but certainly the roof would be very vulnerable to pounding. If the building to the east had impacted, it could well have been a contributing factor.

5

Q. And just explain to the lay person how that might have happened, or why?

A. It's – basically buildings if they can respond to their natural period and flex to resist the earthquake, they have a reasonable chance of doing so. If they have an impact from the adjoining building which is trying to take the space that they want, during the earthquake, that impact force can be quite detrimental. There's a lot of energy which actually transfers from one building to the other and is very detrimental to unreinforced masonry.

10

15 **CROSS-EXAMINATION: MR ELLIOTT - NIL**

1750

CROSS-EXAMINATION: MR LAING

Q. Mr Smith when you are talking about minimum strength criteria following an earthquake event, are you talking about a percentage of code or some other sort of test?

20

A. One would assume that it was given as a percentage of code.

Q. Yes. Do you have any suggestions about what that might be?

A. I think it will differ according to the event. I think that there needs to be some seismologist advice, geotechnical advice, engineering advice to come up with what would be a sensible level of, of strength for occupancy if we are to prevent, that won't totally prevent what happened in this case because February was so severe but it does, the lessons from what we, has, have happened on the various buildings I believe suggest we should have a minimum strength before we start occupying these high risk buildings immediately following an earthquake.

25

30

Q. Do I take it then that you are suggesting something quite separate from earthquake strengthening under a territorial authority's earthquake policy?

A. Yes.

5 Q. Earthquake prone policy?

A. Yes although I think some of the triggers like the 33% may be a figure that's used because it helps the local authority especially as buildings get strengthened you'll have a 33% and a 67% type trigger where buildings will have met those levels and they may well be very useful figures in sorting buildings that need to be considered or not considered.

10

Q. Just so I understand your evidence completely I take it you are suggesting legislative reform to prevent occupancy of unreinforced masonry buildings following an earthquake event is that correct?

A. Sorry I didn't quite catch that?

15 Q. Are you referring to legislative reform?

A. Yes.

Q. Statutory reform to prevent occupancy until a building's upgraded to a certain minimum level?

20

A. I think possibly it would be better within Civil Defence personally, um, or within the administration that is in control of events following an earthquake. To legislate it you probably won't get it right. I think each earthquake will be different, whether it's on a major fault in the North Island or whether it's one of these fairly brittle faults around Christchurch would dictate a slightly different response I suggest.

25 Q. So you're not suggesting a one stop fits all approach?

A. No, it needs to be flexible I believe and the best information available at the time.

CROSS-EXAMINATION: MR WOODS

Q. If we could turn to page 8 of your report please?

30 **WITNESS REFERRED TO PAGE 8 OF REPORT**

Q. If that document can be brought up it's, thank you, the third to last paragraph. You deal there with the, under the heading "Delay in

installation of the level 3 shear wall” and the third the last paragraph you say there's no records that indicate why the construction of the shear wall was not constructed prior to the 22 February earthquake?

A. Correct.

5 Q. Did you hear the evidence from Mr Wilson today?

A. Correct. I did.

Q. Firstly he, he said that the intent of the bracing on that part of the building was to reinstate the integrity of the wall elements and that he considered it had performed in line with his expectations?

10 A. Correct.

Q. Yes. And do you agree that the bracing had reinstated the structural integrity of that wall element?

A. I think there was sufficient engineers who viewed it to have some confidence that may have happened.

15 Q. And do you agree that with his evidence that a permanent solution would have been a much more significant process than the two to three weeks he had initially proposed?

A. I would agree a permanent solution would be. I would have hoped that if anyone had concerns as to the adequacy of the temporary securing something further would have been done of a temporary nature.

20 Q. But there's, you haven't seen any evidence that anyone had any concerns have you?

A. No.

Q. No. Similarly the evidence from Mr Hare. His evidence was that it concluded that that work was doing what it was intended to do and you agree with that?

25 A. I understood (inaudible 17:54:46).

Q. And he also said that the permanent solution would need to be part of an integrated design for the whole building and you just couldn't put a wall in. You'd agree with that?

30 A. Clearly any permanent solution needs to be integrated into an overall solution for the building.

Q. And the, as Mr Wilson said the two to three weeks was an ambitious timeframe?

A. I believe so.

CROSS-EXAMINATION: MR HANNAN AND MR FERRIER – NIL

**5 QUESTIONS FROM COMMISSION FENWICK AND JUSTICE COOPER -
NIL**

WITNESS EXCUSED

JUSTICE COOPER:

That concludes our hearing into The Press building and our reflections on
10 what we've heard will be contained in our final report which is issued later in
the year. We will adjourn now until 9.30 tomorrow morning.

COMMISSION ADJOURNS: 5.56 PM