

A. A crack appeared along the south wall of level 1. I have marked its approximate position as 1 on the plan for level 1 A. This crack ran vertically from the ceiling nearly to the floor and was about two metres in length.

5 Q. Just pause there and we'll get A brought up again.

WITNESS REFERRED TO A

Q. So 1 is?

A. Is the mouse there, that's number 1.

Q. So on the south side?

10 A. Yes.

Q. And can you be any more specific about where it was?

A. It was on the, um, in the room they call the master control room. It was on the, um, in the plaster on the what do you call that wall the?

Q. Southern wall?

15 A. Yeah southern, yeah the wall that took the strength, you know the?

Q. Shear wall?

A. The shear wall by the fire escape yeah.

Q. So it was a crack in that wall or in the plaster that covered that wall?

A. Ah, it was in the plaster but, no, it was also on the outside and I think I
20 mentioned further on, do you want to wait till then or do you want me to say now?

Q. No I just wanted you to describe what you saw in relation to this paragraph, so you were looking at the inside?

A. Yes.

25 Q. And it was a crack in the plaster that the lining of the southern wall?

A. Yes, B, what you couldn't tell is how deep it actually was.

Q. Carry on please, paragraph 20?

A. Sometime after the 4 September earthquake cracks appeared along the northern wall in the carpark on level 1. These were along the join where
30 the concrete blocks met the ceiling. They were approximately two metres in length. I am not sure what caused the cracks but they may have been a result of aftershocks. I have marked their approximate position as 2 on plan A. The cracks appeared to get worse over time.

Q. Again on A you've got two marked up north near the north-west corner?

A. Yep.

Q. That's the block wall –

A. Yeah.

Q. – that formed that north wall.

5 A. North wall yes.

Q. Thank you, 21?

A. I did not notice any other damage. An inspection of the building was carried out after the 4 September earthquake. Reference to this is made in an email sent out to all staff on the 9th of September from
10 Murray Wood, the managing director. This is attached and marked E.

1624

Q. We'll get that brought up and I'll get you to read it. Get the body of it highlighted.

A. Okay. The email included the following message, "We've just had an
15 internal inspection of the building from three engineers and they have found that this building is in good condition and is deemed habitable." That was on the 7th of September.

Q. And it went on to say the only damage they could find was surface damage and has no effect on the stability of the structure. Correct?

20 A. Yes.

JUSTICE COOPER:

Q. He took that on as no, is that the way you received it, he's written on effect.

25 A. Yeah.

Q. But you took that as no effect did you?

A. Yes.

EXAMINATION CONTINUES: MR ZARIFEH

Q. "And there is advice in the media that there will be more aftershocks so
30 we need to be mindful that the situation may change at any time but on the recommendations of the experts from the agencies involved, business as usual at CTV." Correct.

A. That's correct.

Q. So as you said that was from the manager, Murray Wood, on the 9th of September?

A. Ah –

Q. Were you aware of that inspection that he was referring to?

5 A. I never saw the people themselves, no. But I was involved with a lot of other things at that time so.

Q. We're going to hear evidence from three building inspectors or similar positions from the Council who inspected the CTV building on the 7th of September.

10 A. Yeah.

Q. Were you aware of that inspection at the time?

A. No.

Q. Thank you, paragraph 23.

A. Sometime after this initial inspection the building was inspected again. I
15 cannot remember exactly when this inspection took place but it was
sometime late in September. I think it was an inspection arranged by
the building manager because an insurance man turned up later in the
day to take measurements and notes. I walked around with the
engineer, David Coatsworth, and showed him the cracks we had found.
20 He was especially interested in the crack along the south wall of level 1,
marked "1" on the plan A.

Q. That was the one on the south wall, to the exterior of the south wall?

A. Yes, yeah. He came in the following day to inspect inside the ceiling
cavity to see how far the crack ran. He told me that it did not run as far
25 as the internal beams. I took this to mean that it was not structural. I
remember that he took a number of photographs as he went around.

Q. Right, and just in relation to that crack you said you were going to add something to that.

A. Oh, just that he had a concern about the crack and his concern was
30 whether we would have to take the plaster off to see how far it had
gone.

Q. Right, and he discussed that with you?

A. That was one of the options and he seemed a bit happier when he'd got
up in the roof and seen it hadn't gone any further (inaudible 16:27:46).

Q. Right, so you mentioned him coming back the following day to do that.

A. I think, I'm sure he is, the following day it was, he came back the second time anyway.

Q. And were you present with him the second time?

5 A. Yes, mmm.

Q. And that's when he told you about it not going as far as the internal beam?

A. Yes, mmm.

10 Q. You mentioned that that same crack, that there was a corresponding crack on the outside?

A. Yes, yeah.

Q. Just tell us about that, what did you see?

15 A. There was a crack in the plaster again on the outside wall and again the same issue is that you could see in that how far it went without taking the plaster off, it was an unknown quantity.

Q. And when you say plaster, was there a coating on top of the concrete?

A. Yeah.

Q. So it was the plaster type coating on top of the exterior concrete?

A. Yeah.

20 Q. How far up could you see this crack extending?

A. Inside?

Q. Outside.

A. Oh, I don't know really, probably round about the same as the inside really, it was – be a metre or a couple of metres probably.

25 Q. Just I want to ask you a bit more about that inspection that day. How long do you think you were involved with Mr Coatsworth?

A. Probably an hour or so. He was there longer than that but I was called away to do other things at various times and I went and – and more just to make sure he was seeing all the things that we'd seen, that was the main – yeah.

30

Q. And had staff, we're going to hear that this visit was the 29th of September. Does that –

A. Yes, be roundabout that time, yes.

Q. Had staff spoken to you between the 4th of September and the 29th about concerns they had about observed damage?

A. Everyone was concerned, yeah. I think we all were in the sense that we'd never been through an earthquake like that before, so.

5 Q. Right, had you had any concerns expressed to you by staff about movement of the building in aftershocks?

A. A lot of the staff were, I wouldn't say terrified but some of the women were quite, yeah, were terrified's probably too strong a word but reaching that point where they would run when there was say around a
10 four and a half, five aftershock, you know.

Q. And did any of them express any concerns to you about the building moving more after the September earthquake?

A. Ah, yes with vehicles going past, I mention that a bit further on but yes.

15 Q. Did you pass any of those concerns on to Mr Coatsworth when he – when you went with him in that inspection?

A. I can't remember that part of it.

Q. Well you were showing him the damage that had been observed by yourself and others.

A. Yes.

20 Q. You can't recall if you spoke to him any further about concerns?

A. No I can only remember walking around and – we met him actually in the lift well at one point, where there was a lot of cracking on the walls there too, but looked at surface stuff as well in there and the stairwell you know by the lift.

25 Q. And you didn't accompany him on the other floors, say the third or fourth floors or top floors?

A. No, only the floors that concerned us.

Q. Can I get you to carry on please. I think you were on 24?

30 A. We all, but mainly senior staff, talked about the damage we saw, especially when we were in areas where the damage was clearly visible. The room in the southwest corner of level 2 was one of these areas; the cracks marked as one and 13 were common topics of conversation in B. We were all quite concerned about being able to see outside through the gaps in the wall.

Q. This is the west wall?

A. Yes. That's right. I did not notice movement from people walking around the floor. However, I thought that the building moved more easily whenever trucks went past. It is hard to compare this movement with what it was like before September the 4th, because we had a lot more trucks going past as a result of demolitions that were going round about, going round the place. They began to demolish the building next to the CTV building in about October 2010. The building had been used as a car park. It was approximately eight metres in height. I do not know why they were demolishing it. They used excavators, large trucks and jack hammers. I think sometime early in the demolition a ball and chain swinging from a crane was used to knock the walls down. The CTV building was quite sensitive and would shudder and shake a lot as a result of the digging and falling masonry next door. This caused a lot of anxiety among the staff. I was told that the building was designed to move between the lift shaft and the opposite part on the south wall. I think I was told this by David Coatsworth, during his inspection of the building after the 4 September earthquake. I repeated this message to CTV staff. We all assumed that this was why the building moved with the demolition next door.

Q. Do you recall discussing the demolition with Mr Coatsworth or not?

A. Not so much the demolition but we did discuss why, how the building reacted in the earthquake and that – he was saying that's why the shear wall and the lift, how it was designed.

Q. Right, and obviously in that conversation you're talking about the building moving and the earthquakes or aftershocks.

1634

A. Yes, mmm.

Q. You don't recall telling him of your observations?

A. Not really. I can't remember that. The only other thing I gave him was the floor plans. We had floor plans of our level 1 and level 2.

Q. And they were architectural plans weren't they, not structural?

A. Yeah, they were only architectural layout plans of the, yep.

Q. And when did you give him those?

A. Would have been on that day he was there, yeah, or the day after, mmm.

Q. What I was going to say to you is, had there been any arrangement prior to that day for you to look for those plans or new plans?

5 A. No.

Q. So you didn't know he was coming till the day?

A. No we just, I think I might have volunteered the plans because they didn't have anything that they were actually looking at, you know.

10 Q. Right well I was going to ask you how did the subject of the plans come up?

A. I can't remember if it was him or the insurance bloke that asked me about them, someone did, it triggered it off and then everybody wanted a copy so.

15 Q. Right so you can't recall if it was Mr Coatsworth or, there was it Leonard Pagan, a quantity surveyor?

JUSTICE COOPER:

What name?

20 **MR ZARIFEH:**

Pagan. P-A-G-A-N. Pagan.

EXAMINATION CONTINUES: MR ZARIFEH

Q. You can't recall the names other than Mr Coatsworth?

A. Did he come, David Coatsworth, there's two there at one point, yeah.

25 Q. All right but you can't recall who raised it?

A. No, no.

Q. And was there any discussion about structural plans?

A. Not, not when I was there, no.

Q. John Drew was the building manager at that time.

30 A. That's right, yes.

Q. Was he present?

A. Not sure he was present in the first part but I know when we were in the stairwell discussion he was present then.

Q. You were in the stairwell discussing what?

A. Well the cracks. There was a crack on this wall here that I pointed out there but in the stairwell there was cracks showing around the well itself and one of the things, and the crack that I was pointing out there continued through but they seemed to think it was the way the floor was poured that caused that rather than being any actual damage itself.

5

Q. Who seemed to think that?

A. I think it was David Coatsworth at the time.

Q. When you were discussing the plans was Mr Drew there?

10 A. I think he may have been, yes.

Q. Now where were we, paragraph 29.

A. I was able to distinguish between the movement felt in the building by the demolition and from aftershock. Aftershocks tended to have a wave rolling motion whereas the demolition was a shuddering vibrating motion. However, I would not be surprised if some smaller aftershocks were masked by the movement already felt in the building during the demolition. I retired at the end of December, in December 2010. I did not visit the building again.

15

Q. Thank you. I just wanted to ask you, you mentioned Mr Drew was the building manager. When did he become the building manager?

20

A. I think probably early 2010/2009, somewhere round about there, mmm.

Q. And after he became the building manager did you have any reason to go up to the upper floors that weren't CTV?

A. No, before that I did at times, yes.

25

Q. I was wondering if you can help us out. You were probably sitting in Court when there was discussion about the photograph of the pillar on level 6.

A. Right.

Q. Did you ever go into that area?

30

A. Yes about, about a couple of years before I suppose. There was, for nearly a year there was a severe leak in the roof up around the lift well and before John Drew was manager, because we had naming rights to the building everyone seemed to come to us to get things fixed and we used to have to relay this down to Mr Russell Robertson in Alexandra

and try and get some decision to get things fixed but the water was a big problem up there and there was one severe storm which actually caused a lot of water on the floor and through all the ceiling and everything around there, yeah.

5 Q. When was that?

A. I'm trying to remember now.

Q. Roughly what year?

A. Must have been around 2007/2008, roundabout there. Then they had the whole roof redone and all the ceiling around the lift well and that
10 seemed to fix it but it took a, it took probably nearly a year to get some really good action on it.

Q. Do you recall the photograph of that area on the 6th floor which appears to show some staining on the tiles?

A. Yes.

15 Q. Do you know if that was there before the September 2010 earthquake?

A. Well unless they'd fixed it from the time of the rain, there was stain on all the tiles up there, there had been, mmm.

Q. Had you been up there, well did you go up there after the September earthquake to that level?

20 A. Yeah I did go up there but I can't remember if I looked at them.

Q. All right.

A. Sorry.

Q. But certainly before September –

A. Yes.

25 Q. – there was staining on some of the tiles on that level.

A. Mmm, yes.

CROSS-EXAMINATION: MR LAING – NIL

CROSS-EXAMINATION: MR RENNIE

Q. Mr Brown you have the two plans in front of you.

30 A. Yes, yep.

- Q. Talking first about level 1, we've learned that there was a stairwell which rose from close to the south-eastern corner and went up to level 2. Do you recall that?
- A. Correct, yes.
- 5 Q. That's not shown on your plan. Would it fall in the area just above the entrance point that you've shown?
- A. Yes. It began just at the corner of that diagonal.
- Q. Yes.
- A. On level 1 and it would have had an equal rise, I suppose you can say
10 half way between the floor is equal rise up and then an equal rise to the, the right.
- Q. Turn to the right and came out on level 2.
- A. 2, that's right.
- Q. We've been told that somewhere in the area of level 2 was the master
15 control room.
- A. Level 1.
- Q. Well we get into difficulties.
- A. I see.
- Q. The one above the ground, what I'm calling level 2, had the master
20 control room on it.
- A. No level 1 had the master control room. That was the ground floor.
- Q. On the ground floor.
- A. Yes.
- Q. So at the top of the stairs at the second level.
- 25 A. Yes.
- Q. Which is your second plan.
- A. Yes.
- Q. Is that – the stairs come out in the open area to the left of the fire escape area that you've drawn.
- 30 A. Yes I've, looking at that diagram I've probably missed a room off but only, I only say that because the person in that room had the door, fire escape door in there.
- Q. I'm not greatly concerned about –
- A. Sorry.

Q. – whether you've got the floors separations entirely accurate.

A. Yeah.

Q. Was there any heavy equipment in the vicinity of the top of the stairs?

5 A. No, no there was spare equipment in the room in the, it would be southeast corner but nothing of any major, nothing you'd call, you couldn't carry, put it like that.

Q. Do you recall giving any attention to floor loadings on level 2 in the time that you were with CTV?

A. No.

10 Q. Now you are described as a technical engineer. I take it your qualifications are in broadcasting communications.

A. Yeah, telecommunications, NZCE.

CROSS-EXAMINATION: MR WALLACE

15 Q. Mr Brown just dealing firstly with the email that you refer to at your paragraph 22.

A. Yes.

Q. We saw it up on screen before and it seemed to have the date of the 7th of September on it, 2010.

A. That's correct, yeah.

20 Q. Did you receive that at a private email address at home or was that a work email address that you received it that?

A. That particular one, when the building went down we lost everything. One of our staff used to work three days, three and a half days a week I think it was altogether and her emails were sent home from the CTV address and I was able, they were given to me when we got CTV going again and that was the email that all staff received on September 25 the 7th. I was able to re-collect that from the, from the system.

1644

30 Q. Yes, all right, so did you personally receive that email as well on the 7th of September?

A. That's of, no I was not at CTV then, oh sorry yes I was, yes I did sorry, yeah, I'm with you.

Q. And so did you receive it at work at the CTV building or at your private email.

A. Yeah, would have been at work.

5 Q. So on the 7th of September when you received that email CTV staff were already working in the building.

A. Um, yes some of us were yes. Not everybody was, if I can put it like that, yeah.

10 Q. Now you've shown us and produced to the Commission various photographs that you've taken. If I can just ask, firstly, about the photographs that you refer to at paragraph 16 which illustrated the work being done by the glaziers of cracked glass.

A. Yes.

Q. Can you recall the date, even if it's a day or two approximate, when the glaziers did that work?

15 A. It's probably getting near October I think. It took them, would have been there or near the end of September because it took the, there were a lot of people wanting glazing done at the time that's why tape was put on the window to try and (inaudible 16.45.44).

20 Q. Yes and, in fact, your paragraph indicates that this was a developing problem with the cracks in the glass, is that right, from after the earthquake until that glazing work was done some weeks after the earthquake these cracks were getting worse all the time, is that right?

A. Yep that's correct.

25 Q. So those photographs were taken something like late September/early October.

A. Yeah.

Q. So all of the photographs that you've taken were not taken on the same day then, you've produced?

30 A. No. The glazier ones were but the rest were, the reason I hadn't taken any of the other cracks at the time when we arrived in the building we had to put all our gear back where it was and not knowing what was broken we thought the best quickest way would be to take photographs of the mess so to speak and if there was anything broken we had photographs to show what had happened. We were just fortunate that

we got the camera back out of the building. It was broken but the SD card was still with it.

Q. So when did you retrieve that camera?

5 A. Would have been after the February quake the police, a lot of belongings came out of the building and I was able to get hold of that one there.

10 Q. So if we can just turn to your paragraph 10 where you first introduced photographs and that is a photograph that we've seen and you described as showing a crack running alongside a pillar on the western wall of Level 2. Can you tell us what date you took that photograph? If you need to see the photograph to refresh your memory just tell us and the photograph can be brought up.

15 A. Yes, no I took all those photographs of the mess and the wall were taken at the same time. The only ones that were different were the glass, those there. These were all taken at the same time as the –

Q. Same time as ?

A. As all the others of the mess. The only ones that have been different in timing were the, I'm pretty sure, were the glazier ones.

20 Q. And can you give us a date that you think you took these photographs then?

A. It's probably in that following week after the September 4. Possibly even the following two or three days after.

Q. So you say, without being precise as to exactly what day, it was within a week of the September 4 earthquake.

25 A. Yes, right, that's correct.

30 Q. Now just at the end of that paragraph 10 you mention that you understand from colleagues that you've since spoken to that this crack that was illustrated by photograph 1 slowly increased in size with each large aftershock. Are you referring then to colleagues telling you that after you left CTV in December 2010 it continued to grow in size.

A. Grow in size.

CROSS-EXAMINATION: MR SHAMY – NIL

QUESTIONS FROM COMMISSIONER FENWICK:

Q. Yes you've got a wealth of information there which is very interesting. I'm particularly interested in this crack you've marked 1 on A, the first
5 floor, and possibly might need the view of the second floor as well. Now that crack, was that plaster on the actual structural wall or was it alongside the structural wall?

A. It was actually on that structural wall.

Q. The other thing I'm very keen to find out is exactly where the stairs
10 came up because they obviously went through a hole in the floor that must have been cut out for them. So can you tell me roughly where that will have stopped. Presumably it will have stopped somewhere on the eastmost section of the southern wall, somewhere opposite that.

A. (inaudible 16.50.53) There's one, if you look on Plan B there's one
15 more room to go on the end where I've got the mouse there which I've missed off and the stairwell came up in there.

Q. Came up into that room?

A. No just come up beside that room. There was one more room just in
20 there and then there was the stairwell come up through here just beside the room here.

JUSTICE COOPER:

This might help if we have a look at the plan attached to Ms Spencer's
evidence which is WIT.SPENCER.0001.6 or perhaps, that's Level 2, did you
25 want Level 1?

COMMISSIONER FENWICK:

It doesn't matter, Level 2 is fine. That goes through the floor on Level 2.

JUSTICE COOPER:

And we were told by that witness that the floor came up to Level 2 in the
narrow rectangular space under the last of the rooms marked 'office'.

A. That's right.

CROSS-EXAMINATION: MR LAING	83
CROSS-EXAMINATION: MR RENNIE	84
RE-EXAMINATION: MR ZARIFEH – NIL	89
QUESTIONS FROM COMMISSIONER FENWICK – NIL	89
QUESTIONS FROM COMMISSIONER CARTER:	89
BRUCE MICHAEL CAMPBELL (SWORN)	91
CROSS-EXAMINATION: MR LAING – NIL	98
CROSS-EXAMINATION: MR RENNIE	98
QUESTIONS FROM COMMISSIONER FENWICK:	100
QUESTIONS FROM COMMISSIONER CARTER – NIL	101
QUESTIONS FROM JUSTICE COOPER – NIL	101
STEPHEN MALCOLM GILL (RE-SWORN)	102
CROSS-EXAMINATION: MR LAING	104
CROSS-EXAMINATION: MR RENNIE – NIL	105
QUESTIONS FROM THE COMMISSIONERS – NIL	105
QUESTIONS FROM JUSTICE COOPER - NIL	105
ARTHUR EDWARD TYNDALL (AFFIRMS)	106
CROSS-EXAMINATION: MESSRS LAING AND WALLACE – NIL	111
CROSS-EXAMINATION: MR ZARIFEH	111
QUESTIONS FROM COMMISSIONER FENWICK	114
QUESTIONS FROM COMMISSIONER CARTER – NIL	114
QUESTIONS FROM JUSTICE COOPER – NIL	114
ALAN EDGE (AFFIRMED)	115
CROSS-EXAMINATION: MR LAING	116
CROSS-EXAMINATION: MESSRS WALLACE AND ZARIFEH – NIL	116
QUESTIONS FROM THE COMMISSIONERS – NIL	116
QUESTIONS FROM JUSTICE COOPER – NIL	116
DAVID BAINBRIDGE (SWORN)	117
EXAMINATION: MR ZARIFEH	117
CROSS-EXAMINATION: MR LAING	126
CROSS-EXAMINATION: MESSRS RENNIE AND WALLACE – NIL	126
QUESTIONS FROM COMMISSIONER FENWICK:	126
QUESTIONS FROM COMMISSIONER CARTER:	126
QUESTIONS FROM JUSTICE COOPER:	128
BRIEF OF EVIDENCE OF MARIE-CLAIRE BREHAUT ADMITTED AS READ. BRIEF HAS BEEN DISTRIBUTED AND IS ON WEBSITE	129
MR ZARIFEH CALLS	130
PETER JAMES BROWN (SWORN)	130
CROSS-EXAMINATION: MR LAING – NIL	145
CROSS-EXAMINATION: MR RENNIE	145
CROSS-EXAMINATION: MR WALLACE	147
CROSS-EXAMINATION: MR SHAMY – NIL	149
QUESTIONS FROM COMMISSIONER FENWICK:	150
QUESTIONS FROM COMMISSIONER CARTER – NIL	151