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<p>1 Friday, 30 November 2018</p> <p>2 (10.08 am)</p> <p>3 MR SO: Good morning, Mr Chairman and Mr Professor. I do</p> <p>4 apologise.</p> <p>5 CHAIRMAN: That's all right.</p> <p>6 MR STEPHEN JOHN LUMB (on former affirmation)</p> <p>7 Cross-examination by MR KHAW</p> <p>8 MR KHAW: Good morning.</p> <p>9 A. Good morning.</p> <p>10 Q. I represent the government.</p> <p>11 Yesterday, in answer to Mr Pennicott's question, you</p> <p>12 told us your view was that couplers in the EWL slab and</p> <p>13 also those connecting the slabs to the diaphragm wall</p> <p>14 were non-ductile couplers. Do you remember that?</p> <p>15 A. I do, yes.</p> <p>16 Q. Do you still maintain this view today?</p> <p>17 A. I do, yes.</p> <p>18 Q. If I can just clarify this issue with you and then we</p> <p>19 move on to other topics. If we can take a look at the</p> <p>20 QSP, which I believe other counsel also referred you to</p> <p>21 yesterday. It's at bundle H9, page 4262.</p> <p>22 This is a letter from MTR, submitting the QSP to the</p> <p>23 government, and you can see from this letter,</p> <p>24 paragraph 1, it says the submission related to quality</p> <p>25 supervision plan, submission of the proposed ductility</p>	<p>1 couplers, ie ductility couplers, would need to be used;</p> <p>2 would you agree?</p> <p>3 A. So, I guess just to clarify, my opinion is based on,</p> <p>4 one, the QSP that I have seen, that was submitted from</p> <p>5 Leighton to MTR. I haven't seen what was submitted from</p> <p>6 MTR on to government, so I can't comment on that. And</p> <p>7 the other reason for formulating that opinion is based</p> <p>8 on what the Hong Kong Code of Practice for the</p> <p>9 structural use of concrete says in terms of the</p> <p>10 definition of "ductility", and the definition of</p> <p>11 "ductility" refers only, in my reading of the code, to</p> <p>12 columns and beams. There is no reference to ductility</p> <p>13 requirements in the code for slabs. So that's</p> <p>14 a technical viewpoint on what ductility means and to</p> <p>15 which elements of the structure it actually applies to.</p> <p>16 Q. Thank you.</p> <p>17 If we can just take you very briefly to two</p> <p>18 drawings, just to complete this point. If we can have</p> <p>19 a look at H2/440.</p> <p>20 These are certain notes attached to the drawings</p> <p>21 submitted by Atkins on behalf of MTR to the Buildings</p> <p>22 Department.</p> <p>23 440, if we can just blow up the part with the</p> <p>24 diagram in the middle on the right, under the heading,</p> <p>25 "Notes on diaphragm wall couplers", do you see,</p>
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<p>1 coupler for diaphragm wall reinforcement cage and slab</p> <p>2 construction at Hung Hom Station. Do you see that?</p> <p>3 A. Mm-hmm.</p> <p>4 Q. If we can just move to 4265, where we can see the actual</p> <p>5 QSP submitted, Mr Lumb, you would see that it is for</p> <p>6 installation of couplers, and also it specifies type II</p> <p>7 ductility coupler; do you see that?</p> <p>8 A. Yes.</p> <p>9 Q. Thank you. Just to clarify this with you. If we go to</p> <p>10 the material from BOSA -- well, maybe we can have a look</p> <p>11 at 4267 as well. You will see from the introduction to</p> <p>12 the quality supervision plan, the first paragraph, for</p> <p>13 the purpose of this document we will see "Type II</p> <p>14 (ductility coupler", do you see that, "use in any</p> <p>15 location)"?</p> <p>16 A. Yes.</p> <p>17 Q. If we can then have a look at 4056 of the same bundle.</p> <p>18 This is the material submission also provided by MTR,</p> <p>19 whereby MTR provided materials in relation to the</p> <p>20 proposed coupler.</p> <p>21 If we can go to 4058, we can see a clear distinction</p> <p>22 between type I non-ductility coupler and type II</p> <p>23 ductility coupler. So, in that case, it's quite clear</p> <p>24 to me that, according to the QSP, in relation to the</p> <p>25 construction of diaphragm wall and slabs, type II</p>	<p>1 "Couplers positioned within the zone shown below shall</p> <p>2 be classified as ductility couplers", and also we can</p> <p>3 see from the diagram there's "Ductility zones" and then</p> <p>4 2, in relation to "Ductility couplers shall comply with</p> <p>5 [the following conditions]"; do you see that?</p> <p>6 A. Yes.</p> <p>7 Q. Have you ever come across this kind of drawing?</p> <p>8 A. I've seen this drawing.</p> <p>9 Q. Maybe just as an additional example, if we can take</p> <p>10 a look at --</p> <p>11 A. Sorry, can I just comment on that drawing?</p> <p>12 Q. Yes, of course.</p> <p>13 A. Again, my opinion is that this is referring to the</p> <p>14 vertical couplers in the diaphragm wall. You will note</p> <p>15 there is no shading or hatching of the slab which</p> <p>16 indicates any element in the slab to have any ductility</p> <p>17 requirement, and if you look at the diagram beneath</p> <p>18 note 4, you will also note that it is referring to the</p> <p>19 vertical couplers in the diaphragm wall. There is no</p> <p>20 reference to any horizontal couplers into the slab.</p> <p>21 Q. I see. But you agree with me that the couplers referred</p> <p>22 to here are the couplers for construction of the</p> <p>23 diaphragm wall?</p> <p>24 A. The vertical couplers, yes, not the horizontal couplers.</p> <p>25 Q. Right.</p>

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<p>1 CHAIRMAN: Sorry, do we actually have a clear record 2 anywhere of what type of couplers were in fact 3 installed? Because that would seem to -- 4 A. I can comment -- 5 CHAIRMAN: -- settle the issue, rather than exploring. 6 A. Maybe I can help out on that? 7 CHAIRMAN: Yes, thank you. 8 A. I believe ductility couplers were used everywhere, in 9 ductile areas and non-ductile areas. But the fact that 10 you use a ductile coupler doesn't mean it doesn't apply 11 to a non-ductile zone. The requirements for ductility 12 couplers are more onerous, so I believe the project just 13 used -- they ordered purely ductile couplers for the 14 entire job. 15 CHAIRMAN: Thank you. 16 COMMISSIONER HANSFORD: Sorry, just so that I can understand 17 that -- so what you're saying is the actual piece of kit 18 is capable of operating with ductility requirements or 19 not, but actually the requirement for ductility, in your 20 understanding -- and you use this drawing as part of the 21 evidence -- is just for the vertical ones? 22 A. That is my understanding of the situation, yes, and 23 I believe supported by the Concrete Code as well. 24 COMMISSIONER HANSFORD: Thank you. 25 MR KHAW: If we can just explore a little bit further -- on</p>		<p>1 it's under this heading of "Proposed cut-off level" -- 2 yes, this one, this diagram, and you can blow it up 3 a little bit. Yes, the diagram in the middle. We can 4 see that those areas in rectangular shape, if we look at 5 the legend at the right, the black rectangle shape 6 matter refers to ductility coupler. 7 And if we go back to the diagram in the middle, we 8 can see various ductility couplers, and some are 9 vertically shown and some are horizontally shown, and 10 they have been connected at EWL slabs. 11 So, upon seeing this particular diagram, would you 12 still maintain your view that non-ductile couplers were 13 used for the construction of the platform slab, EWL 14 slab? 15 A. I haven't seen this diagram before. 16 Q. Right. 17 A. But this would show, for this drawing, that those 18 couplers are ductility couplers, in accordance with the 19 legend. 20 Q. Yes. 21 A. I guess my question would be, again, per code are they 22 ductility couplers. I think you need to read also the 23 Code of Practice. 24 Q. So notwithstanding what we have seen from the actual 25 QSP's requirements, notwithstanding what we have seen</p>	
<p>1 this particular page, if we scroll down to note 4: 2 "As-built position of couplers to slabs shall 3 [remain] minimum cover and shall be a maximum of 15mm 4 deeper into the slab than the theoretical level of the 5 connecting reinforcement." 6 Then we see ductility couplers referred to in the 7 diagram; do you see that? 8 A. Yes. That's defining the minimum cover to the slab 9 couplers, yes. 10 Q. So may I take it that the couplers used for the slabs 11 are ductility couplers? 12 A. I don't believe it says that. I think it's defining the 13 position of those couplers. The note is under "Notes on 14 diaphragm wall couplers", so that note defines the 15 setting out of those couplers. 16 COMMISSIONER HANSFORD: Is that diagram, as you understand 17 it, a section, or is that a plan? 18 A. The diagram beneath -- 19 COMMISSIONER HANSFORD: The diagram at the bottom. 20 A. That, to me, is a section through the diaphragm wall, 21 with the diaphragm wall running vertically. 22 COMMISSIONER HANSFORD: Right. Okay. Thank you. 23 MR KHAW: If we can just take a look at another drawing at 24 H4/725, maybe that will give us a clearer picture. 25 If we look at the diagram in the middle -- sorry,</p>	Page 6	<p>1 from the drawing, you still maintain your view that it's 2 the non-ductile couplers which were used for the 3 construction of the slabs? 4 A. As a structural engineer, my opinion, based on the Code 5 of Practice, is that non-ductility couplers are -- or 6 shall I say ductility couplers are not required in this 7 particular application. 8 CHAIRMAN: But they were in fact used, to the best of your 9 knowledge? 10 A. They were used. They were used across the job. 11 CHAIRMAN: Yes. 12 MR KHAW: Thank you. So, in that case, do I take it from 13 you, Mr Lumb, that you do not maintain your view which 14 was given yesterday that couplers in the EWL slab and 15 those connecting slabs to diaphragm wall were 16 non-ductile couplers only? 17 A. No, I maintain my opinion, as a structural engineer, 18 that ductility couplers are not required. I also 19 commented that, as a company, I believe that ductility 20 couplers were used generally, across the job. And 21 I think the reason behind that is you don't want to 22 procure some couplers which are ductile, some couplers 23 which are non-ductile, because clearly then there's 24 a huge risk that they get mixed or they end up in the 25 wrong place.</p>	Page 8

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<p>1 Q. But leaving aside your opinion as a structural engineer, 2 simply as a matter of fact, coming back to this 3 particular project, you agree that ductile couplers were 4 used? 5 A. This drawing shows ductile couplers. 6 Q. Thank you. 7 Now, we all know that you were asked to lead 8 an urgent review as a result of Mr Jason Poon's email 9 dated 6 January 2017. 10 A. Yes. 11 Q. And it's your evidence that Mr Anthony Zervaas asked you 12 to conduct that review? 13 A. It was Mr Paul Freeman together with Mr Zervaas, yes. 14 Q. Yes, thank you. 15 One matter I am somewhat interested to know is this. 16 In Leighton, is there any system or mechanism which 17 deals with complaints like this one, like the one lodged 18 by Mr Jason Poon? 19 A. This is the first time I've experienced this situation 20 in my career with Leighton. 21 Q. Right. So, in view of your experience, you have never 22 been asked to conduct any similar review like this one? 23 A. Not of this nature. I've been asked to conduct other 24 reviews of I guess a more technical nature, but not this 25 style.</p>	<p>1 Q. I would like to know if, during your investigation, 2 whether you actually went on to check the exact location 3 as shown on each of those photographs. Do you know? 4 A. The location, no, but the date is the only, I guess, 5 evidence as to where it might be. 6 Q. Yes. We can all see the date from the photograph. But 7 somebody was making a complaint that some workers were 8 doing things which we do not usually see on the site, so 9 photographs were shown to you. Did you find it 10 necessary to at least ascertain where was the location 11 as shown in any of these pictures? 12 A. I believe so, yes. 13 Q. But you did not? 14 A. No, I believe we -- my colleague did look at the 15 particular area or zone. 16 Q. No. Wait a minute. You were the investigator assigned. 17 I'm asking whether you actually, you yourself, made any 18 enquiry with anybody in Leighton as to, "Hey, where is 19 this location as shown in the picture?" Did you raise 20 that enquiry? 21 A. Me personally? 22 Q. Yes. 23 A. No, but I gave the direction to my investigator or the 24 guy who was helping me carry out the review. 25 CHAIRMAN: Both, perhaps? Did you personally do it or did</p>
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<p>1 Q. Not a review arising from an allegation regarding 2 malpractice, so to speak? 3 A. No. 4 Q. Thank you. So we can say that this review was a rather 5 special, ad hoc review for this particular occasion? 6 A. Correct. 7 Q. You remember yesterday China Tech's lawyer asked you why 8 you did not consider it necessary to interview Jason 9 Poon, and you gave us the answer: it was an internal 10 review, and you also told us that you -- quoting from 11 your words, you had read and digested Jason Poon's 12 email, so you knew what the allegation was about. Do 13 you remember that? 14 A. Yes. 15 Q. If we can take a look at the email forwarded to you: 16 C35/26683. This is the email from Jason Poon which was 17 forwarded to you, and we can see from this email that 18 there were two photographs attached, at 26685, 26686; do 19 you see that? 20 A. Yes. 21 Q. So I take it that when you received this email from 22 Jason Poon, which was forwarded to you by Mr Zervaas, 23 the two photographs were attached to the email that you 24 received; is that right? 25 A. Correct.</p>	<p>1 you give an instruction? 2 A. I didn't personally, but part of the review, based 3 around this date, September, was to look at the records 4 around that date, in terms of the inspection forms, the 5 RISC forms, the quality control checklist. 6 MR KHAW: Right. So, just to understand your answer 7 correctly -- so you yourself did not give any particular 8 instructions to anyone in Leighton as to where is the 9 location as shown in any of these pictures; am I right? 10 A. I asked my colleague -- clearly this was an event in 11 September -- to take a look at the records for 12 particularly this period, September period. 13 Q. Yes. Mr Lumb, I'm not talking about the record. We 14 will deal with the records later. I'm only interested 15 to know, when you saw this picture, did you raise 16 an enquiry with anyone in Leighton as to where was the 17 exact location as shown in any of these pictures? It's 18 as simple as that. 19 A. We looked at the concrete pour dates and the CJs, so 20 from that you can deduce which area it may be. 21 Q. So which area, according to your understanding? 22 A. Off the top of my head, I don't know. 23 Q. You don't know? 24 A. No. 25 Q. Did anyone tell you? Did anyone tell you what was the</p>

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<p>1 area?</p> <p>2 A. I can't recall.</p> <p>3 Q. Thank you.</p> <p>4 CHAIRMAN: Sorry, so there was no mention in the report,</p> <p>5 therefore, of the estimated location of these</p> <p>6 photographs?</p> <p>7 A. It's not mentioned in the report.</p> <p>8 MR KHAW: Thank you. Upon seeing these pictures, did you</p> <p>9 also check who are those workers, who were they working</p> <p>10 for; did you?</p> <p>11 A. No. Again, I'd like to point out that the report was</p> <p>12 carried out over a short period, it was two and a half</p> <p>13 days that we had to go from zero to an end product.</p> <p>14 Of course it's very easy to look back now and say, "We</p> <p>15 should have done this, could have done that, did you do</p> <p>16 this?" But the fact is we carried out the reports, to</p> <p>17 the best of our ability, within the period of time that</p> <p>18 we were given. We didn't have time to carry out</p> <p>19 a forensic investigation such as is being carried out in</p> <p>20 this Commission.</p> <p>21 CHAIRMAN: Could I ask, on that subject, why was it</p> <p>22 necessary that it be an urgent report?</p> <p>23 A. That was the period that we were given. I was tasked to</p> <p>24 go to the project, speak to the people we could, look at</p> <p>25 our systems, quality systems, our procedures, and have</p>	<p>1 have already been referred to ad nauseam. But if I may</p> <p>2 just go back to one point in relation to the QSP</p> <p>3 requirements. It's H9/4269.</p> <p>4 We have seen this many times, but if I may just ask</p> <p>5 you to confirm that during the investigation process,</p> <p>6 you were obviously aware of the requirement in relation</p> <p>7 to the level of supervision and inspection required for</p> <p>8 the coupler installation works; am I right?</p> <p>9 A. Not during the original review, but when requested by</p> <p>10 MTR to make reference to the statutory requirements,</p> <p>11 then we became aware of the requirements.</p> <p>12 Q. I see.</p> <p>13 I can put it this way. You were not aware of the</p> <p>14 requirement when you prepared your first report, but you</p> <p>15 were certainly aware of this requirement at the time</p> <p>16 when you prepared your final report, when you put in the</p> <p>17 statutory requirements?</p> <p>18 A. Yes.</p> <p>19 Q. So, at the time when you prepared your final report, you</p> <p>20 were aware of this full-time and continuous supervision.</p> <p>21 Do you, as head of engineering, does this requirement</p> <p>22 mean that when the activities for splicing assemblies</p> <p>23 on site were carried out, staff from Leighton would need</p> <p>24 to watch and supervise such activities closely?</p> <p>25 A. So, again, just to go back to what I said yesterday, at</p>
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<p>1 a report back to the project within one week of the</p> <p>2 initial request.</p> <p>3 CHAIRMAN: Okay. It's just that it may be suggested that</p> <p>4 an urgent report is normally needed so that you can act</p> <p>5 upon it to stop something that is ongoing, whereas this</p> <p>6 appears to have been, in large measure, historical, and</p> <p>7 so therefore perhaps the urgency is not required. I may</p> <p>8 be wrong there, and I appreciate you've also got</p> <p>9 pressures upon you all to get on with the bigger job at</p> <p>10 hand.</p> <p>11 A. I can't comment on the period, other than that was the</p> <p>12 period I was given by Mr Freeman and Mr Zervaas, who</p> <p>13 asked me to carry out the review.</p> <p>14 CHAIRMAN: Okay.</p> <p>15 MR KHAW: Thank you. Mr Lumb, just going back to my earlier</p> <p>16 question, I'm not talking about any forensic exercise.</p> <p>17 I'm not talking about any DNA test or anything like</p> <p>18 that. I'm just asking, I'm just interested to know,</p> <p>19 upon seeing these pictures, did you care to at least</p> <p>20 find out who those workers were?</p> <p>21 A. No.</p> <p>22 Q. Thank you.</p> <p>23 We have heard your exchange with Mr Pennicott</p> <p>24 regarding the QSP requirements, and I believe a lot of</p> <p>25 people in this room would find that the QSP requirements</p>	<p>1 the time of carrying out the review the QSP that we saw</p> <p>2 and which we attached to the report was for the</p> <p>3 diaphragm wall and barrettes. We didn't see or attach</p> <p>4 anything at the time that we saw was relevant to the</p> <p>5 slabs.</p> <p>6 So, in terms of the level of supervision you are</p> <p>7 requesting now, at the time I couldn't comment on that.</p> <p>8 They were non-ductility couplers, so it was a T1 -- it</p> <p>9 was a T1 requirement which was covered by our normal</p> <p>10 quality supervision requirements.</p> <p>11 Q. Yes. So, at the time when you compiled the final</p> <p>12 report, what you are saying is that even though at that</p> <p>13 time you were aware of these requirements under the QSP,</p> <p>14 but you were under the impression that these</p> <p>15 requirements only applied to diaphragm walls but not</p> <p>16 platform slabs?</p> <p>17 A. At the time, yes.</p> <p>18 Q. Do you still maintain this view now, after seeing --</p> <p>19 after having a chance to see all the relevant documents</p> <p>20 again?</p> <p>21 A. I maintain my view about ductility, yes.</p> <p>22 Q. What about the requirement that, insofar as level of</p> <p>23 supervision and inspection is concerned, the</p> <p>24 requirements apply to both diaphragm wall and platform</p> <p>25 slabs; would you agree now?</p>

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<p>1 A. I think it goes back to the question of are the couplers 2 ductility couplers or not in the slabs. We had the 3 discussion earlier about my opinion and you showed me 4 other documents. I also said refer back to the Code. 5 So ... 6 CHAIRMAN: Sorry, can you help me here -- I'm falling a bit 7 behind. My understanding is that we accept that 8 ductility couplers were in fact used universally. 9 A. Yes. 10 CHAIRMAN: And your investigation was into trimming, or 11 possible trimming, of couplers, and supervision thereof; 12 okay? 13 A. (Nodded head). 14 CHAIRMAN: Are you saying that even though they were all 15 ductility couplers, if those ductility couplers were 16 placed in a particular area, for example in the slabs, 17 then they were effectively doing the job of 18 non-ductility couplers? 19 A. Correct. 20 CHAIRMAN: And you could treat them as non-ductility 21 couplers? 22 A. Correct. 23 CHAIRMAN: Okay. That I understand. 24 COMMISSIONER HANSFORD: I think I still need a bit of help 25 with this, because it seems to me we've got something</p>	<p>1 requirement, but you are still using the standard 2 coupler that you're using everywhere, then the lesser 3 requirements, the lesser quality requirements, for 4 supervision are required; is that your view? 5 A. That's my view, yes. 6 CHAIRMAN: Just so that again I can put the stamp of 7 approval for myself on this, so I understand it, you're 8 saying it doesn't really matter what couplers are used, 9 the issue is the requirement for ductility, so 10 "requirement" is the core word? 11 A. Yes. 12 CHAIRMAN: So if you've got ductility in an area where you 13 don't need to have ductility couplers, but only ordinary 14 couplers, then you supervise and deal with all the 15 issues as if they are ordinary couplers? 16 A. Correct, and by the requirement I would refer back to 17 the Code of Practice as setting out the requirements. 18 CHAIRMAN: Okay. 19 MR KHAW: If we can leave aside the difference between 20 ductility couplers and non-ductility couplers for the 21 time being. Let's focus on the QSP first. 22 We all know that this QSP was attached to the 23 submission made by MTR to the government, and if I can 24 just bring you to have a look at one additional document 25 attached to that submission: 4264. It's a certificate</p>
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<p>1 called a ductility coupler, but we've also got something 2 about mechanical couplers for steel reinforcing bars 3 without ductility requirement. So we've got something 4 about ductility requirement, with ductility requirement, 5 or for ductility requirement, and without ductility 6 requirement. Is that different? Is it the requirement 7 for ductility that's the issue, or is it the actual 8 coupler itself that's capable of being -- of taking -- 9 of satisfying the ductility requirement? 10 Do you see the point I'm making? 11 A. Yes. I think the Buildings Department acceptance letter 12 in the appendices refers to couplers with ductility 13 requirement or couplers without ductility requirement, 14 and there are two separate appendices -- 15 COMMISSIONER HANSFORD: Yes. 16 A. -- written for both, and the difference, as you probably 17 know, one, couplers with ductility requirement requires 18 a QSP, and the level of supervision is T3. The couplers 19 without ductility requirement, there is no QSP, and the 20 level of supervision is by a T1 equivalent. 21 If you then refer back to the Hong Kong Code of 22 Practice for Concrete, that will define the zones where 23 there is a requirement for ductility. 24 COMMISSIONER HANSFORD: So is your understanding, then, that 25 if you're in an area using couplers without ductility</p>	<p>1 of preparation of plans or documents, signed by 2 competent person of MTR. Then the submission title is 3 called, "Quality supervision plan submission of the 4 proposed ductility coupler for the diaphragm wall 5 reinforcement cage and slab construction at Hung Hom 6 Station". 7 What I am interested to know is that when you were 8 going through the QSP at the time of your investigation 9 process, did you actually check this document, ie the 10 purpose of the submission of the QSP? 11 A. This isn't the QSP that, as far as I recall, we made 12 reference to in the report. 13 Q. No, this is not the QSP. This is the document attached 14 to the submission made by MTR, and the submission 15 related to the QSP, but this is a certificate signed by 16 the competent person, setting out the submission title 17 here, which tells us that it is about both diaphragm 18 wall reinforcement and slab construction. 19 A. I haven't seen this. 20 Q. If we go back to the QSP on the next page, you just told 21 us that you were under the impression that the level of 22 inspection -- the requirements for level of inspection 23 and supervision set out in this QSP only applied to 24 diaphragm wall but not platform slabs. 25 A. Correct.</p>

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<p>1 Q. Can you tell us on what basis, in relation to the 2 contents of this document, would you be able to form 3 that particular view? 4 A. I think you need to or we need to refer back to the QSP 5 which is attached in the report that we submitted, the 6 one that we looked at yesterday. 7 Q. Yes. If we can go back to the QSP that we discussed 8 yesterday: C27/20441. This is a submission form 9 provided by MTR, and we can see that -- 10 A. Sorry, this is the submission from Leighton to MTR. 11 Q. Yes, you are right. This is provided by Leighton to 12 MTR, and the document title is "Quality supervision plan 13 for installation of couplers for diaphragm wall and 14 barrettes by BOSA -- second submission". 15 So this is the QSP that you just wanted to refer to? 16 A. This is what we were given during the review period. 17 Q. Yes. 18 Then if we can take a look at the contents of this 19 quality supervision plan, on the next page, "Quality 20 supervision plan on enhanced site supervision &amp; 21 independent audit checking by MTRC &amp; [Leighton] for 22 installation of couplers", again it is about type II 23 couplers, ie ductility couplers; do you see that? 24 A. Yes. 25 Q. Then if we move on, 20446, we can see the same</p>	<p>1 A. That wasn't provided to me at the time. This is the 2 reason that I attached this QSP into the report. We 3 attached the information that we were given. 4 Q. Right. So, when you were conducting the report, you 5 were all along under the apprehension that there were no 6 specific supervision or inspection requirements for the 7 construction of the slabs; is that what you mean? 8 A. When we were conducting the report, we based our view on 9 the QSP, ie this one, that we were provided, which was 10 specific to the diaphragm wall and barrettes. 11 Q. I see. If I can go back to the passage that I was just 12 referring you to, 20446, under (5), paragraph 1, 13 "Supervision and inspection by RC". You just told us 14 that this "RC" refers to the contractor for the splicing 15 works, not Leighton. 16 A. This was for the ... 17 Q. Are you sure? 18 A. My understanding is the registered contractor for the 19 diaphragm wall was Intrafor. 20 Q. But the registered contractor for the purpose of this 21 document is clearly Leighton, at 20444. 22 A. Again, my understanding, this document is for the 23 diaphragm wall and barrettes, and the registered 24 contractor was the registered specialist foundation 25 contractor, which was Intrafor.</p>
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<p>1 requirements regarding supervision of site works. The 2 first paragraph under (5): "Supervision and inspection 3 by RC [ie Leighton] on site -- installation works". 4 A. Sorry, RC for the diaphragm wall was not Leighton. 5 Q. Sorry? 6 A. The registered contractor for the diaphragm wall was 7 Intrafor, I believe. 8 Q. Right, yes, "by RC on site", and then there are three 9 requirements imposed; you can see that? 10 A. Yes. 11 Q. So again I'm just curious to know on what basis, even in 12 view of the contents of the two QSPs that we have 13 seen -- on what basis were you able to draw the 14 distinction -- 15 A. As I -- 16 Q. -- to the effect that the QSP only should apply to 17 diaphragm wall but not platform slabs? 18 A. So, at the time of review, this is the document which we 19 saw as the QSP. 20 Q. Yes. 21 A. And this document was for diaphragm wall and barrettes. 22 Q. Yes. 23 A. So, based on that, that was how I drew my conclusion. 24 Q. Yes, but we also have the QSP in relation to 25 specifically diaphragm walls and platform slabs.</p>	<p>1 CHAIRMAN: Sorry, again I'm falling behind; please forgive 2 me. I'm looking at this and it says: 3 "Quality control supervisors (RC) will be 4 responsible to carry out full-time and continuous 5 supervision of the splicing assemblies on site." 6 Now, as a layperson, I've been educated as to 7 splicing assemblies, which is, as I understand it, the 8 actual act of putting rebars into couplers, and as 9 a layperson I've listened to Intrafor, and they don't 10 seem to have been involved in doing anything like that. 11 What they did was they put couplers into the cages for 12 the diaphragm walls, and then, if those couplers were 13 correctly positioned and tied, and everybody signed off 14 on that, then everybody said "Yes", and it went into the 15 trench, and they didn't then have to go underground 16 later to actually inspect the reinforcing bars being put 17 into those couplers. 18 Now, I may be wrong there, because as I say I'm 19 falling behind and you can educate me as to where I'm 20 wrong. 21 A. No, sir, that's correct. It applies to the diaphragm 22 wall, the couplers on the vertical bars in the diaphragm 23 wall, which are installed in a trench. 24 CHAIRMAN: Yes. 25 A. Certainly Intrafor would not come back and had no</p>

Page 25	1 involvement in any further connection to any horizontal 2 couplers. Their responsibility was only for, if you 3 like, the elements cast into the wall and the splicing 4 assemblies for those elements cast into the wall, but no 5 further subsequent connections, you know, once the face 6 of the wall was exposed. 7 CHAIRMAN: So Intrafor would not have been responsible for 8 continuous supervision of the splicing assemblies 9 on site? 10 A. During the diaphragm wall construction and installation, 11 yes, they would be. 12 COMMISSIONER HANSFORD: Because -- and the reason you say 13 that, you're referring to the vertical couplers? 14 A. The vertical couplers, yes. 15 CHAIRMAN: Oh, okay, vertical couplers, of course, yes. 16 Sorry, I thought we were talking about -- because the 17 cause of your investigation was somewhat later than that 18 process. 19 A. Yes. I guess the point we were discussing was the 20 relevance of this QSP, which I'm saying is relevant to 21 the diaphragm wall element and the splicing assemblies 22 within the diaphragm wall. 23 MR KHAW: If we can go back to 20444. You can see at the 24 top "RC" is defined as registered contractor. Do you 25 agree that it refers to Leighton?	Page 27	1 the level 1 TCP supervision. So, based on that, that 2 was my understanding of the circumstances. 3 CHAIRMAN: Sorry, I'm still behind on this. 4 This document says, "RC -- registered contractor", 5 "Quality supervision plan"; that I get. Underneath, it 6 gives the name of BOSA Technology, but surely 7 "registered contractor" is defined, isn't it, somewhere, 8 like saying, "The registered contractor under this 9 document is ABC", or, if you want to be complicated, as 10 a lot of lawyers like to be in drawing up contracts 11 because they don't want anybody to understand what's 12 actually happening at first glance, "Please go to 13 schedule 17012"? 14 A. There is a formal document which is submitted to MTR and 15 to Buildings Department which defines who the registered 16 contractor is for different elements of the works. So 17 there will be a form that has been submitted which 18 clarifies that Intrafor would be the registered 19 contractor for the foundation and diaphragm wall works, 20 and subsequently a separate form that clarifies that 21 Leighton is the registered contractor for all subsequent 22 works. 23 COMMISSIONER HANSFORD: And are you aware whether that form 24 is in the bundles that have come to this Commission? 25 A. I have no idea.
Page 26	1 A. No. The registered contractor for the diaphragm wall 2 was Intrafor. I'm certain of that. 3 Q. All right. 4 So all along when you are reading this document, you 5 take "RC" as Intrafor, not Leighton; is that right? 6 A. For the diaphragm wall, yes. 7 Q. Thank you. 8 If I can just go back to one of my earlier 9 questions. That is, at the time when you were 10 conducting the investigation process, you were aware of 11 these two QSPs, and according to your understanding 12 there were no specific supervision or inspection 13 requirements for the coupler installation regarding the 14 construction of platform slabs; is that right? 15 A. Based on the QSP that we saw, correct. 16 Q. Right. During the investigation, did you raise any 17 query as to why there were requirements regarding 18 supervision and inspection for coupling works regarding 19 diaphragm walls, but there were absolutely requirements 20 for inspection or supervision for platform slabs? Did 21 you raise any query? 22 A. I think it comes back to a point we discussed earlier 23 about ductility v non-ductility. If you refer to the 24 Buildings Department letter of acceptance for couplers 25 without ductility requirement, the only requirement is	Page 28	1 COMMISSIONER HANSFORD: I thought you would say that, and 2 I'm half-looking around the room to see if anybody else 3 would like to draw my attention to that. 4 A. It's a statutory document so it should be very easily 5 available. 6 COMMISSIONER HANSFORD: Thank you. 7 MR KHAW: If I can go back to 20443. 8 CHAIRMAN: Sorry to interrupt, it just seems to me it's 9 quite a simple issue and we have a very fundamental 10 concern as to who was responsible for actually 11 conducting supervision. I'm a bit puzzled by that. 12 I would have thought that something like that would have 13 been abundantly clear because the simplest and easiest 14 of building contracts must surely state who's 15 responsible for what. 16 MR KHAW: I would have thought so, certainly. 17 MR PENNICOTT: Sir, can I on this specific point that we're 18 on at the moment -- it seems to me that the problem 19 we've got is where do you start? If your starting point 20 is Mr Lumb's starting point, that is that this QSP only 21 applies to the diaphragm wall and the barrettes, then 22 one can see why it is that Mr Lumb concludes that the 23 "RC" must mean Intrafor. 24 CHAIRMAN: Yes. 25 MR PENNICOTT: However, if the starting point is where the

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<p>1 government is, MTR is, and I have to say at the moment 2 the Commission's legal team is, that this QSP applies 3 not only to the diaphragm wall and the barrettes but 4 also to the installation of the rebar connecting into 5 the couplers for the purposes of constructing the slab, 6 then one puts a different definition on the "RC", 7 because in those circumstances it would undoubtedly be 8 Leighton. 9 CHAIRMAN: The point I'm trying to make is, as 10 a layperson -- and I emphasise that; I know I say it 11 a lot, but my witnesses are professionals, I know that 12 the advocates who are in this courtroom, many of them 13 have many years of experience in the building trade and 14 I don't -- but I express a certain consternation that, 15 as the Chairman of this Commission, we are now, after 16 all of the building has gone on, debating who actually 17 had responsibility for supervising a very important part 18 of this construction. 19 MR PENNICOTT: Yes. 20 CHAIRMAN: And I use the word "consternation" advisedly. 21 MR PENNICOTT: Yes, sir. Of course the other problem is 22 what actually happened. We know that when the diaphragm 23 walls, the cages -- and we are obviously focusing on the 24 cages at the moment, the reinforcement -- we know from 25 all the documents we've seen generated largely by</p>	<p>1 case. 2 CHAIRMAN: Yes. 3 MR PENNICOTT: We've got a number of statutory references 4 that I can take you to, but I don't know whether it's 5 going to help in the context of the current discussion. 6 CHAIRMAN: Then we will just get deeper and deeper. 7 MR PENNICOTT: We will just get into -- yes, right. It's 8 a question of what it really means in the context of 9 this particular document, and one can see, it just seems 10 to me, it depends what the starting point is. 11 MR KHAW: Just one more question on this point, and then 12 I will move on. 13 Mr Lumb, if we can take a look at this QSP for 14 diaphragm wall and barrettes, we see that, for example, 15 20443, under the "Content", there is "Assignment of 16 quality control supervisors personnel (from MTRC/RC)". 17 So you are saying that this "RC" should mean 18 Intrafor. So what Leighton did in this document was to 19 impose requirements for Intrafor and not itself; is that 20 right? 21 A. As registered contractor for the foundation works, 22 Intrafor have the statutory responsibilities to meet the 23 requirements of the Buildings Department acceptance 24 letter and any attached appendices or related documents 25 to that.</p>
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<p>1 Intrafor that the supervision was undoubtedly by MTRC, 2 Leighton and Intrafor, because all the cage-by-cage 3 documents that we've seen were signed by all of them. 4 So I have to say, at the moment, that our 5 understanding is -- certainly I understand where Mr Lumb 6 is coming from, because if you start with this idea or 7 the proposition that this only applies to the diaphragm 8 wall, one can see that it's quite simple to make the 9 conclusion that the "RC" means Intrafor. 10 CHAIRMAN: I'm not for one moment blaming Mr Lumb, I do 11 hasten to add. 12 MR PENNICOTT: No. But, sir, unfortunately, I think 13 probably Mr Lumb is right also in this sense, that if 14 one looks at the statutory definition of "RC" or 15 "registered contractor", it can mean RGC, registered 16 general contractor, such as Leighton, and it can also 17 mean registered specialist contractor, such as Intrafor. 18 So it can mean both, that is right. 19 I don't know whether we can find the statutory 20 provision but -- 21 CHAIRMAN: The point I make is a point I made a bit earlier. 22 MR PENNICOTT: Yes, sir. 23 CHAIRMAN: I would have thought that things like this are so 24 clearly defined that there can be no doubt. 25 COMMISSIONER HANSFORD: That would certainly normally be the</p>	<p>1 But we, as main contractor or as RGBC, we clearly 2 have to share the statutory requirements with our 3 sub-contractor, which was Intrafor. 4 Q. If your understanding of this document is correct, it 5 would mean that Leighton was preparing for a QSP which 6 imposed actually no requirements on Leighton itself? 7 A. Not preparing a QSP. A QSP was largely prepared by 8 BOSA, but there is a formal communication channel 9 between ourselves, as the main contractor, and MTRC, the 10 client. So, clearly, any correspondence between our 11 sub-contractors and the main contractor has to come 12 through us and is submitted through ourselves as the 13 main contractor. 14 Q. Right. So it means that when Leighton was submitting 15 this QSP to MTR, they were actually submitting this QSP 16 for and on behalf of Intrafor? 17 A. That's correct. 18 Q. Thank you. That's interesting. 19 If we can take a look at your report. If we can 20 take a look at the first report first: C27/20257. The 21 first item: 22 "The following conditions on mechanical couplers for 23 steel reinforcing bars for ductility requirement are 24 required". 25 Then it sets out various requirements in relation to</p>

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<p>1 the qualified site supervision, what should the 2 competent person do, et cetera. 3 Then if we can move to 20259, under item 3, 4 "A quality supervision plan of the competent person and 5 the RGBC/RSC is required to be submitted to this 6 department prior to the commencement of the mechanical 7 coupler works. The quality supervision plan should 8 include the following details." 9 Now, (b), we can see that your report says: 10 "Frequency of quality supervision, which should be 11 at least 20 per cent of the splicing assemblies by the 12 quality control supervisor of the competent person and 13 full-time continuous supervision by the quality control 14 coordinator of the RGBC/RSC of the mechanical couplers 15 works." 16 Do you see that? 17 A. Mmm. 18 Q. Now, in your report, you have never drawn any 19 distinction between the requirements imposed for the 20 construction of diaphragm wall on the one hand and on 21 the other hand the construction of platform slabs; would 22 you agree? 23 A. I think, if I recall, the reference to this table -- 24 maybe you can go to the section on statutory, maybe just 25 before this -- I think it speaks about this table in the</p>	<p>1 diaphragm walls; am I correct? 2 A. Yes, but remembering the view at the time was the slabs 3 were non-ductile so didn't impose the same conditions. 4 Q. In your report, if I can refer you to C27/20250, you 5 mentioned in paragraph 2: 6 "After forming the shear key ... it was advised that 7 a survey of the diaphragm wall couplers was undertaken, 8 and checks on the couplers carried out for number, 9 setting out orientation against the approved diaphragm 10 wall rebar shop drawings. No formal record of the 11 survey or coupler checks are in place recording this 12 process." 13 Do you see that? 14 A. Yes. 15 Q. When Mr Pennicott asked you yesterday whether you were 16 surprised when you discovered that there were no formal 17 records of coupler check, your answer was "not 18 necessarily"; do you remember that? 19 A. Yes. 20 Q. Then you went on to say "it would be nice to have"? 21 A. Yes. 22 Q. We are not concerned at all with whether it would be 23 nice to have it or not. Would you agree that keeping 24 proper records of inspection and supervision is key to 25 quality control; would you agree?</p>
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<p>1 context of the diaphragm wall or foundation element. If 2 you can scroll up. 3 So, if you go to section 9.1, two or three pages 4 before this, under item 3, the penultimate paragraph of 5 9.1 says: 6 "The approval letter for diaphragm wall ... is taken 7 as a reference for verification of document compliance." 8 So what you see there in that table was written 9 I think in the context of diaphragm wall. 10 Q. No, I'm sorry, if you rely on this particular page, 11 item 3, where you are referring to "BD letter", clearly 12 you were aware of the letter regarding track level and 13 also foundation and pile cap; right? 14 A. Yes. What I'm saying is that in the penultimate 15 paragraph, where we make reference to the table in 9.1 16 and 9.2, that is made in the context of the diaphragm 17 wall, not in the context of the slabs. 18 Q. Yes. But am I correct to say that in your report, you 19 never mentioned that there were no specific requirements 20 in relation to the coupling installations for platform 21 slabs? 22 A. We didn't discuss that. 23 Q. In fact, when you were compiling the report, you knew 24 full well of the specific requirements in relation to 25 coupling installation for both platform slabs and</p>	<p>1 A. Yes, correct. 2 Q. Would you agree that the absence of any formal record of 3 survey, as you put in your report, amounts to 4 a non-compliance insofar as record-keeping is concerned? 5 A. I don't believe so. I think, as Mr Brewster said, 6 fixing of coupled bars for slabs is not an uncommon 7 construction activity. Maybe for the diaphragm wall it 8 is slightly different in terms of the density of the 9 couplers, but for slabs, it's very much business as 10 usual, I would say. On most projects in Hong Kong there 11 is a large element of couplers. 12 Q. You are certainly aware of the requirement imposed under 13 the QSP that it was necessary to record supervision and 14 inspection in a record sheet and write it into 15 an inspection logbook; you are aware of that? 16 A. Yes. 17 Q. So, going back to my earlier question, with such 18 a requirement, when you discovered that there was no 19 record of observing in relation to coupling 20 installation -- checking, inspection or supervision of 21 the coupling installation -- would you regard it as 22 a non-compliance of the requirements? 23 A. No. As I understood it from the project, the checking 24 was done, as has been explained previously, 25 I understand, using the quality control checklist and</p>

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<p>1 using the formal contract RISC form. That was how the 2 project handled their quality requirements. That was 3 a record of their inspections that they had before 4 moving on to the next hold point. 5 MR WILKEN: Sir, I've let Mr Khaw ask the question twice and 6 he has his answer. He's fishing in relation to 7 regulatory activity outside the ambit of this 8 Commission, because "non-compliance" is capable of 9 a double meaning. 10 MR KHAW: I got my answer already, Chairman. 11 You just referred me to -- that is your answer, you 12 referred me to the quality control records. I take it 13 that when you are referring to the quality control 14 records, you are referring to both the RISC form and 15 also the cast in situ concrete quality checklist? 16 A. Yes. There are two RISC forms, I believe, and one 17 quality control checklist. 18 Q. But am I correct to say that those two forms, the 19 contents of those two forms, won't tell anybody which 20 coupler installation was checked or how many of those 21 were checked; would you agree? 22 A. It would tell me that they've all been checked. 23 I wouldn't expect any engineer to sign off a form if he 24 is not happy that the couplers have been visibly checked 25 and, you know, confirmed to be okay. They wouldn't be</p>	<p>1 A. If you look at, in the Code of Practice for Site 2 Supervision, it defines what the items in the left-hand 3 column are, C8, C9, C10, but from memory they are fairly 4 general items, such as "Is an excavation safe?", or 5 "Have you carried out the site monitoring?" or -- there 6 are no specific items which refer to couplers or 7 checking of rebar, but this is a statutory requirement 8 to comply with the SSP. 9 Q. Yes. Now, we have discussed the contents of the RISC 10 forms, contents of the concrete in situ checklist, the 11 contents of these inspection records which are rather 12 general. 13 If I may then take you to your conclusion at 20265, 14 your conclusion actually specifically refers to 15 compliance with the Buildings Department approval 16 letter, so I'm going to ask you this. Given our 17 discussion regarding the records, which actually do not 18 show which particular coupling installation was checked, 19 how many were checked, there is no basis for you to come 20 to this conclusion that the records were found to be in 21 order and compliant; would you agree? 22 A. I would disagree. I don't believe there is any 23 requirement to show individual coupler-by-coupler 24 inspection records. That's not stated anywhere. So, 25 based on my view and judgment at the time, I'm happy in</p>
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<p>1 doing their job if they were signing off without that. 2 Q. Mr Lumb, I'm not asking what it means to you. I'm 3 asking, when one looks at the contents of the RISC form, 4 when one looks at the content of the concrete in situ 5 checklist, one cannot tell from the documents themselves 6 as to which particular coupling installation was checked 7 and how many were checked; would you agree? 8 A. It doesn't identify individual couplers, but as 9 I explained, I would expect it should cover all. 10 Q. And there's an appendix P in your report, 20583. If we 11 can start from 20584, that is a set of records of 12 specific tasks performed by TCP, RC stream, and we can 13 see that 854 is a form signed by Chan Chi Ip; right? 14 A. (Nodded head). 15 Q. Then there are various forms covering different periods, 16 and the one by Chan Chi Ip goes -- from Chan Chi Ip goes 17 all the way to page 592. 18 Now, obviously you referred to these forms in your 19 investigation process; right? 20 A. Yes. 21 Q. Am I also right in saying that these forms do not tell 22 anyone what was actually inspected, what was actually 23 inspected? 24 A. The SSP forms are fairly general forms. 25 Q. Yes.</p>	<p>1 terms of writing that statement. 2 Q. Now, in your fourth witness statement, you referred to 3 the people who were interviewed for the purpose of the 4 investigation process. 5 A. Mm-hmm. 6 Q. The first thing I would like to ask you on this is: was 7 there any record or note of interview that you or your 8 colleagues have kept for this purpose? 9 A. We don't have any records that are retained. 10 Q. Not at all? 11 A. Everything that was found went into the report. 12 Q. Thank you. 13 CHAIRMAN: Could I ask, just briefly -- sorry -- your fourth 14 paragraph down: 15 "It was found that while some non-conformances were 16 identified during the construction of the works, these 17 were raised by Leighton's own supervisors through the 18 established non-conformance report process ..." 19 But of course that's not 100 per cent accurate, is 20 it? Because there was the photograph that showed, on 21 its face, an apparent cutting of threaded rebar by some 22 workman. 23 A. But we saw no evidence that -- yes, there was no context 24 behind that, and we saw no evidence that it had been 25 incorporated into the works and in terms of the people</p>

<p style="text-align: right;">Page 41</p> <p>1 that we spoke to there was no awareness of that either. 2 CHAIRMAN: I suppose that's what worries me a little, 3 because I appreciate it's an internal report, but 4 I don't think, because something's an internal report, 5 it thereby prohibits speaking to people outside in order 6 to find out what's best internally. Do you see the 7 point? 8 A. Mm-hmm. 9 CHAIRMAN: So perhaps, with the benefit of hindsight and in 10 an ideal world, if Mr Poon had been contacted, he might 11 have said, "This is what happened. I was at this 12 particular junction. I saw them doing X, Y and Z", and 13 he would therefore have given body and substance to 14 those two photographs, which might then have better 15 enabled you to complete your report. 16 A. I was never given any direction to approach or speak to 17 Mr Poon. 18 CHAIRMAN: No, but weren't you just given authority to 19 prepare a satisfactory report? 20 A. By "internal", I took it as retaining the scope of the 21 investigation within the Leighton business and the 22 Leighton employees. That was how I read the request. 23 CHAIRMAN: All right. 24 MR KHAW: Regarding those people who were interviewed during 25 the investigation process, you agree that Mr Man Sze Ho</p>	<p style="text-align: right;">Page 43</p> <p>1 Q. During the investigation process, talking about Man 2 Sze Ho only, did you ever make any enquiry regarding the 3 percentage of coupling installations which had actually 4 been inspected? 5 A. I can't recall personally. I wasn't the one conducting 6 the interviews. 7 Q. Finally, in your report, you also referred to one NCR 8 incident, and you also attached the relevant documents 9 at appendix J to your report. 10 Is it fair to say that the NCR incident, it was 11 an incident about bar cutting, threaded bar cutting; you 12 are aware of that? So at least you would agree with me 13 that the nature of this NCR incident is similar to the 14 nature of Mr Poon's allegation; would you agree? 15 A. Yes. 16 Q. Now, in view of the NCR incident, did you care to at 17 least find out whether it was an isolated incident or 18 whether it might represent a more widespread 19 malpractice? 20 A. Yes, we asked the question, and we were given the answer 21 that the staff were only aware of that one incident. 22 Q. So you were satisfied that it was an isolated incident? 23 A. Yes. 24 Q. Did you know anything about the cause of the NCR 25 incident; why did the workers choose to cut the threaded</p>
<p style="text-align: right;">Page 42</p> <p>1 was the only engineer on the list responsible for the 2 inspection of coupler installation? 3 A. Yes. 4 Q. Were you aware that in fact Mr Edward Mok was also a key 5 person responsible for the inspection of coupler 6 installation? 7 A. We were aware subsequently. We only spoke to people who 8 were on the project at the time. I think Edward had 9 left the project by that stage. 10 Q. Right. But did you apply your mind at least, during 11 your investigation process, for the purpose of at least 12 ascertaining who were the key persons responsible for 13 the inspection of the coupling works for the project, 14 despite whether he moved to another project or whatever? 15 At least you should apply your mind to that; right? 16 A. We interviewed those engineers who we were advised to 17 speak to by the project team there and who were 18 available at the time. 19 Q. Now, you just told us that without any formal records of 20 survey, then you of course had to look at other records 21 like the RISC form, et cetera, but obviously the 22 interview with the key person in charge of the 23 inspection would be important because that would give 24 you an idea as to what they did; would you agree? 25 A. Yes.</p>	<p style="text-align: right;">Page 44</p> <p>1 rebars on their own initiative? 2 A. No one could explain that to us. 3 Q. Did you make enquiry in that regard? Did you? Did you 4 talk to anyone, "Hey, does anybody know about why the 5 workers actually cut the threaded rebar in relation to 6 the NCR incident"? 7 A. Again, I wasn't the one asking the questions so I can't 8 speak on behalf of my engineer who did, but I would 9 expect him to ask that question. 10 Q. And what was the response you were given in relation to 11 the cause? Did you ever receive any response as to the 12 possible cause or causes of that incident? 13 A. No. No one would know. 14 Q. Sorry, you said "no one would know", it means you 15 actually asked and you did not get an answer, or you 16 simply assumed that no one would know? 17 A. I didn't ask the question. My colleague would have put 18 the question. But the feedback, I recall, was that 19 no one knew. When I asked my colleague what was the 20 reason behind it, his feedback was no one would know or 21 no one knew the reason behind the cutting. 22 CHAIRMAN: But, in that regard -- I suppose this is why I'm 23 a bit puzzled, even though I appreciate this is 24 an internal investigation -- if somebody had gone down 25 to the rebar fixers and spoken to the foreman and said,</p>

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<p>1 "Look, we've now had a complaint from a sub-contractor, 2 there are some photographs. We appreciate these things 3 happen but come on, man to man, what are the reasons 4 here, what are the causes?" 5 A. I think even to this day, as far as I'm aware, we 6 haven't got to the bottom of why it was done. So within 7 the scope of my review we didn't make any progress there 8 either. 9 CHAIRMAN: You see, forgive me again, but if that had taken 10 place -- and personally I see no reason why it shouldn't 11 have taken place, even though it's an internal 12 investigation -- you might have got things like, "Look, 13 it's a difficult contract, we are running up against 14 time, the walls aren't properly put", or "Too many of 15 the couplers are out of order", or "The time taken to do 16 remedial work should be an hour and in fact we are 17 having to wait 48 hours, so there's a temptation from 18 time to time"; that sort of discussion might have 19 helped, wouldn't it? 20 A. I think had the review taken place a year earlier, 21 during the course of the works, perhaps that would have 22 been an appropriate angle. The time the review took 23 place was January 2017, so all works on both EWL and NSL 24 slab had been completed, and the teams basically 25 demobilised. So you didn't really have the</p>	<p>1 review, that we had suitable quality systems in place to 2 prevent or guard against any fundamental, you know, 3 aspect like this. 4 Q. I'm sorry to take you to one of our earlier points, 5 regarding the responsibility of Leighton in relation to 6 the inspection or quality control of the coupling works. 7 Now, we heard what you said in relation to your 8 understanding of the QSP, but if I may just take you to 9 H20/39721. 10 It's a letter from Leighton dated 9 October this 11 year, addressing certain comments made by the Buildings 12 Department, and if we can then take a look at H39722, 13 this is a letter signed by Mr Brewster. "Item (c)": 14 "1. In relation to the 'As-built for on-site 15 assembly of EWL/NSL slab to diaphragm wall/slab couplers 16 forms' the statement that the original was produced in 17 June 2018 was to clarify that the form was 18 a non-contemporaneous record ... 19 2. The quality control coordinators for the 20 mechanical coupler works related to the Hung Hom Station 21 [project] diaphragm wall and EWL platform slab were ..." 22 Then it sets out the specialist foundation 23 contractor of Intrafor. 24 "(b) LCAL engineering and supervision staff 25 responsible for the platform slab reinforcement works."</p>
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<p>1 opportunity -- you know, these were events that were 2 12 months earlier, more maybe, so no one -- everyone had 3 moved on, everyone had no recollection of the events, 4 you know, which had happened 12 or 14 months previously. 5 CHAIRMAN: Yes, I appreciate the fact that you are asked to 6 look at a historical event now covered up by concrete. 7 Yes, thank you. 8 MR KHAW: Mr Lumb, would you agree that on your list of 9 interviewees, probably the only person who might have 10 some direct knowledge regarding this NCR would be 11 Mr Harman? 12 A. I would expect Mr Ip to have been aware of it. 13 Q. Yes. Did you yourself or did anyone, any of your 14 colleagues, actually speak to Mr Harman regarding the 15 possible causes of the incident, do you know? 16 A. I don't know. 17 Q. Would you agree that without actually knowing the cause 18 of the NCR incident, it would be rather impossible for 19 you to ascertain whether this was only an isolated 20 incident or it might represent a more widespread 21 malpractice; would you agree? 22 A. Not necessarily. I would again refer back to our review 23 of the quality records and of the inspection processes, 24 the signing off of those individual records by 25 engineers. That was, if you like, the main gist of the</p>	<p>1 So it is quite clear from Mr Brewster's response 2 that there were Leighton engineering and supervision 3 staff responsible for the platform slab reinforcement 4 works; would you agree? 5 A. Agree. Again, if you look at the Buildings Department 6 letter of acceptance, the appendix which relates to 7 non-ductile couplers, there is still a requirement for 8 quality control coordinators. That doesn't disappear. 9 So, yes, I agree that there's a requirement for quality 10 control coordinators for the mechanical coupler works. 11 Q. Just regarding the record, the issue of records, that 12 Mr Pennicott discussed with you yesterday, I only have 13 two questions for you. 14 If we can take a look at H14/35067. This is the 15 original template, as we gather from you, and the 16 heading is "Checklist for on-site assembly", et cetera. 17 It was later changed to "As-built" -- 18 A. I referred to it as the draft. 19 Q. Yes, as a draft. It was later revised -- the heading 20 was revised to mean as-built? 21 A. Yes. 22 Q. Here, if we can go to the box, the lower part of this 23 document, we can see a description, "EWL bottom bars", 24 "EWL top bars"; do you see that? 25 A. Yes.</p>

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<p>1 Q. Then we have different rows described; do you see that?</p> <p>2 A. Yes.</p> <p>3 Q. B1, B3, B5, B7, T1, T3, T5, T7; right? Then we even</p> <p>4 have the particular numbers of the bars set out, 1 to</p> <p>5 59, 1 to 50, et cetera; do you see that?</p> <p>6 A. Yes.</p> <p>7 Q. Would you agree with me that in order to put or circle</p> <p>8 a "yes" or an "S" in the items in this box, one could</p> <p>9 only rely on the RISC forms -- as far as documentation</p> <p>10 is concerned one could only rely on the RISC forms and</p> <p>11 the concrete in situ checklists; do you agree?</p> <p>12 A. Yes, and we made that reference at the top.</p> <p>13 Q. Yes. But the contents -- none of the RISC forms or the</p> <p>14 concrete in situ checklists would be able to provide us</p> <p>15 with any information regarding the coupling installation</p> <p>16 condition in relation to a particular bar regarding</p> <p>17 a particular row; do you agree?</p> <p>18 A. When signing off a checklist -- sorry, the checklist,</p> <p>19 I mean the quality control checklist -- then my</p> <p>20 expectation of anyone within our business would be they</p> <p>21 should only sign off that box once they are happy that</p> <p>22 the works have been constructed accurately and</p> <p>23 thoroughly. So I wouldn't expect anybody to sign off</p> <p>24 a checklist without being able to confirm that the works</p> <p>25 were in accordance with the working drawings or the</p>	<p>1 appropriate for me to do that after the coffee break but</p> <p>2 I'm in your hands.</p> <p>3 CHAIRMAN: Yes, I think so. Thank you very much.</p> <p>4 15 minutes.</p> <p>5 (11.46 am)</p> <p>6 (A short adjournment)</p> <p>7 (12.07 pm)</p> <p>8 Cross-examination by MR BOULDING</p> <p>9 MR BOULDING: Good afternoon, sir. Good afternoon,</p> <p>10 Professor.</p> <p>11 Good afternoon, Mr Lumb. There are just a couple of</p> <p>12 matters I would appreciate your assistance on, please.</p> <p>13 Do you remember that yesterday counsel for the</p> <p>14 Commission took you to a document called, "Checklist for</p> <p>15 on-site assembly of EWL slab to D-wall/slab couplers"?</p> <p>16 A. Yes.</p> <p>17 Q. If we can have that document up on the screen, please.</p> <p>18 It's H14/35067. That's the one.</p> <p>19 You can see the manuscript markings, "19 December</p> <p>20 2015"; do you see that?</p> <p>21 A. Yes.</p> <p>22 Q. The Chairman, you will recall, I'm sure, made the</p> <p>23 comment to you that this Leighton document looked like</p> <p>24 a contemporary document; do you remember that being</p> <p>25 suggested to you?</p>
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<p>1 diaphragm wall drawings.</p> <p>2 Q. Thank you. Further, if we focus on this box again --</p> <p>3 now, we asked a lot of people, a lot of Leighton</p> <p>4 witnesses, as to who actually put the circle for "S",</p> <p>5 for this box. Nobody could help us. You couldn't help</p> <p>6 us, apparently.</p> <p>7 A. I think we discussed this yesterday, that we had</p> <p>8 engineers on site, there was multiple engineers working</p> <p>9 on these, and some were providing the background, they</p> <p>10 were pulling together the, if you like, template from</p> <p>11 the diaphragm wall shop drawings. Some were working</p> <p>12 through site instructions, photographs, technical</p> <p>13 queries. Others were looking at the RISC forms and the</p> <p>14 quality control checklists. And ultimately all of that</p> <p>15 was gathered together on this one form.</p> <p>16 Q. Yes. Can you at least tell us whether you know that</p> <p>17 there's any person in Leighton who would at least be</p> <p>18 able to tell us who put the circle or the "yes" here?</p> <p>19 A. I would have to check.</p> <p>20 Q. Would you be kind enough to check this information and</p> <p>21 inform the Commission later on?</p> <p>22 A. Can do.</p> <p>23 MR KHAW: Thank you. I have no further questions.</p> <p>24 MR BOULDING: Sir, I have two matters I would like to</p> <p>25 investigate with this witness. You might think it's</p>	<p>1 A. Correct, yes.</p> <p>2 Q. And indeed you agreed?</p> <p>3 A. At the time, yes.</p> <p>4 Q. You need to say "yes" or "no" or whatever, for it to be</p> <p>5 picked up, Mr Lumb.</p> <p>6 A. Yes.</p> <p>7 Q. You were then asked to look at the MTR equivalent</p> <p>8 document. Can we keep that on the screen and have up</p> <p>9 document B7/4588 by its side. Perhaps we can get them</p> <p>10 next to each other. That's the one.</p> <p>11 You can see that the MTR document is the record, in</p> <p>12 this instance, for the area "C3-3 (East)"; do you see</p> <p>13 that?</p> <p>14 A. Yes.</p> <p>15 Q. Then if we could focus in, please, at the bottom</p> <p>16 left-hand corner of both documents -- up a little bit on</p> <p>17 both, please, I mean move the bottom up so I can see the</p> <p>18 bottom left-hand corner, please.</p> <p>19 MR PENNICOTT: "Down".</p> <p>20 MR BOULDING: Splendid. A little bit further so I can</p> <p>21 see -- the document on the right, can you please move it</p> <p>22 up so I can see what's down at the bottom, under the</p> <p>23 signature of Kobe Wong. Thank you very much.</p> <p>24 If one looks at the typescript in the bottom</p> <p>25 left-hand corner of both documents, one can see, can one</p>

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<p>1 not, that there is a difference, in that the MTR 2 document has, under the heading "Remark": 3 "This form serves a retrospective record of coupler 4 installation." 5 Do you see that? 6 A. Yes. 7 Q. We can see, can we not, that there's no such statement 8 on the Leighton document; correct? 9 A. Yes. 10 Q. Can I therefore suggest that it's clear, is it not, that 11 whatever the situation might have been so far as the 12 Leighton records were concerned, the MTR records were 13 never intended to give the impression that they were 14 contemporaneous documents, were they? 15 A. That's correct. It's also correct for the Leighton 16 documents as well. 17 Q. Well, there we are. That's the first matter that 18 I appreciate your assistance on, Mr Lumb. 19 You will recall today, I suspect, that my learned 20 friend Mr Khaw discussed with you today the QSP which 21 was annexed to your report; do you remember that? 22 A. Yes. 23 Q. We can pick that up at C27, document 20444, and you can 24 see the heading there, "Quality supervision plan", and 25 so on, and so forth. Then in paragraph (1) we've got</p>	<p>1 "splicing assemblies" the learned Chairman was referring 2 to the act of actually putting the rebars into the 3 couplers? 4 A. Yes. The assembly is the coupler plus the two bars 5 which are engaged into that. 6 Q. I can see that it might be thought, but it's a matter 7 for legal argument and submission, but having regard to 8 your elevated position, head of engineering in Leighton, 9 I wonder whether you can assist me on this particular 10 matter. 11 Do you see the phrase "splicing assemblies" in 12 paragraph (5)1(i)? 13 A. Yes. 14 Q. Would you agree, Mr Lumb, that the phrase "splicing 15 assemblies" could be read as a description of the 16 assembled rebar coupler and rebar? 17 A. Yes. 18 CHAIRMAN: Sorry, could we have a look -- sorry, which 19 paragraph is it? 20 MR BOULDING: It's the first one. 21 CHAIRMAN: Thank you. 22 MR BOULDING: It's used in several locations there, sir. 23 CHAIRMAN: Thank you, yes. 24 MR BOULDING: If that is right, it would not be correct, 25 would it, to read it as being the act or process of</p>
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<p>1 the introduction to the quality supervision plan; you 2 see that, do we not, Mr Lumb? 3 A. Yes. 4 Q. Then I would like you to go or be taken to page 20446, 5 and it's the heading, "Supervision of works", and you 6 will recall being questioned about the contents of 7 paragraph (5), and in particular paragraph (5)1, by 8 Mr Khaw; do you remember that? 9 A. Yes. 10 Q. The learned Chairman is recorded on the transcript as 11 saying as follows: 12 "Sorry, again I'm falling behind; please forgive me. 13 I'm looking at this and it says: 14 'Quality control supervisors (RC) will be 15 responsible to carry out full-time and continuous 16 supervision of the splicing assemblies on site.' 17 Then he went on to say: 18 "Now, as a layperson, I've been educated as to 19 splicing assemblies, which is, as I understand it, the 20 actual act of putting rebars into couplers, and as 21 a layperson I've listened to Intrafor, and they don't 22 seem to have been involved in doing anything like that". 23 I assume you recall that particular statement? 24 A. Yes. 25 Q. Now, it's clear from that statement, is it not, that by</p>	<p>1 actually putting the rebar into the coupler? 2 A. Agreed. 3 Q. In other words -- and I assume from what you've said 4 already that you would agree this as well -- it's 5 referring to the connection, the actual connection, 6 rather than the process of connecting the couplers up to 7 the rebars? 8 A. I would agree. 9 CHAIRMAN: I would hasten to add I didn't think of that as 10 witnessing the actual process, but rather splicing 11 assemblies was something that happened after Intrafor 12 was involved, that was done, and then there was 13 an obligation thereafter to check what had been done by 14 way of the assembly. 15 A. I would see the assembly as the finished product of 16 coupler plus the two bars which are engaged, not the 17 process. 18 MR BOULDING: That is very helpful. Thank you very much, 19 Mr Lumb. I have no further questions. 20 Thank you, sir. Thank you, Professor. 21 CHAIRMAN: Sorry, on that, how do you carry out full-time 22 and continuous supervision of something that's already 23 been done, as a matter of interest? Again, another 24 engineering issue. 25 A. Sorry, is that a question to myself?</p>

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<p>1 CHAIRMAN: Yes.</p> <p>2 MR BOULDING: I was rather hoping it was!</p> <p>3 A. "Full-time supervision" for me means that someone is</p> <p>4 fully engaged on the project, as opposed to part-time,</p> <p>5 which is often used in the BD language, which means they</p> <p>6 are visiting the site, the site being the whole project,</p> <p>7 at a certain frequency.</p> <p>8 "Continuous supervision", again I think, in the</p> <p>9 context of Hong Kong supervision, just means the normal</p> <p>10 daily supervision and inspection regime. It certainly,</p> <p>11 in my opinion, doesn't mean that you are man-marking</p> <p>12 someone who is actually physically screwing a bar in.</p> <p>13 CHAIRMAN: No, no. The point I am making is perhaps</p> <p>14 a different one. I accept entirely that "splicing</p> <p>15 assemblies" doesn't have to mean necessarily purely the</p> <p>16 act, and that it might have a broader term meaning once</p> <p>17 the connection has been made. All I'm asking here is,</p> <p>18 within this particular paragraph, it says that you will</p> <p>19 be responsible to carry out full-time and continuous</p> <p>20 supervision of the splicing assemblies. Now, if in fact</p> <p>21 you're talking about assembling that's already been</p> <p>22 done, it strikes me that you don't need then to have</p> <p>23 full-time and continuous supervision of it. Do you see</p> <p>24 the point? It would seem to me that in the context of</p> <p>25 that sentence, what you are asked to do is to have</p>	<p>1 raise -- is what does "full-time and continuous" mean in</p> <p>2 this context?</p> <p>3 A. Yes.</p> <p>4 CHAIRMAN: Thank you.</p> <p>5 MR CONNOR: Sir, no questions on behalf of Atkins for</p> <p>6 Mr Lumb.</p> <p>7 CHAIRMAN: Thank you.</p> <p>8 Re-examination by MR WILKEN</p> <p>9 MR WILKEN: Sir, just some very brief documentary</p> <p>10 re-examination, as both the witness and the Commission</p> <p>11 have asked to see some documents.</p> <p>12 Good afternoon, Mr Lumb.</p> <p>13 A. Good afternoon.</p> <p>14 Q. Can we go first to H7/2643. This is in response to</p> <p>15 a question from Prof Hansford; he asked to see the</p> <p>16 notices of appointment, and here they are.</p> <p>17 So if one goes to 2644 -- over the page, over the</p> <p>18 page -- you see there that Intrafor is appointed as the</p> <p>19 registered specialist contractor.</p> <p>20 And if we go over the page, over the page, over the</p> <p>21 page -- one more, please -- you see there that Leighton</p> <p>22 is appointed as the registered general building</p> <p>23 contractor.</p> <p>24 Can we now, please, go to C13/8258. This is</p> <p>25 an appendix to the Buildings Department consultation</p>
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<p>1 full-time supervision of the actual process of assembly,</p> <p>2 because otherwise it's like saying -- otherwise you're</p> <p>3 walking around looking at something that's been done,</p> <p>4 just a lot of iron.</p> <p>5 A. I don't think it's ever been read like that, in the</p> <p>6 context of the Hong Kong construction industry. I'm</p> <p>7 certainly never aware of circumstances where we've had</p> <p>8 individuals just literally stood there, watching the</p> <p>9 physical act of a bar being screwed, because again, in</p> <p>10 my opinion, that is impractical. You would need to</p> <p>11 probably multiply by a factor of ten the number of</p> <p>12 supervisors on a site to actually carry out that</p> <p>13 process.</p> <p>14 CHAIRMAN: I appreciate that, but -- sorry, I really don't</p> <p>15 want to keep us on this too long -- would you agree that</p> <p>16 what this is talking about, in plain English, is that</p> <p>17 there has to be some form of supervision of the process</p> <p>18 of splicing assembly, some form of supervision?</p> <p>19 A. Some form of supervision, yes.</p> <p>20 CHAIRMAN: As opposed to -- and that would include, for</p> <p>21 example, when the work is done, checking that it's been</p> <p>22 done properly?</p> <p>23 A. Yes.</p> <p>24 CHAIRMAN: And your issue, as other people have raised --</p> <p>25 and it seems to me to be an entirely legitimate issue to</p>	<p>1 letter.</p> <p>2 A. Yes.</p> <p>3 Q. And you will see here -- this is appendix IX, and you</p> <p>4 will see it says, "Steel reinforcing bars for ductility</p> <p>5 requirement"; do you see that?</p> <p>6 A. Yes.</p> <p>7 Q. Then if you go down to paragraph (c), you see there it</p> <p>8 requires a T3, and below you see there are certain</p> <p>9 requirements as to record-keeping.</p> <p>10 If we then go to 8262, this is appendix X, "Mental</p> <p>11 couplers for steel reinforcing bars without ductility</p> <p>12 requirement", and if you go down to paragraph (c) on</p> <p>13 this page, you will see it's a T1?</p> <p>14 A. Yes.</p> <p>15 Q. And there are different requirements.</p> <p>16 A. Also, just to note, there is no quality supervision plan</p> <p>17 required in this appendix.</p> <p>18 Q. Finally, you wanted to see the Code of Practice for</p> <p>19 Concrete.</p> <p>20 A. Mm-hmm.</p> <p>21 Q. I apologise if I've got this horribly wrong and I give</p> <p>22 the wrong references because I'm doing this on the fly,</p> <p>23 but C27/8503. No, I have got the wrong reference.</p> <p>24 C13 -- I'm grateful to Mr Coleman -- 8503. There we go.</p> <p>25 Scroll down, please. You see there, there's a reference</p>

Page 61	1 to detailing for ductility, and it refers to beams. 2 If we go to the next page, we have some references 3 to "Transverse reinforcement". The next page, 4 "Columns"; you see that. 5 Then if we go to 8547, please. You see there 6 "Ductility" and references to "Beam-column joints", 7 "Beams" and "Columns"; is that what you were referring 8 to? 9 A. Correct. 10 MR WILKEN: Sir, I have no further questions. 11 CHAIRMAN: Thank you. Thank you very much indeed, Mr Lumb. 12 You are finished. 13 WITNESS: Thank you. 14 CHAIRMAN: Thank you for the assistance you have given to 15 the Commission. 16 WITNESS: You are welcome. 17 (The witness was released) 18 MR BOULDING: Sir, that means it's the turn of MTR to call 19 its witnesses, and if it's convenient to you, I'm going 20 to call MTR's first witness, Mr Clement Ngai. 21 MR PENNICOTT: Sir, before Mr Boulding does that, could 22 I just mention one thing? 23 The Commission has invited Leighton to provide 24 a witness statement from Mr Harman, a gentleman whose 25 name has cropped up from time to time over the last few	Page 63	1 statement for the Commission's assistance in this 2 Inquiry, and please could you go to B232. Do we there 3 see the first page of your witness statement, Mr Ngai? 4 A. Yes. 5 Q. If we can go on to page 238, we there see your 6 signature, under the date of 14 September 2018; correct? 7 A. Correct. 8 Q. But we know that you'd like to make one or two 9 amendments to that, and if we can go to page 238.1, do 10 we see the amendments that you would like to make to 11 your statement? 12 A. Yes. 13 Q. Subject to those amendments, are the contents of the 14 statement true to the best of your knowledge and belief? 15 A. Yes. 16 Q. Is that your evidence in this Commission of Inquiry, 17 Mr Ngai? 18 A. Yes. 19 MR BOULDING: Now, the process will be, Mr Ngai, that you 20 will be questioned by various of the lawyers in the 21 room, starting with my learned friend Mr Pennicott. At 22 the end of that questioning, I might ask you a few more 23 questions, and of course the Chairman and the Professor 24 are always at liberty to ask you a question when they 25 feel they need some assistance.
Page 62	1 days, if not few weeks. My understanding is that 2 Leighton are in the process of obtaining that witness 3 statement and I think they have been asked to do that by 4 next Friday. That's my understanding; I will be 5 corrected if I am wrong. So there will be, assuming 6 that all happens, one further witness from Leighton, 7 Mr Harman, who will be called in due course, but 8 obviously not next week. It will be in the week after. 9 Just to make it clear, so that everybody is aware that 10 that is happening. 11 MR WILKEN: Sir, the reason for the slight delay is he is no 12 longer an employee. 13 MR PENNICOTT: I understand that and that is entirely right. 14 CHAIRMAN: Good. Thank you. 15 MR BOULDING: Good morning, Mr Ngai. 16 WITNESS: Good morning. 17 MR NGAI YUM KEUNG, CLEMENT (sworn in Puntì) 18 (All answers given via simultaneous interpreter 19 except where otherwise specified) 20 Examination-in-chief by MR BOULDING 21 MR BOULDING: Please could you give your full name and 22 address to the Commission. 23 A. Ngai Yum Keung, that's the full name. The address 24 is ... [redacted]. 25 Q. Thank you. We know that you've produced one witness	Page 64	1 So thank you, Mr Ngai. 2 Examination by MR PENNICOTT 3 MR PENNICOTT: Mr Ngai, good afternoon. Thank you very much 4 for coming along to give evidence to the Commission. 5 Mr Boulding has explained the process. My name is 6 Pennicott, I'm one of the counsel to the Commission, and 7 I'll be asking you questions to start with. 8 Mr Ngai, as I understand it, at the moment you are 9 head of project engineering at MTR; is that correct? 10 A. That is correct. 11 Q. And, as head of project engineering, you are not just 12 involved in project SCL1112, but you are involved in 13 a number of projects that the MTR has running at the 14 moment? 15 A. Correct. 16 Q. I think you started in June 2016 as acting head of 17 project engineering, and then a little later you became 18 head of project engineering? 19 A. Yes. 20 Q. And your predecessor as head of project engineering was 21 Mr Stephen Chik? 22 A. Correct. 23 Q. During the time that we are most concerned with in this 24 Inquiry, that is 2013 through to, let's say, June 2016, 25 when you became acting HPE, you were the chief design

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<p>1 manager, as I understand it, at MTR?</p> <p>2 A. Correct.</p> <p>3 Q. And, so far as this project is concerned, that is</p> <p>4 SCL1112, you were responsible, in an overseeing role,</p> <p>5 for the design management of the project; would that be</p> <p>6 right?</p> <p>7 A. Correct.</p> <p>8 Q. You didn't have, as I understand it, day-to-day</p> <p>9 involvement in the design, but it was, as I say,</p> <p>10 an overseeing role?</p> <p>11 A. Correct.</p> <p>12 Q. Would this be right, that the principal personnel at MTR</p> <p>13 who may report to you, if they needed to, were Andy</p> <p>14 Leung, Ralph Tam and Vincent Chu?</p> <p>15 A. They were the design managers.</p> <p>16 Q. Right. They were the three principal design managers</p> <p>17 who, if they had any particular issue that they wished</p> <p>18 to raise, you were there, effectively -- you were there</p> <p>19 to assist him?</p> <p>20 A. Yes.</p> <p>21 Q. Mr Ngai, I also understand from paragraph 9 of your</p> <p>22 witness statement -- perhaps we could have a look at</p> <p>23 that -- that the HPE, as I will now call you, was</p> <p>24 responsible for the nomination of the competent person</p> <p>25 or persons?</p>	<p>1 delegates at any given time; is that correct?</p> <p>2 A. Yes.</p> <p>3 COMMISSIONER HANSFORD: Okay. Thank you.</p> <p>4 MR PENNICOTT: And so far as the engineer's representative</p> <p>5 is concerned, again, Mr Chik would have appointed</p> <p>6 Patrick Cheng and Kit Chan, and more recently you would</p> <p>7 have appointed Mr Michael Fu? Or perhaps not, insofar</p> <p>8 as Mr Michael Fu is concerned.</p> <p>9 A. I believe Mr Michael Fu was also appointed by Mr Chik.</p> <p>10 Q. Right. So one can see from that brief discussion that,</p> <p>11 at times, the competent person and the engineer's</p> <p>12 delegate might be one and the same person?</p> <p>13 A. Yes.</p> <p>14 Q. But the engineer's representative would always be</p> <p>15 a separate and identifiable position and would not</p> <p>16 double up with any other position; is that right?</p> <p>17 A. Engineer's delegate and engineer's representatives are</p> <p>18 different people.</p> <p>19 Q. Yes, and likewise the engineer's representative would</p> <p>20 never be the competent person?</p> <p>21 A. Correct, in this case.</p> <p>22 Q. You have amended paragraph 13 of your witness statement</p> <p>23 to tell us that you first heard of the defective steel</p> <p>24 work allegation on 6 January 2017, when Mr TM Lee</p> <p>25 forwarded you an email chain in respect of Jason Poon's</p>
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<p>1 A. Yes.</p> <p>2 Q. We can see that -- I think, on the dates that you've</p> <p>3 given us -- Mr Chik would have appointed Mr Saunders,</p> <p>4 Mr Rooney and Mr Jason Wong to that position?</p> <p>5 A. Yes.</p> <p>6 Q. And more recently you would have appointed Mr Neil Ng to</p> <p>7 that position?</p> <p>8 A. Yes.</p> <p>9 Q. Likewise or similarly, if we go to paragraph 11 of your</p> <p>10 witness statement, the HPE was also responsible for</p> <p>11 appointing the engineer's representative and the</p> <p>12 engineer's delegate or delegates?</p> <p>13 A. Yes.</p> <p>14 Q. We can see from the useful table that you've provided in</p> <p>15 paragraph 11 that again Mr Chik would have been</p> <p>16 responsible for appointing Dr Philco Wong and</p> <p>17 Mr Saunders, Mr Reilly and Mr Rooney to the engineer's</p> <p>18 delegate position?</p> <p>19 A. Yes.</p> <p>20 Q. And again you would have appointed Mr Neil Ng to that</p> <p>21 position more recently?</p> <p>22 A. Yes.</p> <p>23 COMMISSIONER HANSFORD: Just on that, Mr Pennicott -- and</p> <p>24 perhaps I can ask Mr Ngai -- on the engineer's</p> <p>25 delegates, who appear to be multiple engineer's</p>	<p>1 email to Mr Zervaas of Leighton, dated 6 January 2017?</p> <p>2 A. Yes.</p> <p>3 Q. What you go on to say is that Mr Lee asked you to ask</p> <p>4 Andy Leung to look into the matter, and you accordingly</p> <p>5 forwarded the email chain to Andy Leung on the same day?</p> <p>6 A. Yes.</p> <p>7 Q. Having done that, Mr Ngai, did you follow up with</p> <p>8 Mr Andy Leung whether or not he had investigated into</p> <p>9 the matter, and did he tell you what his conclusions</p> <p>10 were?</p> <p>11 A. No, not at that time.</p> <p>12 Q. So would this be right, that at that time, which</p> <p>13 I assume you mean January/February 2017, you had no</p> <p>14 further discussions with Andy Leung about the bar</p> <p>15 cutting email?</p> <p>16 A. I didn't.</p> <p>17 Q. Did you at any time follow up with Mr Andy Leung</p> <p>18 Mr Poon's email and your request for Mr Leung to look</p> <p>19 into it?</p> <p>20 A. No, not at that time.</p> <p>21 Q. At any time?</p> <p>22 A. No.</p> <p>23 Q. All right. Could I then move to the subject matter of</p> <p>24 the MTR report that was prepared and issued in June of</p> <p>25 this year. You refer to that in paragraph 16 of your</p>

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<p>1 witness statement, which you have also added to, and you 2 say: 3 "My involvement in the preparation of the June 4 report was limited to reviewing a few draft paragraphs 5 under the section entitled 'Carrying out site 6 supervision and inspection in accordance with statutory 7 requirements'." 8 And you've added the words "and commenting on 9 an earlier draft of the June report?" 10 A. Yes. 11 Q. Would I be right in suggesting to you, Mr Ngai, that you 12 were also, in the context of the June report, asked to 13 carry out a check on the number of couplers that were 14 referred to in the report? 15 A. At that time, the project director, Philco Wong, asked 16 our design management team to guess the number of 17 couplers. 18 CHAIRMAN: Sorry, to guess? 19 MR PENNICOTT: Could I clarify -- 20 A. (In English) I say "estimate". 21 INTERPRETER: "Estimate", what I meant was." 22 MR PENNICOTT: "Estimate", okay. Right. That might be 23 a better answer. 24 When you say "he asked our design management team to 25 estimate the number of couplers", my understanding,</p>	<p>1 steps were taken to, as Dr Wong put it, double-check the 2 number of couplers? What was done? 3 A. At the time, Dr Philco Wong gave me a phone call and he 4 asked the design team to come up with an estimate of the 5 number of couplers. Then I had asked the design manager 6 and his team to conduct an estimate. 7 Q. And which design manager was it? Mr Andy Leung, or one 8 of the others? 9 A. It was Andy Leung. 10 Q. Do you know what steps Mr Andy Leung took to carry out 11 your instructions to him? 12 A. In my recollection, Andy Leung and his team, they did 13 an estimate according to the as-built drawings of the 14 diaphragm wall. 15 Q. All right. 16 Could I ask you, please, to look at the June report, 17 at B1, page 24. 18 Just to put this in context, Mr Ngai, if we go back 19 to page B21, there's a heading there, "Contract 20 requirements"; do you see that? 21 A. Yes, I see it. 22 Q. Then if we go over the page to B22, there's a section on 23 MTRC's on-site inspection personnel, and that's in 24 a series of subparagraphs which finish at the bottom of 25 B23.</p>
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<p>1 Mr Ngai, is that he asked you, no doubt as head of the 2 design management team, but he did ask you; is that 3 right? 4 A. Yes. 5 Q. Perhaps we could just look at how Dr Philco Wong phrases 6 it in his witness statement. Could we go, please, to 7 B1/145. This is the statement of Dr Philco Wong, and at 8 145 you can see he's got a heading there -- and I assume 9 you've read this witness statement before, Mr Ngai; 10 would that be right? 11 A. I didn't read it in detail. 12 Q. Okay. Well, he's got a heading there, "Request 13 no. 11(b)": 14 "Please identify the person or persons responsible 15 for preparing the MTR report." 16 Then there's paragraphs 31 and 32, and if you go 17 over the page, please, at paragraph 33 he says this: 18 "In addition, I also commented on a number of 19 specific issues/paragraphs of the draft ... report, 20 including the number of couplers. In this regard, 21 I specifically asked Mr Aidan Rooney and his team to 22 double-check the number of couplers. I also separately 23 requested Mr Clement Ngai [that's you] and his design 24 team to conduct a similar exercise." 25 Mr Ngai, can you explain to the Commission what</p>	<p>1 Then, if we go over the page to B24, could I ask you 2 to look at the paragraph just above 5.3.2, towards the 3 bottom of the page, where it says this: 4 "In accordance with the design accepted by BD, the 5 total number of couplers connecting the EWL slab to the 6 east and west diaphragm walls was approximately 23,500. 7 In addition, to facilitate their method of slab 8 construction, Leighton installed approximately 19,800 9 couplers at the 31 construction joint locations between 10 adjacent bays of concrete and at temporary openings 11 within the whole EWL slab." 12 The first thing to note, Mr Ngai, is that all those 13 figures that we see in that paragraph relate, and relate 14 exclusively, to the EWL slab. Is that your 15 understanding? 16 A. Correct. 17 Q. Mr Ngai, that means, in terms of the totality of the 18 couplers, both on the east and west diaphragm walls, and 19 the construction joints, there were 43,300 couplers, 20 according to this report? 21 A. Correct. 22 Q. Did you personally take any steps to satisfy yourself 23 that those figures were correct? 24 A. At the time, Dr Philco Wong instructed the design team 25 to come up with an estimate. The main purpose was to</p>

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<p>1 look at the EWL slab and the diaphragm wall connection.</p> <p>2 They wanted to come up with the number of couplers and</p> <p>3 it did not include the construction joint couplers.</p> <p>4 And regarding the EWL slab and diaphragm wall, the</p> <p>5 couplers and the connections there, I had asked the</p> <p>6 design manager, Andy Leung. He was responsible for the</p> <p>7 estimate.</p> <p>8 Q. Right. So would this be fair, Mr Ngai, that you simply</p> <p>9 relied upon the information that you were given by</p> <p>10 Mr Andy Leung and his team, on the basis of the</p> <p>11 investigation and the research that they had carried</p> <p>12 out?</p> <p>13 A. Yes, I relied on their results.</p> <p>14 Q. Okay.</p> <p>15 Could we then, please, look at, also in the report,</p> <p>16 page B1/28. Mr Ngai, this is the section of the report,</p> <p>17 at the top of the page, 5.3.3, "Carrying out site</p> <p>18 supervision and inspection in accordance with statutory</p> <p>19 requirements".</p> <p>20 Do you see that?</p> <p>21 A. Yes.</p> <p>22 Q. As I understand it, this is the section of the report</p> <p>23 that you accept in your witness statement you looked at</p> <p>24 and considered?</p> <p>25 A. Yes.</p>	<p>1 "Full records are in place. All inspection records</p> <p>2 indicated that the works were acceptable, with no</p> <p>3 anomaly."</p> <p>4 Again, Mr Ngai, did you personally, having read and</p> <p>5 reviewed this paragraph, did you personally look at any</p> <p>6 records in relation to these supervision and inspection</p> <p>7 functions?</p> <p>8 A. I did not.</p> <p>9 Q. So is it again a question of you simply relying upon</p> <p>10 what you were told by Mr Andy Leung or whoever else</p> <p>11 wrote this section of the report?</p> <p>12 A. At the time, I read it, and I considered that the</p> <p>13 20 per cent splicing assembly requirement was in</p> <p>14 accordance with the BD requirements.</p> <p>15 Q. Could I ask you, please, to be shown bundle B7,</p> <p>16 page 4537.</p> <p>17 This is a document, as you can see, headed, "MTR</p> <p>18 mechanical coupler checklist". Do you recall having</p> <p>19 seen this document before, Mr Ngai?</p> <p>20 A. I don't think so.</p> <p>21 Q. Could I ask you, please, to be shown the next page,</p> <p>22 which will be 4538, I guess. This is an example,</p> <p>23 Mr Ngai, of a series of documents, signed, as we can</p> <p>24 see, bottom left, by Mr Kobe Wong, one of the MTR's</p> <p>25 inspectors of works, and he puts at the bottom:</p>
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<p>1 Q. You make reference -- sorry, the report makes reference,</p> <p>2 below the box that we see, to the fact that:</p> <p>3 "Leighton proposed to use BOSA type II ... standard</p> <p>4 ductility couplers for the reinforcement coupler to the</p> <p>5 threaded bar connection works. MTR accepted this</p> <p>6 proposal."</p> <p>7 Then there's reference to the QSP that I'm not going</p> <p>8 to trouble you with. Then there's reference to the site</p> <p>9 supervision plan, details of the technically competent</p> <p>10 persons; again, I'm not going to trouble you with that.</p> <p>11 Then it goes on to say:</p> <p>12 "During the process of the EWL slab construction</p> <p>13 works, MTR and Leighton have deployed TCPs to supervise</p> <p>14 the works at specified frequencies. These TCPs are</p> <p>15 required to record their observations in the SSP/QSP</p> <p>16 records to confirm whether the works are carried out in</p> <p>17 accordance with the approval requirement. The</p> <p>18 fabrication, sampling, testing and supervision for</p> <p>19 installation of the couplers and threaded reinforcement</p> <p>20 bars were carried out in accordance with the submitted</p> <p>21 QSP arrangement including ..."</p> <p>22 And I'm not going to read the rest of that out, but</p> <p>23 then the last sentence under the second bullet point,</p> <p>24 that's under the heading "Supervision and inspection by</p> <p>25 MTR on site", it says this:</p>	<p>1 "This form serves a retrospective record of coupler</p> <p>2 installation."</p> <p>3 Do you know, Mr Ngai, whether this document was in</p> <p>4 existence at the time that the June report was prepared?</p> <p>5 A. I don't know.</p> <p>6 Q. Is it a document you have seen before, Mr Ngai?</p> <p>7 A. No.</p> <p>8 Q. All right. Mr Ngai, do you have any idea how the figure</p> <p>9 of 23,500 couplers for the EWL slab connected to the</p> <p>10 diaphragm walls, both east and west, was calculated?</p> <p>11 A. I know that the design manager, Mr Andy Leung, used the</p> <p>12 diaphragm wall as-built drawings to come up with</p> <p>13 an estimate.</p> <p>14 Q. We know, Mr Ngai, and I'm sure you know -- we can look</p> <p>15 at some more documents in a moment, if necessary -- that</p> <p>16 that figure, unfortunately, was wrong?</p> <p>17 A. Yes.</p> <p>18 Q. Do you know why it was wrong, Mr Ngai?</p> <p>19 A. My understanding is, at that time, they thought some</p> <p>20 locations had couplers, but another detail was used.</p> <p>21 That is, the so-called through-bar detail was used,</p> <p>22 rather.</p> <p>23 Q. Right. That, unfortunately, was a discovery that was</p> <p>24 made after the report had been produced, been given to</p> <p>25 the government and been made public?</p>

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<p>1 A. Yes.</p> <p>2 MR PENNICOTT: Sir, I'm just about to go on to a sort of</p> <p>3 separate section. It will be the last section, as it</p> <p>4 happens. It will probably take maybe 10 or 15 minutes.</p> <p>5 I'm in your hands.</p> <p>6 CHAIRMAN: Well, it's 1 o'clock now. It's an opportune</p> <p>7 moment.</p> <p>8 MR PENNICOTT: Of course, sir.</p> <p>9 MR BOULDING: Can you give him the usual warning, sir?</p> <p>10 CHAIRMAN: Yes, I will do that.</p> <p>11 Mr Ngai, you are in the middle of giving your</p> <p>12 evidence at the moment. All witnesses, when they are in</p> <p>13 the middle of giving their evidence, are not permitted</p> <p>14 to speak to anybody about their evidence; okay? That</p> <p>15 includes your lawyers or friends, anything like that.</p> <p>16 So you must keep all matters relating to your evidence</p> <p>17 to yourself, until it is completed.</p> <p>18 WITNESS: I understand.</p> <p>19 CHAIRMAN: Good. Thank you.</p> <p>20 MR PENNICOTT: 2.15, sir?</p> <p>21 CHAIRMAN: 2.15. Thank you.</p> <p>22 (1.01 pm)</p> <p>23 (The luncheon adjournment)</p> <p>24 (2.18 pm)</p> <p>25 MR PENNICOTT: Good afternoon, sir. Good afternoon,</p>	<p>1 A. Yes.</p> <p>2 Q. Mr Ngai, were you involved in any way in reviewing</p> <p>3 CM Wong's report or proposal, outline proposal, before</p> <p>4 it was sent out to government?</p> <p>5 A. We did not conduct any review, because it was a proposal</p> <p>6 from an independent expert or consultant, CM Wong</p> <p>7 &amp; Associates.</p> <p>8 Q. Right. Did you see the report before it was forwarded</p> <p>9 to government?</p> <p>10 A. Yes, I saw the report first.</p> <p>11 Q. Okay. If we go to the report, which is the -- the front</p> <p>12 sheet is the next page, 3020, and then at 3022 we can</p> <p>13 see a table of contents, and then at 3025 we see</p> <p>14 a heading, "Extent of issue"; do you see that, Mr Ngai?</p> <p>15 A. Yes.</p> <p>16 Q. What is said there is:</p> <p>17 "According to [the MTR report]" -- that's the one we</p> <p>18 were looking at before lunch -- "the total number of</p> <p>19 couplers connecting the EWL track slab to the eastern</p> <p>20 and western diaphragm walls is approximately 23,500", as</p> <p>21 we have seen, "and the horizontal couplers under concern</p> <p>22 are located at the junction between the eastern</p> <p>23 diaphragm wall and the EWL track slab between</p> <p>24 gridlines 15 and 50 (ie areas B and C)."</p> <p>25 Do you see that?</p>
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<p>1 Prof Hansford.</p> <p>2 Good afternoon, Mr Ngai. Just a few more questions</p> <p>3 from me.</p> <p>4 Can I ask you, please, Mr Ngai, to be shown</p> <p>5 bundle H8, page 3017. Mr Ngai, this is a letter from</p> <p>6 the Highways Department to Dr Philco Wong, dated 31 May</p> <p>7 this year. Is this a letter you've seen before,</p> <p>8 Mr Ngai?</p> <p>9 A. Yes, I have.</p> <p>10 Q. It's the letter that was written shortly after all the</p> <p>11 publicity in the media at the end of May about cut</p> <p>12 threaded rebar, and what the Highways Department were</p> <p>13 requesting from MTR was a load test to be conducted by</p> <p>14 an independent expert, and you probably recall that</p> <p>15 request being made, Mr Ngai; is that right?</p> <p>16 A. Yes, correct.</p> <p>17 Q. And the independent expert that MTR engaged was a firm</p> <p>18 called CM Wong &amp; Associates; is that right?</p> <p>19 A. Yes.</p> <p>20 Q. If you would be good enough to be shown the next page,</p> <p>21 at 3019, two pages on, on 22 June, so some three weeks</p> <p>22 later or so, Mr TM Lee, the general manager for the</p> <p>23 project and head of E&amp;M construction, sent to the</p> <p>24 government a structural safety test outline proposal,</p> <p>25 prepared by CM Wong &amp; Associates. Do you see that?</p>	<p>1 A. Yes.</p> <p>2 Q. Then over the page, at 3026, CM Wong set out a list of</p> <p>3 information provided by MTRC; do you see that?</p> <p>4 A. Yes.</p> <p>5 Q. Again, Mr Ngai, were you involved in the provision of</p> <p>6 this information to Mr Wong -- or to CM Wong, rather?</p> <p>7 A. It was prepared by the design management team. We</p> <p>8 provided drawings and documents to CM Wong &amp; Associates</p> <p>9 Ltd.</p> <p>10 Q. Who decided what information they were going to give to</p> <p>11 CM Wong &amp; Associates?</p> <p>12 A. Back then, we had meetings with CM Wong. Information he</p> <p>13 required was provided by us.</p> <p>14 Q. So it was really a process of him asking you for</p> <p>15 information and then you complying with his requests?</p> <p>16 A. Yes, roughly so.</p> <p>17 Q. All right. Was Mr CM Wong himself dealing with this</p> <p>18 matter?</p> <p>19 A. Mr Wong and his colleague Mr Leung were both involved.</p> <p>20 Q. Mr Leung?</p> <p>21 A. (In English) Yes.</p> <p>22 Q. Okay. If you look at the list of information that is</p> <p>23 set out on this page, and go about halfway down, under</p> <p>24 the heading "As-built drawing", you will see the fourth</p> <p>25 and fifth items there listed are firstly the "Coupler &amp;</p>

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<p>1 bend-out bar schedule for area B", and the "Coupler 2 schedule for area C (sheet 1 and 2)". 3 Do you know, Mr Ngai, what those documents are? 4 A. My recollection is there were schedules on the number of 5 couplers in each panel. 6 Q. So just a schedule of couplers for each panel? Were 7 they stand-alone documents? Were they documents 8 prepared specifically for the purposes of giving 9 Mr Wong? Were they contemporary documents? Do you have 10 any recollection? Because I'm bound to say I haven't 11 been able to find them or identify them. 12 A. In my recollection, they were as-built drawings. 13 Q. All right. So I showed you a document, one of the 14 series of documents before lunch; remember the one 15 signed by Mr Kobe Wong? Do you remember that? We 16 looked at it before lunch. It wasn't those documents; 17 it was something different, was it? 18 A. I can't remember. No, no, they were not such -- they 19 were not those documents. I believe those coupler 20 schedules were as-built documents submitted to the 21 Buildings Department. 22 Q. I see. So as-built diaphragm wall drawings? 23 A. Yes. 24 Q. Okay. 25 Then can I ask you, please, to go to page 3378 in</p>	<p>1 diaphragm wall. The sketches indicate that for bays 2 C1-1 and 1875, horizontal couplers were used for both 3 the top and bottom reinforcements of the track slab. 4 However, for the remaining portions, couplers were used 5 only for connecting the bottom reinforcement to the 6 diaphragm wall and no coupler was employed for the top 7 reinforcement. In other words, except for the width of 8 13 metres, encompassing bays C1-1 and 1875, no couplers 9 were used for all the top reinforcement. For ease of 10 reference, we enclose the two sketches with this 11 letter." 12 Mr Ngai, first of all, what that letter suggests is 13 that you personally, first of all, attended a meeting 14 with Mr Wong and perhaps Mr Ben Leung on 16 July this 15 year; is that right? 16 A. Yes. 17 Q. That you handed to him the two sketches that we will 18 look at in a moment, Mr Leung that is? 19 A. Yes. 20 Q. And would this be right, that by this time you, the 21 MTRC, had realised that, essentially, there were some 22 very material errors in the MTRC report of 15 June? 23 A. Correct. 24 Q. And that the information that you had given to Mr Wong 25 for the purposes of his outline proposal was not the</p>
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<p>1 the same file. This is now a letter -- we're now at 2 18 July, so we've moved on another month. 3 Sorry, sir, did you want to ask a question? 4 COMMISSIONER HANSFORD: Yes. At the bottom of that letter, 5 there's a list of the partners in CM Wong, and I'm just 6 wondering whether that is the Mr Leung that we're 7 referring to, Mr Ben CH Leung? 8 MR PENNICOTT: Yes, sir, and he's also referred to in the 9 first line of this letter. I will get Mr Ngai to 10 confirm but I'm pretty sure that's right. 11 COMMISSIONER HANSFORD: Thank you. 12 MR PENNICOTT: Let's just deal with that first point. Just 13 looking at the list of partners at the bottom of the 14 letter, the two people dealing with it were, from 15 CM Wong's point of view, Mr Wong himself, and Mr Ben 16 Leung; is that correct? 17 A. Yes. 18 Q. We can see, from the first line of this letter, that 19 what he says is this -- and this was signed by Mr Wong 20 himself: 21 "During the meeting at our office on 16 July 2018, 22 Mr Clement Ngai [that's you] handed to our Mr Ben Leung 23 two sketches, 'Attachment B' and 'Attachment C', which 24 show the as-built record of the connection details of 25 the eastern support of the EWL track slab with the</p>	<p>1 full and accurate information that he needed? 2 A. In June, we handed CM Wong the information available at 3 that time. For these two sketches, these were attached 4 to the letter sent to the RDO on 13 July. 5 Q. Right. So you would have found out by 13 July what the 6 position was, and you were now informing Mr Wong? 7 A. Correct. 8 Q. Mr Ngai, what role did you play, personally, in 9 discovering the errors that had occurred in the 15 June 10 2018 report? 11 A. Can we take a look at attachment B and attachment C? 12 Q. Of course. 13 A. To my memory, the information was provided by the 14 construction team. I only learned about it later in 15 July. 16 Q. Let's look at attachment B first. It's at 3380. 17 A. Mmm. 18 Q. So that's the first detail, and, as I understand it, 19 Mr Ngai, this is showing, as it says on its face, the 20 position in relation to areas C1-1 and 1875. 21 A. Mm-hmm. 22 Q. That is, it is showing the original approved design 23 using rebar and couplers? 24 A. Yes, that is what is set out in the 13 July letter. 25 Q. All right. The other detail is over the page at 3381.</p>

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<p>1 At this point in time, your understanding was that the 2 remainder of areas B and C were constructed as per this 3 detail? 4 A. Correct. 5 Q. Mr Ngai, following this letter, the letter to the RDO on 6 13 July, your meeting with Mr Wong on 16 July, Mr Wong's 7 letter that we've just been looking at on 18 July, did 8 you thereafter, you personally again, have a continuing 9 role in providing Mr Wong, CM Wong &amp; Associates, with 10 further information? 11 A. I recall that later on, the construction team colleagues 12 have retrieved even more updated information, and to my 13 recollection such information was also passed to CM Wong 14 &amp; Associates Ltd. 15 Q. Did the construction team that you've just described, 16 your colleagues in the construction team, pass that 17 information to you in the design team before it was 18 passed on to CM Wong? 19 A. I can't recall this point. 20 Q. All right. 21 If we could go, please, to 3390. We are now at 22 30 August 2018, do you see that, some six weeks on from 23 where we were previously? What has happened during this 24 period, amongst other things, is that Mr Neil Ng has 25 become the project manager -- sorry, is the project</p>	<p>1 information provided. 2 Then in the next paragraph he says this: 3 "Subsequent to the response, MTRC further provided 4 in several occasions more as-built records of couplers 5 in late July 2018." 6 Is that a reference to what you mentioned just 7 a moment ago, Mr Ngai, that is the construction team 8 providing yet further information to Mr Wong for his 9 consideration? 10 A. Correct. 11 Q. He goes on to say: 12 "CMA had requested on 10 August 2018 a set of the 13 amended drawings to be submitted to RDO but now without 14 such drawings, CMA have amalgamated the latest 15 information, which consist of 11 types of as-built 16 connection details, into a single drawing as attached. 17 It was noted that no top couplers are used in 18 area 1875." 19 Mr Ngai, why were you unable to provide Mr Wong with 20 as-built records of couplers? 21 A. Because the construction management team then was 22 working together with the contractors to retrieve 23 construction records. 24 Q. And why were you unable to provide amended drawings to 25 Mr Wong as he requested?</p>
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<p>1 manager, but also I think had been, as we saw earlier -- 2 A. Yes. 3 Q. -- made the competent person? 4 A. Correct. 5 Q. Because, unfortunately, a number of your colleagues at 6 the MTR, around about 7 and 8 August, had been -- their 7 contracts had been terminated? 8 A. Correct. 9 Q. What Mr Ng is doing is sending to government an updated 10 or a different load test proposal; do you see that? 11 A. Yes. 12 Q. Presumably, you would have had a look at this before it 13 was sent out? 14 A. Yes, we have seen it, but I have not reviewed it in 15 detail. 16 Q. All right. If we go to page 3397, there is a synopsis 17 provided, and under the first heading some background 18 provided, in this report. 19 CM Wong refer to, in the second paragraph, the 20 outline proposal that had been prepared on 22 June 2018, 21 which we looked at earlier; do you see that? 22 A. Yes. 23 Q. Then in the next paragraph, skipping over the first 24 sentence, he then refers to the meeting on 16 July that 25 we've just touched upon, and the as-built updated</p>	<p>1 A. To my understanding, the construction team and the 2 contractor were trying to find the information, to come 3 up with updated drawings. 4 Q. Were you involved in that process, Mr Ngai, at all? 5 A. We knew that there was updated information, but I was 6 not directly involved in the process. 7 Q. Before information was passed to Mr Wong, would you get 8 to see it yourself first, or did the construction team 9 and your design managers just pass it straight to 10 Mr Wong? 11 A. Well, on most occasions, the information was directly 12 passed on to CM Wong &amp; Associates Ltd. 13 Q. So you didn't think it appropriate for you to oversee 14 this process of information flow to Mr Wong? 15 A. I believe that they could directly provide the 16 information to CM Wong &amp; Associates Ltd. 17 MR PENNICOTT: All right. Mr Ngai, thank you very much. 18 I have no further questions for you, but others may 19 have. 20 MR SO: No questions from China Technology. 21 CHAIRMAN: Thank you. 22 MR WILKEN: No questions from Leighton. 23 MR CONNOR: No questions from Atkins. 24 MR CHOW: Mr Chairman, I have some questions for Mr Ngai. 25 CHAIRMAN: Yes.</p>

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<p>1 Cross-examination by MR CHOW</p> <p>2 MR CHOW: Good afternoon, Mr Ngai. My name is Anthony Chow</p> <p>3 and I represent the government, and I have a few</p> <p>4 questions regarding the design of the project that</p> <p>5 I would like to explore with you.</p> <p>6 Mr Ngai, there is an entrustment agreement between</p> <p>7 the government and MTRC in relation to the SCL project.</p> <p>8 Are you aware of that agreement?</p> <p>9 A. Yes.</p> <p>10 Q. Under that entrustment agreement, there is a series of</p> <p>11 entrustment activities that MTRC has to undertake in</p> <p>12 relation to the project. Are you aware of that?</p> <p>13 A. Yes.</p> <p>14 Q. One of those activities actually concerns the detailed</p> <p>15 design of the works. Are you also aware of that?</p> <p>16 A. Yes.</p> <p>17 Q. Am I correct to say that for that purpose, MTRC engaged</p> <p>18 Atkins to carry out the detailed design for the works?</p> <p>19 A. Yes, for the Hung Hom Station part.</p> <p>20 Q. Yes, Hung Hom Station; right?</p> <p>21 A. (In English) Yes.</p> <p>22 Q. Notwithstanding that, MTRC would oversee the detailed</p> <p>23 design performed by Atkins, in the sense that to make</p> <p>24 sure that the detailed design form was proper?</p> <p>25 A. Correct.</p>	<p>1 Q. And in the diagram under note 1, you can see two boxes</p> <p>2 shaded, which indicate to be ductility zones; do you see</p> <p>3 that?</p> <p>4 A. Yes.</p> <p>5 Q. Can you confirm that these two boxes shaded represent</p> <p>6 part of the diaphragm wall?</p> <p>7 A. Yes, they should be the diaphragm wall.</p> <p>8 Q. Because to the right of the diaphragm wall we see "EWL</p> <p>9 slab" and then below it is the "NSL slab"; you also see</p> <p>10 that, right?</p> <p>11 A. Yes.</p> <p>12 Q. Do you agree with me that the diaphragm wall would</p> <p>13 involve the use of couplers, both vertically, for the</p> <p>14 purpose of connecting different cages of -- the</p> <p>15 reinforcement cages inside the diaphragm wall?</p> <p>16 A. Yes.</p> <p>17 Q. And it also contained couplers placed horizontally for</p> <p>18 the purpose of connecting to the horizontal</p> <p>19 reinforcement coming in from the slabs?</p> <p>20 A. I know that there are lateral slabs -- lateral bars from</p> <p>21 the slabs to be connected, but they are not shown on the</p> <p>22 diagram.</p> <p>23 Q. Yes. I'm going to take you to another drawing which</p> <p>24 shows the horizontal couplers, but before that can I get</p> <p>25 you to confirm that the requirement set out under note 1</p>
<p>Page 90</p> <p>1 Q. Is that the position?</p> <p>2 A. Correct.</p> <p>3 Q. Can I then ask you to take a look at one of the</p> <p>4 drawings: bundle H2, page 440, please.</p> <p>5 What you see on the screen is one of the design</p> <p>6 drawings submitted by MTRC to the Buildings Department,</p> <p>7 and this drawing was accepted by the Buildings</p> <p>8 Department. Can you confirm that?</p> <p>9 A. This is an Atkins drawing, but exactly which drawing was</p> <p>10 submitted to the Buildings Department I'm not so sure.</p> <p>11 Q. That's fine. You can take it from me that this is one</p> <p>12 of the drawings Buildings Department received from MTRC,</p> <p>13 and this drawing was accepted by the Buildings</p> <p>14 Department.</p> <p>15 What I want to ask you is -- I would like you to</p> <p>16 focus on the lower right-hand side of the drawing, which</p> <p>17 shows -- you see there's a diagram, and the heading is</p> <p>18 "Notes on diaphragm wall couplers"; do you see that</p> <p>19 part?</p> <p>20 A. Yes.</p> <p>21 Q. Under note 1, it provides that:</p> <p>22 "Couplers positioned within the zone shown below</p> <p>23 shall be classified as ductility couplers."</p> <p>24 Do you see that?</p> <p>25 A. Yes.</p>	<p>Page 92</p> <p>1 for ductility couplers to be used in the zone, would it</p> <p>2 include -- if there is any horizontal couplers to be put</p> <p>3 inside the diaphragm wall for connecting -- for the</p> <p>4 future connection with the slab, that would also be</p> <p>5 included, under note 1?</p> <p>6 A. Should be the case.</p> <p>7 Q. Can I then refer you to another drawing, at bundle H4,</p> <p>8 page 725, please. You can also take it from me that</p> <p>9 this is also one of the drawings submitted by MTRC to</p> <p>10 the Buildings Department and was accepted by the</p> <p>11 Buildings Department.</p> <p>12 If we now focus on the diagram in the middle of the</p> <p>13 drawing, and the top part of it, if we can have it blown</p> <p>14 up a little bit -- right. Now, you see -- can you</p> <p>15 confirm that the darkened rectangular boxes represent</p> <p>16 the horizontal couplers, those to be used to connect to</p> <p>17 the slab?</p> <p>18 A. Yes.</p> <p>19 Q. If we can now move to the right side of the drawing, the</p> <p>20 upper part, showing the legend -- right -- do you see,</p> <p>21 under the word "Legend", there are a few symbols, and</p> <p>22 one of those symbols is a darkened rectangular box put</p> <p>23 in a vertical direction; do you see that?</p> <p>24 A. Yes.</p> <p>25 Q. And next to it there is a description called "Ductility</p>

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<p>1 coupler"; do you see that?</p> <p>2 A. Yes.</p> <p>3 Q. Does it mean that the boxes, the darkened boxes,</p> <p>4 represent ductility couplers?</p> <p>5 A. Yes.</p> <p>6 Q. And does it mean that this is what is specified by MTRC</p> <p>7 in the contract with Leighton?</p> <p>8 A. Yes.</p> <p>9 Q. This morning, Mr Stephen Lumb's evidence is that, as</p> <p>10 a structural engineer, he finds this is not necessary.</p> <p>11 Do you agree with this?</p> <p>12 A. Well, for every design, we have to follow the design of</p> <p>13 the consultant.</p> <p>14 Q. Do you think there is a technical justification for</p> <p>15 specifying ductility couplers in those locations?</p> <p>16 A. The consultant might have taken into account the loading</p> <p>17 of the joint, and therefore the consultant has specified</p> <p>18 this kind of coupler.</p> <p>19 MR CHOW: Thank you, Mr Ngai.</p> <p>20 Mr Chairman, I have no more questions.</p> <p>21 MR BOULDING: Sir, I have no questions. Unless the good</p> <p>22 professor or yourself have any questions, perhaps the</p> <p>23 perhaps could be released.</p> <p>24 CHAIRMAN: Thank you very much indeed. Thank you. Your</p> <p>25 evidence is completed now. Thank you for your</p>	<p>1 Q. Subject to those corrections, are the contents of that</p> <p>2 first witness statement true to the best of your</p> <p>3 knowledge and belief?</p> <p>4 A. Yes.</p> <p>5 Q. We know you have also prepared a reply witness</p> <p>6 statement, and I wonder if you could be taken to</p> <p>7 page B24513. Do we there see the first page of your</p> <p>8 reply statement, Mr Leung?</p> <p>9 A. Yes.</p> <p>10 Q. If you can be taken on, please, to page B24517, and do</p> <p>11 we there see your signature under the date of 7 November</p> <p>12 2018?</p> <p>13 A. Yes.</p> <p>14 Q. Are the contents of that statement true to the best of</p> <p>15 your knowledge and belief, Mr Leung?</p> <p>16 A. Yes.</p> <p>17 Q. Do those two statements contain the evidence that you'd</p> <p>18 like to put before the Commission?</p> <p>19 A. Yes.</p> <p>20 Q. Now, Mr Leung, before I hand you over for questioning,</p> <p>21 it's become something of a convention to see where</p> <p>22 people like you are to be found in organisation charts,</p> <p>23 so I wonder if we could assist the Commissioners by</p> <p>24 going to page B627.</p> <p>25 We can see, at the bottom left-hand corner, CAN we</p>
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<p>1 assistance.</p> <p>2 (The witness was released)</p> <p>3 MR BOULDING: Sir, my next witness is Mr Andy Leung.</p> <p>4 Good afternoon, Mr Leung.</p> <p>5 WITNESS: (Via interpreter) Good afternoon.</p> <p>6 MR LEUNG FOK VENG, ANDY (affirmed in Punti)</p> <p>7 (All answers given via simultaneous interpreter</p> <p>8 except where otherwise specified)</p> <p>9 Examination-in-chief by MR BOULDING</p> <p>10 MR BOULDING: Splendid, Mr Leung.</p> <p>11 Could you give your full name, please, to the</p> <p>12 learned Commissioners.</p> <p>13 A. Leung Fok Veng.</p> <p>14 Q. Could you turn to page B239, and do we there see the</p> <p>15 first page of your first witness statement, Mr Leung?</p> <p>16 A. (Nodded head).</p> <p>17 Q. If you would be kind enough to be taken to page B258, do</p> <p>18 we there see your signature under the date of</p> <p>19 14 September 2018?</p> <p>20 A. Correct.</p> <p>21 Q. I understand that there are one or two corrections that</p> <p>22 you would like to make, so could you be taken to</p> <p>23 page B258.1. Do we there see, Mr Leung, the corrections</p> <p>24 you'd like to make to your witness statement?</p> <p>25 A. Correct.</p>	<p>1 not, that the positions set out there do not indicate</p> <p>2 seniority but it's effective from July 2013; do you see</p> <p>3 that? The bottom left-hand corner.</p> <p>4 A. Yes.</p> <p>5 Q. If we go up the page, we can see, can we not, your name</p> <p>6 and position, "Design manager", immediately below</p> <p>7 Mr Clement Ngai; correct?</p> <p>8 A. Yes.</p> <p>9 Q. Just to see how matters progressed, if we could then go,</p> <p>10 please, to B694. Here, bottom left-hand corner,</p> <p>11 "Effective July 2015", there we can see your name, can</p> <p>12 we not, Mr Leung, "Design manager -- SCL (EWL south)"?</p> <p>13 A. Correct.</p> <p>14 MR BOULDING: Now, the situation is that various lawyers in</p> <p>15 this room, Mr Leung, will ask you questions. The</p> <p>16 Commissioners can ask you questions at any time they</p> <p>17 consider it appropriate. Then I might take the</p> <p>18 opportunity to ask some further questions at the end.</p> <p>19 But for the time being, please stay there, and the</p> <p>20 first person to have a go, I suspect, will be my learned</p> <p>21 friend Mr Pennicott.</p> <p>22 Examination by MR PENNICOTT</p> <p>23 MR PENNICOTT: Good afternoon, Mr Leung.</p> <p>24 A. Good afternoon.</p> <p>25 Q. Mr Boulding is entirely right; I get to go first. As</p>

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<p>1 you know, I am one of the lawyers for the Commission. 2 Thank you very much for coming along this afternoon to 3 give your evidence. 4 Mr Leung, I want to discuss with you a few topics, 5 and they are as follows. First of all, I want to ask 6 you some questions about the respective roles of the 7 design management team and the construction management 8 team, and how they got along together, or didn't, as the 9 case may be. 10 The second thing I want to do is to talk to you, 11 briefly I hope, about the first design change that we 12 have been calling it, that is to the work that Intrafor 13 did on the diaphragm wall. 14 I then want to talk to you about the second change, 15 that is the further modifications that were made to the 16 top of the east diaphragm wall. 17 I then want to ask you some questions, fourthly, 18 about the QSP, that's the quality supervision plan, and 19 then perhaps at the end some general questions about 20 as-built records. 21 So that's the shape of it, Mr Leung. 22 Now, so turning to the first topic, that is the 23 design management and construction management teams -- 24 Mr Leung, you, as I understand it, have been MTRC's 25 design manager for contract 1112 since July 2012. Is</p>	<p>1 Q. The design management team was very much office-based; 2 is that correct? 3 A. Correct. 4 Q. We know, and we've seen with Mr Ngai, that under the 5 instrument of exemption, MTR was required to appoint 6 a competent person to deal with submissions to the 7 Buildings Department, amongst other things. 8 A. Correct. 9 Q. And we know, as we've seen with Mr Ngai, Mr Aidan Rooney 10 was the competent person from September 2013 to February 11 2015, and afterwards he was replaced by Mr Jason Wong? 12 A. Correct. 13 Q. However, if one actually looks at some of the 14 documentation -- I'll start again. We had a bit of 15 a glitch there. 16 A. (In English) Sorry, so ... 17 Q. Let me start again, Mr Leung. 18 A. (In English) Okay, sorry. 19 Q. Mr Leung, I am noticing that you are watching the screen 20 that's in front of you. I think you're the first 21 witness that's had the LiveNote transcript in front of 22 you, as far as I'm aware -- I may be wrong about that -- 23 but I don't want you to be distracted by it. If you are 24 going to be helped by it, that's fine, but I don't want 25 you to be distracted by it. Do you understand?</p>
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<p>1 that right? 2 A. Correct. 3 Q. In essence, you are the head of MTRC's design management 4 team for this project? 5 A. In relation to SCL, as pointed out by Mr Ngai, there are 6 three design managers. I was one of them. I worked 7 from Sung Wong Toi Station to Hung Hom Station, that 8 Section that I worked on, and contract 1112 formed part 9 of my duties. 10 Q. All right. Let me be a bit more specific. We are 11 obviously concerned in this Inquiry with the Hung Hom 12 Station; yes? 13 A. Yes. 14 Q. And you were the design manager, the head of the design 15 management team, in respect of that station? 16 A. Correct. 17 Q. As we've just seen in the couple of questions that 18 Mr Boulding asked you, you reported to Mr Ngai? 19 A. Correct. 20 Q. As I understand it, Mr Leung, generally speaking, the 21 role of the design management team was to liaise with 22 MTR's detailed design consultant, namely Atkins, and 23 prepare design submissions to the Buildings Department. 24 Is that correct? 25 A. Correct.</p>	<p>1 A. (In English) Okay. Sorry. 2 Q. Let me start that question again. If one looks at some 3 of the documents, which we're about to do, in fact you 4 were very often the person who was responsible for 5 making submissions to the Buildings Department; is that 6 right? 7 A. Correct. 8 Q. Could we therefore look in that context, by way of 9 example, at B10/7256. 10 You will see there, or you should see there, 11 a letter of 29 July 2015 from MTR to the Buildings 12 Department; do you see that? 13 A. Yes. 14 Q. It's signed by you, as the design manager? 15 A. Correct. 16 Q. And it's submitting a "design report for the HUH station 17 excavation and lateral support area C1 and C2 -- 18 excavation below minus 5mPD (amendment submission)"; do 19 you see that? 20 A. Yes. 21 Q. In paragraph 1 it says -- you are submitting for comment 22 and agreement: 23 "1. 1 set of design report" -- and I'm not going to 24 read all that out" -- which are delivered to Pypun-KD as 25 per the agreed submission logistic."</p>

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<p>1 Do you see that?</p> <p>2 A. Yes.</p> <p>3 Q. Can you explain to me what "the agreed submission</p> <p>4 logistic" is a reference to?</p> <p>5 A. Yes. Very often, for the engineering submissions, they</p> <p>6 were usually very bulky. One submission could contain</p> <p>7 over 1,000 pages easily. And for the Shatin to Central</p> <p>8 Link Project, we agreed with BD -- BD engaged Pypun to</p> <p>9 review our submissions. So, for our drawings and</p> <p>10 submissions and the main report, they were directly</p> <p>11 delivered to Pypun's office, so that the report could be</p> <p>12 read the earliest and review could be done</p> <p>13 expeditiously.</p> <p>14 If that was not done, then we have to take the</p> <p>15 documents to the Buildings Department's office, which in</p> <p>16 turn had to send the documents to Pypun. So this was</p> <p>17 what I meant by "the agreed submission logistic" in this</p> <p>18 letter.</p> <p>19 Q. Right. So there was essentially a protocol in place</p> <p>20 that when a submission of this nature was being made to</p> <p>21 the Buildings Department, you were also required to give</p> <p>22 a physical hard copy to Pypun at the earliest</p> <p>23 opportunity?</p> <p>24 A. Correct.</p> <p>25 Q. Right. If you had feedback and comments on any of these</p>	<p>1 review the position perhaps when we break.</p> <p>2 CHAIRMAN: Has this just started now?</p> <p>3 MR PENNICOTT: It has, sir, and I don't quite know how or in</p> <p>4 what circumstances it started. I'm not aware of any</p> <p>5 previous witness having looked at the screen. Because</p> <p>6 I'm standing where I'm standing, because I've been</p> <p>7 asking the questions before, I've now picked up what's</p> <p>8 happened. I was unaware of it before we started.</p> <p>9 MR BOULDING: We understand it was provided by the</p> <p>10 Commission. It's not something we've asked for.</p> <p>11 MR PENNICOTT: No, it's not right. We haven't provided, as</p> <p>12 we suspect -- it's not us, I'm afraid. That's what my</p> <p>13 instructions are, anyway, and neither the Secretariat,</p> <p>14 so we haven't, as far as I'm instructed, provided it.</p> <p>15 Anyway, let's see how we go. We can either shut it</p> <p>16 down now or look at it during the tea break.</p> <p>17 CHAIRMAN: We'll do it at the break and I'll check into it</p> <p>18 as well.</p> <p>19 MR PENNICOTT: Yes, please, sir. Thank you very much.</p> <p>20 WITNESS: (After shutting the computer lid) I think it's</p> <p>21 better. Forget about it. Sorry for the trouble.</p> <p>22 MR PENNICOTT: If I may say so, Mr Leung, good decision.</p> <p>23 Mr Leung, just another example, just to emphasise</p> <p>24 the point. If you go in the same file to B10/7322,</p> <p>25 there's a similar letter from yourself, signed by</p>
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<p>1 submissions, they would, however, as I understand it,</p> <p>2 come from the Buildings Department itself, not from</p> <p>3 Pypun?</p> <p>4 A. Correct.</p> <p>5 Q. Right. So you would have expected, although you</p> <p>6 probably didn't know what was going on at the time,</p> <p>7 Pypun to liaise with the Buildings Department if they</p> <p>8 had any observations, and then the Buildings Department</p> <p>9 would formally respond to yourself?</p> <p>10 A. Yes, a formal response.</p> <p>11 Q. Okay.</p> <p>12 COMMISSIONER HANSFORD: Sorry, you said "formal response".</p> <p>13 Was there ever any informal response directly from</p> <p>14 Pypun?</p> <p>15 A. Yes.</p> <p>16 COMMISSIONER HANSFORD: So you could get informal response</p> <p>17 coming from Pypun, but formal response would always come</p> <p>18 from BD; is that correct?</p> <p>19 A. Correct.</p> <p>20 COMMISSIONER HANSFORD: Thank you.</p> <p>21 MR PENNICOTT: Sorry, sir, I'm slightly being distracted</p> <p>22 because I'm getting a message regarding whether or not</p> <p>23 the witness should be looking at the transcript in front</p> <p>24 of him. I understand that perhaps that shouldn't be the</p> <p>25 case. But anyway, let's see how we go from now and I'll</p>	<p>1 yourself, we can see from 7323, 30 July 2015, making</p> <p>2 another submission -- it doesn't matter what it is; I'm</p> <p>3 just doing this for an example -- and again copying the</p> <p>4 design report and the assessment report this time to</p> <p>5 Pypun, as per the agreed submission logistic that you've</p> <p>6 explained to us?</p> <p>7 A. Correct.</p> <p>8 Q. All right. Fine.</p> <p>9 Apart from the design team, you have the</p> <p>10 construction management team as well?</p> <p>11 A. Correct.</p> <p>12 Q. For the majority of the period with which we are</p> <p>13 concerned, that was headed up, as I understand it, by</p> <p>14 a Mr Kit Chan; is that correct?</p> <p>15 A. What do you mean by the majority of the period under</p> <p>16 your concern? Can you be more specific?</p> <p>17 Q. I can. From about November 2014 to May 2016,</p> <p>18 Mr Kit Chan was the head of the construction management</p> <p>19 team, so far as the Hung Hom Station is concerned?</p> <p>20 A. Correct.</p> <p>21 Q. In contrast to the design management team, the</p> <p>22 construction management team was to supervise the actual</p> <p>23 construction works and was very much a site-based team;</p> <p>24 is that correct?</p> <p>25 A. Correct.</p>

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<p>1 Q. However, the two teams presumably communicate with one 2 another; would that be right, Mr Leung? 3 A. Correct. 4 Q. So, by way of example, if Leighton wished to propose any 5 design changes, those changes would go to the 6 construction management team first for approval, and if 7 assented to by the construction management team, they 8 would send the proposed change to the design management 9 team for consideration? 10 A. Yes. 11 Q. And, as I understand it, there were perhaps weekly 12 design management/construction management coordination 13 meetings; is that correct? 14 A. Correct. 15 Q. And, as I understand it, occasionally, but I'm not quite 16 sure yet how often, you attended those coordination 17 meetings? 18 A. Correct. 19 Q. How often did you attend those weekly meetings, 20 Mr Leung? 21 A. At the early stage of the contract, because the meeting 22 was set up by me, so in the initial stage I attended 23 every meeting. However, as the contract was up and 24 running smoothly, I had my senior design engineer to 25 attend such meetings.</p>	<p>1 of matters that they had to follow up on? Would that be 2 right? 3 A. Correct. 4 Q. Okay. 5 Could I then move on to what we've called the first 6 change, Mr Leung. That is, to put it simply, although 7 I know it was more complicated than this, the removal or 8 the missing U-bars at the top of the diaphragm wall. 9 I think you know what I'm talking about, Mr Leung; yes? 10 A. Yes, I do. 11 Q. Good. That's a relief. 12 Is it correct, Mr Leung, that the Buildings 13 Department only discovered this change that had happened 14 on 14 April 2015 at a meeting which you attended? 15 A. Early 2015, yes, around that time, when we submitted the 16 completion certificate. 17 Q. Yes. You submitted the completion certificate in 18 a series of batches. 19 A. Correct. 20 Q. And it was the Buildings Department analysis and 21 consideration of those submissions that threw up the 22 fact that they then appreciated that the change had been 23 made, of which they had not been previously advised? 24 A. Yes, they were not previously advised. 25 Q. Yes. As I understand it, Mr Leung, from your witness</p>
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<p>1 Q. Right. And so far as, therefore, Hung Hom was 2 concerned, that would be who? 3 A. My senior design engineer, Kevin. 4 Q. Calvin ...? 5 A. Kevin Yip. 6 Q. Kevin Yip? Okay. I'm just coming to him as well. 7 We'll come to him in a moment. Okay. 8 Now, these weekly design management/construction 9 management coordination meetings, were they minuted? 10 A. No. 11 Q. Why not? 12 A. Because such meetings were short, and if minutes were to 13 be taken it might take more time to write the minutes 14 than the meeting itself. So they were just coordination 15 meetings. So, if the construction management team had 16 any queries for the design management team, they would 17 be raised at the meetings, and if we had submissions to 18 require the contractor to submit as soon as possible, 19 that would also be raised at such meetings. 20 Q. All right. So presumably, without any minutes of these 21 meetings -- and I understand your point about the 22 brevity of the meetings and no doubt the subject matter 23 didn't make it terribly easy to keep minutes, perhaps -- 24 so one would be reliant upon the attendees at that 25 meeting or those meetings, what, keeping their own notes</p>	<p>1 statement, you do not dispute that the first change 2 should have been submitted to the Buildings Department; 3 do you agree with that? 4 A. Correct. 5 Q. And that it should have been submitted to the Buildings 6 Department for agreement, or consultation perhaps, prior 7 to the commencement of the work that changed the detail? 8 A. Correct. 9 Q. If we could look, please, at bundle H11, at 5527. This 10 is your letter of 7 July 2015, submitting what is 11 described as "Incident report on diaphragm wall 12 reinforcement details at HUH". Do you see that? 13 A. Yes. 14 Q. If you go, please, to page 5531, you set out some 15 background, and then at 2, "Diaphragm wall design and 16 construction", and then the paragraph I would like to 17 focus on is 2.4 on page 5532, which says: 18 "Following the acceptance of the shop drawings, the 19 contractor's engineering team did not submit the amended 20 design formally for approval by MTRC in accordance with 21 the contract requirements. There was also some 22 miscommunication between the parties involved (1112 23 contractor's engineering and construction team, and 24 MTRC's construction management and design management 25 team) resulting in a misconception that the amended</p>

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<p>1 design had already covered in the subsequent design 2 amendment submission for the permanent works made by 3 C1106 DDC in September 2013. Unfortunately, this was 4 not the case and this inadvertent non-conformity was not 5 discovered until the preparation of certification of 6 completion of works ... in January 2015 for the first 7 batch of diaphragm wall panels constructed." 8 So, in a nutshell, Mr Leung, you were putting 9 forward essentially two reasons for the situation, or 10 the incident as you call it. One was that Leighton, the 11 contractor, did not submit the amended design formally; 12 yes? 13 A. Correct. 14 Q. And, secondly, that there was a miscommunication or 15 a breakdown in communication between Leighton and MTRC's 16 construction management team and the design management 17 team? 18 A. Correct. 19 Q. In relation to that last point, are you saying that 20 there was a breakdown in communication or 21 miscommunication between MTRC's construction management 22 team, on the one hand, and MTRC's design management team 23 on the other? 24 A. Well, it was not just between MTRC's construction 25 management and design management teams. It was also</p>	<p>1 to have occurred between the MTRC's construction 2 management team and your design team, because the 3 construction management team failed to inform you of the 4 change? 5 A. I beg to differ. 6 Q. Why do you beg to differ, Mr Leung? 7 A. Because if the contractor is changing the design of the 8 permanent works, it has the duty to inform the 9 construction management team and then inform the design 10 management team. 11 However, the construction management team --this is 12 just my speculation -- perhaps they didn't have 13 sufficient judgment to tell whether it was a change in 14 design, so they did not inform us. 15 So should there be any change in the permanent 16 works, then according to the contract requirements they 17 should inform us. They should inform the design 18 management team. 19 Q. When you say "They should inform us", are you talking 20 about the construction management team or Leighton? 21 A. (In English) Leighton. 22 Q. And so your position is this, is it, that it doesn't 23 matter that the construction management team of the MTRC 24 knew about this alteration and saw it being implemented, 25 saw it being constructed; there was still an obligation</p>
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<p>1 Leighton's, I mean the contractor, the miscommunication 2 between Leighton, which was the contractor, and our 3 side. 4 Q. But, Mr Leung, do you accept -- we can look at -- 5 there's a quick way and a long way of doing this -- do 6 you accept that in relation to this first change, the 7 construction management team knew about it when it was 8 instigated and implemented? 9 A. I think they should have known, because they were 10 supervising the process of work on a daily basis. 11 Q. Yes. You've no doubt heard, perhaps read, some of the 12 evidence from the Leighton witnesses, particularly 13 Mr Buckland, where he says it's quite clear from the 14 documents that the construction management team knew 15 about this right from the start. Have you reviewed that 16 material and do you agree with Mr Buckland? 17 A. I cannot say on behalf of the construction management 18 team whether they knew right from the start. As I said, 19 they were responsible for managing the daily works and 20 they should know. 21 Q. All right. You would have expected them to know? 22 A. (In English) Yes. 23 (Via interpreter) Correct. 24 Q. So would this be fair: if that is right, and I'm pretty 25 sure it is, Mr Leung, the real breakdown might be said</p>	<p>1 on Leighton to do exactly what, Mr Leung? 2 A. Correct. 3 Q. Yes, but do what? What did Leighton fail to do that you 4 say they should have done? 5 A. In this particular case, they have resorted to a shop 6 drawing approach to amend a design, and for shop drawing 7 submission, it should not be used for amendment to 8 permanent works. 9 So here there is a failure on their part. So the 10 incident report found this out, and that was one of the 11 problems identified in the incident report. 12 Q. First of all, let's start with Mr Buckland -- 13 CHAIRMAN: Sorry, could I ask -- I do apologise -- what's 14 a soft drawing approach? 15 MR PENNICOTT: I think it was "shop", sir. 16 CHAIRMAN: It's come out as "soft". 17 MR PENNICOTT: That's what I heard as well, but then 18 I realised I think he meant "shop". 19 CHAIRMAN: I do want to emphasise here that the 20 transcription service, day after day, has been superb, 21 so it's not a criticism. 22 MR PENNICOTT: Not at all, no, no. It did come out as 23 "soft" and that's what I heard but I thought it couldn't 24 be right. 25 Can we just look at C29/21522.</p>

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<p>1 I think this is perhaps the point you are making but 2 I'm not sure, Mr Leung. 3 We can see at C29/21522 that Leightons, under the 4 cover of a contractor's submission form, do you see 5 that, are submitting a number of shop drawings and bar 6 bending schedule for the diaphragm wall in area C; do 7 you see that? 8 A. Yes. 9 Q. That's on 23 August 2013, so quite near the beginning of 10 the diaphragm wall construction period? 11 A. Correct. 12 Q. If we go, please, to 21528, and you look at the section 13 in the top right-hand corner, I think you'll agree with 14 me, Mr Leung, that that shows the first change, that is 15 the U-bars have disappeared and you've got the bars 16 going straight across the top of the diaphragm wall? 17 A. Correct. 18 Q. If we could just go back to the cover sheet, so 21522, 19 it's being sent by Mr Plummer of Leighton to Mr Patrick 20 Cheng, then construction manager on 1112; do you see 21 that? 22 A. Yes, I see it. 23 Q. So it's quite clear, is it not, that as at 23 August 24 2013, MTRC had a drawing -- it might be a shop drawing 25 but they certainly had a drawing -- which showed the</p>	<p>1 Leighton, with the amended design, to pass it to you, 2 the design management team? 3 A. Well, in an ideal scenario, that would be good, but then 4 in this case that didn't happen. 5 Q. No. And because -- even though the construction 6 management team clearly knew about the proposal, and 7 then we know that the proposal was actually implemented, 8 because this information was not passed to the design 9 management team, you weren't put in a position, as 10 I understand it, to take a call on whether or not this 11 should have been submitted to the Buildings Department 12 before implementation? 13 A. Can you repeat the question, please? 14 Q. Yes. First of all, let me go back a stage. This 15 proposed revision in the shop drawing, had you had 16 notice of it back on 23 August 2013, would you have 17 concluded, Mr Leung, that this is something that should 18 have gone to Buildings Department at that time for 19 consultation? 20 A. Yes. 21 Q. And the reason it didn't go for consultation at that 22 time is because the construction management team didn't 23 inform the design management team of this proposed 24 change? 25 A. As I set out in my statement, the revision was contained</p>
<p>Page 114</p> <p>1 change, proposed change, of detail? 2 A. Correct. 3 Q. Can you explain why it is that that is not sufficient so 4 far as Leighton is concerned in fulfilling their 5 obligation to advise MTRC of a proposed design change? 6 A. As I said, these are shop drawings. It's for 7 implementing the works. If amendments are made to the 8 design of permanent works, without going through the 9 designer's review -- and that's what we are seeing 10 happening here, ultimately. It looks as if the 11 amendment is acceptable. But, if there was a thorough 12 review, then you will find that the design was 13 problematic. 14 Q. Mr Leung, the problem with that answer, and if I may say 15 so your approach on this particular issue, is this. 16 I thought you had agreed with me earlier that if, for 17 example, as I put it to you earlier, Leighton wished to 18 propose a design change, that change would go to the 19 contract management team of MTR first, as it did by 20 reference to this contractor's submission form. Do you 21 agree with that so far? 22 A. I don't agree. You should not do it by way of a shop 23 drawing submission to amend a permanent work design. 24 Q. Did you expect your construction management team, when 25 they received this contractor's submission form from</p>	<p>Page 116</p> <p>1 in an email which was copied to the design management 2 team, but we didn't pick that up. The design management 3 team did receive information on this amendment, but only 4 via an email copied to us. 5 MR PENNICOTT: Right. 6 Sir, would that be a convenient moment for 7 15 minutes? 8 CHAIRMAN: Yes, it would. Thank you. 15 minutes. Thank 9 you. 10 MR PENNICOTT: Thank you, sir. 11 (3.43 pm) 12 (A short adjournment) 13 (4.03 pm) 14 CHAIRMAN: Sorry, as to the use of the computer -- 15 MR PENNICOTT: Yes, sir. 16 CHAIRMAN: -- my understanding is that Mayer Brown asked 17 that a computer be put there. The request went direct 18 to the transcription service and bypassed us. It's 19 sounding a bit like an echo of the evidence. And we 20 were not aware of it. 21 MR PENNICOTT: Neither was I, sir. 22 CHAIRMAN: It has been done this way, apparently, in at 23 least one previous Commission of Inquiry. This is not 24 a trial, so we are not sort of giving a particular 25 advantage to one set of witnesses as against another.</p>

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<p>1 However, we haven't followed that procedure so far, and 2 I think for purposes of consistency it's probably easier 3 if the computer be closed for the witness, but if 4 there's good reason why it needs to be opened then 5 obviously we are happy to consider any request. 6 MR PENNICOTT: Yes, sir. Thank you very much. 7 MR BOULDING: Sir, that's absolutely right. I carried out 8 a certain amount of extracurricular cross-examination 9 and established over the tea break that indeed we had 10 asked for it, Mayer Brown had asked for it, and they did 11 so on the basis that there was a precedent. You will 12 probably recall that Mr Poon had it in front of him 13 during the course of his evidence. 14 CHAIRMAN: Did he? I didn't notice that. 15 MR BOULDING: I do apologise. 16 CHAIRMAN: There's no need to apologise at all. In fact 17 Mayer Brown were obviously alert to the fact that there 18 was precedent and they thought that if it may be of 19 assistance then they would assist their client, so 20 there's nothing to criticise. But I just think for 21 consistency, although that seems to have been shot down 22 slightly, because it seems one of the principal 23 witnesses had that assistance right at the beginning. 24 COURT REPORTER: Excuse me, I don't think Jason Poon did 25 have the transcript.</p>	<p>1 If we could enlarge the centre bit a little bit 2 more, please. That's fine, thank you very much. But 3 now I can't see the date. Thank you very much. 4 You will see from the top, Mr Leung, it's 2 July 5 2013, and then, if we go further down, the email is from 6 Mr Buckland and goes to, as you say, Mr Leo Wong from 7 Atkins team A; do you see that? 8 A. Yes, I see that. 9 Q. Then to CS Tang, who's from MTR -- is he from the design 10 team? 11 A. Yes, CS Tang is a member of the design team. 12 Q. Right. Then also to Patrick Cheng, who we've seen 13 already is the construction manager in the construction 14 management team? 15 A. Correct. 16 Q. And this is the email that you're referring to in your 17 statement; have I got that right? 18 A. Let me take a look at my witness statement again to 19 ascertain that this is the date of the email. 20 Q. Yes. 21 A. Correct. That's from Brett to Leo, that's correct. 22 Q. Okay. Is it this email that attached some shop drawings 23 that you say, well, it was sent to Mr Tang and 24 Mr Cheng -- Mr Tang was part of the design team, Mr Leo 25 Wong part of Atkins team A -- and you just didn't spot</p>
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<p>1 CHAIRMAN: It would seem not. In any event, I don't want to 2 go into historical argument. We will leave it as it is. 3 Sometimes, for example, if a witness says, "Look, 4 I didn't get that question", you could then say, "It's 5 there on the transcript, would you like to read it?", 6 rather than having to repeat the whole thing. 7 MR BOULDING: I do have the right to cross-examine the 8 transcript writer on this occasion! 9 CHAIRMAN: Yes. Thank you. 10 MR PENNICOTT: I'll say no more about it. 11 CHAIRMAN: Yes, Mr Pennicott? 12 MR PENNICOTT: Mr Leung, hello again. 13 A. Good afternoon. 14 Q. Could we, please, look at what I understand to be the 15 email that you referred to just before we broke for 16 a short break. Could you go, please, to paragraph 35 of 17 your witness statement, which is in B1, page 248. 18 You will see there, Mr Leung, you said this: 19 "By email to Mr Leo Wong (design liaison 20 representative of Atkins' team A) dated 2 July 2013, 21 Leighton sought comments on its shop drawings including 22 these changes to the rebar arrangement in of the 23 diaphragm wall. This email was copied to MTRC's CM and 24 DM teams." 25 Pausing there, could we look, please, at B11/8221.</p>	<p>1 the change in the shop drawings? 2 A. Correct. As I said in my statement, I didn't deal with 3 this submission personally. 4 Q. No, but you accept, quite rightly, that the material, 5 the shop drawings, and so forth, went to members of your 6 design -- a member of your design team? 7 A. Correct. 8 Q. All right. And of course this email is dated 2 July 9 2013, so it came before the contractor's submission form 10 dated 23 August that we were looking at before we had 11 a short break? 12 A. Yes, I guess so, because in the team, whether there were 13 further other correspondences or emails, I'm not sure. 14 I just managed to retrieve this email which could 15 confirm that Leighton had sent to the DLR and copied 16 them to the DM team. 17 Q. And so, as it happens, although we hear what you say 18 about the design management team not spotting or not 19 appreciating what they were being shown, on one view of 20 the position, Mr Leung, both from the MTRC construction 21 management team and the design team, knew about this 22 proposed change? 23 A. Correct. 24 Q. So your only complaint, as I understand it, can be that 25 somehow Leighton should have gone further and made some</p>

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<p>1 formal submission to the MTR?</p> <p>2 A. In design management, that should have been done, that</p> <p>3 must be done.</p> <p>4 Q. All right.</p> <p>5 Just to finish this point off, I'm not going to read</p> <p>6 it all out, but in the rest of paragraph 35 of your</p> <p>7 witness statement, you make the point about Leighton not</p> <p>8 having made any formal proposals; as a consequence, the</p> <p>9 changes were not submitted to BD, it wasn't spotted</p> <p>10 until after the first batch -- by BD, that is, until</p> <p>11 after the first batch had been submitted in January</p> <p>12 2015, and that you personally only became aware of it</p> <p>13 after that date?</p> <p>14 A. Correct.</p> <p>15 Q. Just one last question on that then, Mr Leung. When you</p> <p>16 say, or when you agreed with me that some formal</p> <p>17 proposal should have been made, what form should that</p> <p>18 have taken? What do you mean by a formal proposal?</p> <p>19 A. In contract 1112, there was a work proposal mechanism,</p> <p>20 a work proposal meeting, and in those meetings, the</p> <p>21 contractor was provided with a forum to raise proposals</p> <p>22 relating to changes in permanent works, and on that</p> <p>23 platform or at the proposal group, then we could discuss</p> <p>24 whether to proceed with the changes, considering whether</p> <p>25 there were benefits to be brought to the project.</p>	<p>1 A. Correct.</p> <p>2 Q. And presumably failed to tell anybody else in your</p> <p>3 design management team?</p> <p>4 A. You may say so. They have not told anyone of the DM</p> <p>5 team.</p> <p>6 Q. I'm just going to try to limit what we need to look at,</p> <p>7 Mr Leung. Could I ask you, however, to consider one</p> <p>8 particular document, one particular email, that you</p> <p>9 sent. It's an email that Mr Cheuk discussed with</p> <p>10 Mr Taylor the other day.</p> <p>11 Could I ask you, please, to look at B10/7249.</p> <p>12 This is an email that you sent, Mr Leung, to</p> <p>13 Mr Taylor, copying others, on 25 July 2015; do you see</p> <p>14 that?</p> <p>15 A. Yes.</p> <p>16 Q. We've had some difficulty working out, Mr Leung,</p> <p>17 precisely what you meant by some or perhaps all of this</p> <p>18 email, so I'm going to see if we can break it down.</p> <p>19 You start off by saying:</p> <p>20 "Justin,</p> <p>21 Portion of the wall should be cast together with the</p> <p>22 OTE slab as a good practice."</p> <p>23 Does that mean that you were in agreement with the</p> <p>24 monolithic proposal of construction, Mr Leung?</p> <p>25 A. I entirely disagree.</p>
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<p>1 Q. Right. So it should have been raised, you say, at one</p> <p>2 or other of the forum for changes to the permanent works</p> <p>3 or the project group meetings; is that really what it</p> <p>4 comes to?</p> <p>5 A. Correct.</p> <p>6 Q. All right.</p> <p>7 Can we move on to the second change, that is the</p> <p>8 further change to the top of the east diaphragm wall.</p> <p>9 Now, again, there's a long and a short way of doing</p> <p>10 this, Mr Leung. The basic change from the coupler</p> <p>11 arrangement to the through-bar arrangement -- with which</p> <p>12 we are all familiar and I'm sure you're very familiar,</p> <p>13 Mr Leung -- do you accept the general proposition that</p> <p>14 when that change was implemented on site by Leighton,</p> <p>15 the MTR construction management team knew about it?</p> <p>16 A. As I said -- I could not answer this question on behalf</p> <p>17 of the CM team. But general or common sense would say</p> <p>18 that they were monitoring the works on site on a daily</p> <p>19 basis. Logically speaking, they should know.</p> <p>20 Q. Mr Leung, were you personally aware of it?</p> <p>21 A. No, not until July this year, at around July.</p> <p>22 Q. Okay. So that would suggest, would it not, that if the</p> <p>23 construction management team, as a matter of common</p> <p>24 sense, ought to have known about it, they failed to tell</p> <p>25 you personally?</p>	<p>1 Q. What did you mean by the first sentence?</p> <p>2 A. The first sentence means -- now, if the Commission may</p> <p>3 show the sketch of the previous email to facilitate my</p> <p>4 explanation.</p> <p>5 Q. Yes.</p> <p>6 A. If not, I will try my best.</p> <p>7 Q. We can see the sketch. It's at B5/2992.</p> <p>8 A. First, I'd like to explain -- now, the heading of the</p> <p>9 email was "OTE wall", "Updated OTE wall". That's the</p> <p>10 subject. So I was talking about the OTE wall. Which</p> <p>11 part of the OTE wall? It was not the diaphragm wall.</p> <p>12 If we may, I will look at the sketch on the right-hand</p> <p>13 side of the monitor. Yes.</p> <p>14 Q. Detail 2?</p> <p>15 A. (In English) Either detail 1 or detail --</p> <p>16 (Via interpreter) Detail 2 or 1 will do. Let's look</p> <p>17 at detail 1.</p> <p>18 Q. Okay.</p> <p>19 A. On the right-hand side of detail 1, can you see "OTE</p> <p>20 wall"? Can you see this triangular symbol, "OTE wall</p> <p>21 CJ"?</p> <p>22 Q. Yes.</p> <p>23 A. So this email said that -- I was talking about this OTE</p> <p>24 wall and the slab should be cast together as a good</p> <p>25 practice. Now, if you read the whole email again, the</p>

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<p>1 subject of the argument is Atkins had a team, had 2 a design team, who said that the OTE wall on the right 3 did not have to be cast together with the OTE slab, and 4 the engineer, WC Lee, said no, the two should be cast 5 together. 6 If I may refer you to the email dated 21 July. 7 Q. It's the next page? 8 A. Page B7250, the last paragraph. Now, it says here that 9 the OTE wall -- 10 (In English) I can't read. 11 (Via interpreter) Because the page number has 12 blocked the letters there. 13 Q. Sorry, are you reading the sentence -- 14 A. The very last paragraph: 15 "(In English) Even though the horizontal slab have 16 sufficient length to form the tension anchorage for the 17 slab rebar, the OTE wall still" -- I can't read because 18 the number here, right -- "the OTE wall [shall] be 19 concrete concurrently with the EWL slab ..." 20 Q. "[Shall] need to be"? 21 A. (In English) Yes. 22 (Via interpreter) So two design team members had 23 different views on this. 24 So on 24 July Justin Taylor, in his email sent at 25 1910 hours, sent to Brendan Redican and myself asking</p>	<p>1 it was the design submission that we wanted to go to. 2 WITNESS: Yes, that's right. 3 MR PENNICOTT: Just give me the page number again? 4 MR LAM: C27. 5 COMMISSIONER HANSFORD: It's the next one, actually. That 6 one. I was trying to work out where this extra CJ is 7 that Mr Leung is referring to. 8 A. (In English) Can I -- I think it's better use the 9 previous figure. 10 (Via interpreter) This one. What I meant was if the 11 OTE slab -- 12 (In English) Can you move the hand to show which 13 part is ... 14 (Via interpreter) The vertical part is the OTE wall. 15 The horizontal part is the OTE slab. If the OTE wall 16 and the OTE slab are not cast together, then there will 17 be a construction joint in the green part. 18 COMMISSIONER HANSFORD: Yes. But isn't what was being 19 proposed the next diagram, on 20825? Maybe I'm 20 misunderstanding. Isn't this what was being proposed? 21 MR CHEUK: Yes. 22 COMMISSIONER HANSFORD: So the question is what does your 23 email mean in connection with what was being proposed on 24 C20825? 25 A. They were not connected whatsoever. My email was not</p>
<p>Page 126</p> <p>1 for our views and my reply was the portion of the wall 2 should be cast together with the OTE slab as a good 3 practice, otherwise one more CJ is introduced between 4 them. So if the OTE wall on the right-hand side is not 5 cast together with the OTE slab, then there will be one 6 extra CJ, construction joint, and that's what the whole 7 email was about. 8 COMMISSIONER HANSFORD: Have we got the coloured sketch that 9 goes with this, the red -- 10 MR CHEUK: The previous page. 11 COMMISSIONER HANSFORD: -- blue and -- the ones we saw 12 yesterday? 13 MR CHEUK: B10/7250. 14 COMMISSIONER HANSFORD: Will that help us? 15 MR PENNICOTT: It might do. 16 COMMISSIONER HANSFORD: It might help me. 17 MR PENNICOTT: B5/2991. The previous page. 18 COMMISSIONER HANSFORD: No. There was a sketch we were 19 shown yesterday with different -- 20 MR PENNICOTT: In the design report, in the submission? 21 It's probably easier to do it in J. 22 COMMISSIONER HANSFORD: Tell me if that's not helpful. 23 MR PENNICOTT: Don't worry. We'll find it. 24 MR COLEMAN: C20824. 25 MR PENNICOTT: Hang on. Just before we go there. I thought</p>	<p>Page 128</p> <p>1 related to the through-bar at all. 2 Examination by MR CHEUK 3 MR CHEUK: This is a topic I have dealt with in some detail 4 so I wonder if I may help, as per my understanding. 5 COMMISSIONER HANSFORD: Yes. Forgive me if I'm diverting. 6 MR CHEUK: No. I think, Professor, you have pointed out 7 exactly the problem of this communication. 8 If we go back to the previous email, the line of 9 communication, if we go back to Mr Leung's email, 10 according to my understanding, all the email chain 11 before Mr Leung's email was discussing the second change 12 proposal. That is the diagram that, Professor, you just 13 referred us to. 14 COMMISSIONER HANSFORD: Yes. 15 MR CHEUK: I think everybody understood that. 16 What I understand Mr Leung's email here was talking 17 something totally different. 18 COMMISSIONER HANSFORD: Ah. 19 MR CHEUK: He's not answering the issues raised by everybody 20 else. What he actually talks about here -- Mr Leung can 21 correct me if I am wrong -- if we go back to the sketch, 22 B5/2992, we see everybody else was treating OTE wall and 23 OTE slab as one thing; you can just call it "OTE". 24 COMMISSIONER HANSFORD: Yes. 25 MR CHEUK: Then they were talking about casting the OTE with</p>

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<p>1 the diaphragm wall monolithically, in one piece. 2 Everybody was understanding on that basis and trying to 3 discuss this issue. Then what I think -- and Mr Leung 4 can correct me -- he was talking about something totally 5 different. He was dividing the OTE into OTE slab and 6 OTE wall. 7 Of course you can divide it in two ways. One is you 8 cut it horizontally along somewhere below the OTE wall 9 CJ, you cut it slightly horizontally and treat 10 everything above is called OTE wall and everything below 11 is called OTE slab. Then his extra CJ would be along 12 that horizontal line. 13 COMMISSIONER HANSFORD: Of course. 14 MR CHEUK: Another way of looking at Mr Leung's evidence is 15 that if you cut it vertically along the line "FLL" -- 16 I wonder, Professor and Chairman -- 17 COMMISSIONER HANSFORD: I understand, Mr Cheuk, but no one 18 was proposing that, were they? 19 MR CHEUK: Exactly. That's the point. That's the line of 20 miscommunication. That's why, as I understand it, when 21 everybody else was talking about A, Mr Leung was talking 22 about B. 23 COMMISSIONER HANSFORD: Ah. 24 MR CHEUK: That's my understanding. 25 MR BOULDING: Sir, this is a useful explanation, but</p>	<p>1 Mr Leung, he's talking about updated OTE wall and EWL 2 slab, not OTE wall and OTE slab; is that correct? 3 A. (In English) Yes, so that's why it's different. 3 metre 4 slab and the OTE slab and wall should be cast 5 concurrently or at the same time. That is already 6 defined in the remedial proposal; okay? So this 7 question is whether you need to split it further. The 8 subject here is whether you need to split it further, to 9 split the right-hand part, the OTE slab and wall, cast 10 separately. 11 COMMISSIONER HANSFORD: And where is that being proposed? 12 A. (In English) You can see that from the email on B7250, 13 at the second paragraph, or the last paragraph I just 14 mentioned, from the email from Lee Wan Cheung. 15 MR CHEUK: Yes, WC Lee, who is from Atkins. 16 Then if we read the second paragraph: 17 "Even though the horizontal slab have sufficient 18 length to form the tension anchorage for the slab rebar, 19 the OTE wall still need to be concrete concurrently 20 with", not the OTE slab, "the EWL slab ..." 21 A. (In English) Yes. 22 MR CHEUK: So, as I understand it, and I believe everybody 23 else understands it, we are talking about the OTE 24 portion together with the EWL slab portion. That's also 25 Mr Taylor's understanding, when I asked him questions</p>
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<p>1 obviously my learned friend will not want to be accused 2 of giving evidence, and it seems to me that this needs 3 to be put to this witness to see whether this 4 explanation accords with this witness's evidence. 5 COMMISSIONER HANSFORD: I agree entirely. 6 MR CHEUK: I agree entirely. 7 To save everybody else's time -- Mr Leung, you have 8 heard my dialogue and my understanding of your view, 9 your reply on the email. Can you confirm or say 10 anything else? 11 A. I disagree with your explanation. 12 MR CHEUK: Please explain. 13 A. Well, my statement is very clear. In the email chain, 14 we are arguing whether the OTE slab and the OTE wall 15 should be cast together. Let's take a look at the 16 email, please. 17 MR CHEUK: I think we can go back to the email chain, and 18 then let's clarify this a little bit. Let's go back to 19 your point. If we go down to the original email, 20 I think that's where the misunderstanding arises. 21 COMMISSIONER HANSFORD: I see. 22 MR CHEUK: If we go down to the original part that you just 23 referred to. 24 For example, I think you just refer us to 7250. If 25 we look at the bottom part, if we look at this subject,</p>	<p>1 yesterday. 2 COMMISSIONER HANSFORD: We need to hear Mr Leung's 3 understanding. 4 MR CHEUK: What's your understanding? 5 A. (In English) But if you read it further: 6 "... the OTE wall still need to be concrete 7 concurrently with the EWL slab to a level minimum 300mm 8 above the tamper section of the OTE wall." 9 Right? And that's the requirement from Lee Wan 10 Cheung, the email; okay? 11 Then if you read Justin Taylor's email on Friday, 12 24 July, and the second paragraph: 13 "We have spoken to Torgeir about the need to cast 14 the OTE wall as our understanding their intention was 15 not to do so ..." 16 That's the subject of this email. Someone wants to 17 split the OTE wall casting from the OTE slab. That's 18 what I -- 19 MR CHEUK: That's what you understood. 20 A. (In English) And that was the things happened on that -- 21 you know, at the material time. 22 MR CHEUK: Let's put it this way. I understand -- can you 23 agree with me what you understood is that the extra CJ 24 you mentioned will happen, as I tried to explain 25 previously, two ways? Either you say there's</p>

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<p>1 a horizontal line, you cut it slightly below the 2 original CJ -- can we go back to the sketch -- yes. Can 3 you explain where your extra CJ will lie? I think that 4 would be easiest.</p> <p>5 A. (In English) It will lie between this horizontal OTE 6 portion and the horizontal portion here (indicating). 7 If I can show it here, it will be somewhere between 8 here (indicating). That's the OTE slab horizontal 9 portion; right? So this is somewhere here.</p> <p>10 MR CHEUK: I see. Yes. That's what I understood Mr Leung's 11 evidence all along.</p> <p>12 The problem is that this is not Mr Taylor's 13 understanding, and that's why, when Mr Leung -- 14 I believe now it's clear, the extra CJ is along the 15 vertical line --</p> <p>16 COMMISSIONER HANSFORD: Well, sorry, Mr Leung is saying he 17 doesn't want an extra CJ in a vertical line.</p> <p>18 MR CHEUK: Yes.</p> <p>19 COMMISSIONER HANSFORD: But my difficulty is I'm not seeing 20 anybody proposing one.</p> <p>21 A. (In English) That's -- if you read the email, they are 22 talking about to split the concreting of the right-hand 23 portion, the OTE slab and OTE wall, into two portions. 24 That's the email. If you read, you can see -- I don't 25 know it's engineering -- if you read WC -- Lee Wan</p>	<p>1 the top of the east diaphragm wall monolithically so 2 that there would be no multiple construction joints, and 3 so forth.</p> <p>4 So, essentially, the construction management team is 5 saying, "The design team had the same knowledge as we 6 had", and then this all goes to the question, of course, 7 ultimately of issues between the construction management 8 team on the one hand and the design management team on 9 the other, whether or not any change of detail should 10 have been submitted to the BD, and so forth, and so on.</p> <p>11 I mean, there is little doubt -- and I think 12 Mr Leung accepts this quite openly -- that the 13 construction management team knew full well what was 14 going on, and the construction management team seemed to 15 me to be saying -- but obviously we haven't heard 16 Mr Kit Chan yet or indeed all of Mr Leung's evidence -- 17 but it seems to me that Mr Kit Chan is saying, "The 18 design management team knew just as much as we did and 19 really it was for the design management team to take 20 this thing forward, if it thought appropriate, with the 21 Buildings Department."</p> <p>22 So, to that extent, it's this email which is sort of 23 key to that point.</p> <p>24 CHAIRMAN: Is it necessary to discover what the email 25 actually means, or can we work on the basis that there</p>
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<p>1 Cheung's email on 21 July, if you read it carefully, 2 "Even though the horizontal slab have sufficient length 3 to form the tension anchorage for the slab rebar" -- 4 that means if the horizontal part is long enough, but he 5 still insist that the wall still need to be cast 6 together with the horizontal part.</p> <p>7 MR CHEUK: Okay. Let me take you again --</p> <p>8 CHAIRMAN: Sorry, could I ask this. I'm sure it's 9 fascinating for those who are esoterically involved. 10 I'm just wondering, are we in a byway discussing 11 something of no great moment, or is it of moment? If 12 so, we must find a way to explain it.</p> <p>13 MR PENNICOTT: Sir, in a sense, the moment, as it is, is 14 that there is a difference of view amongst the MTRC's 15 own witnesses.</p> <p>16 And where we were going to end up before I asked 17 Mr Cheuk to take over for a few minutes, because of his 18 knowledge of this email chain, is a passage in the 19 witness statement of Mr Kit Chan, the construction 20 manager, as we have heard, of the MTRC, where one can 21 see very clearly and in sharp focus that the 22 construction team understood the design team, through 23 Mr Leung, through this email that we have been 24 struggling with, to have understood that the sensible 25 thing to do was to cast the EWL slab, the OTE wall and</p>	<p>1 was a misunderstanding as to its meaning?</p> <p>2 MR PENNICOTT: I think you could certainly conclude the 3 second, that there was a clear misunderstanding.</p> <p>4 There's no doubt about that.</p> <p>5 CHAIRMAN: And see where that takes us.</p> <p>6 MR PENNICOTT: On the basis of what Mr Leung has told us, it 7 seems to me to be blindingly obvious that there was 8 a misunderstanding, putting it at its lowest, yes.</p> <p>9 CHAIRMAN: Then we look at what the consequences are, if 10 any.</p> <p>11 MR PENNICOTT: Yes.</p> <p>12 WITNESS: Can I supplement one point?</p> <p>13 CHAIRMAN: Yes, of course.</p> <p>14 MR PENNICOTT: Sir, I'm sort of very conscious of the fact 15 that because -- and I take entire responsibility for 16 this -- that we've sort of, in an endeavour by me to 17 save some time, jumped right into this email, without 18 looking at some of the steps that led up to it. I did 19 that because Mr Cheuk went through a lot of this with 20 Mr Taylor and to some extent Mr Buckland as well and 21 I didn't really want to repeat it all if I could avoid 22 it, and it may be that part of the problem is that we 23 haven't had that run-up, as it were, to the email, and 24 Mr Cheuk has tried to explain our understanding of what 25 we think it all means.</p>

1 But obviously, ultimately, what we need to hear is  
2 Mr Leung's evidence and of course I'm well aware of  
3 that. So what I'm going to suggest, if I may -- and  
4 it's 4.45 on Friday afternoon -- it might be an idea if  
5 I go away, reflect upon this and see whether there's  
6 a way of putting it a bit more clearly, neatly and  
7 shortly so that we can all benefit from Mr Leung's  
8 explanation, perhaps on Monday morning.

9 CHAIRMAN: All right. That sounds a very sensible  
10 proposition. Thank you.

11 Mr Leung, as I said to you I think earlier, over the  
12 luncheon, you are in the process of giving your evidence  
13 and you are therefore not allowed to discuss your  
14 evidence over the weekend with anybody.

15 We hope we can resolve this matter fairly early on  
16 Monday, with a more structured approach, which will make  
17 things clearer, but thank you very much for today, and  
18 we will adjourn then until Monday morning at 10 am.

19 Thank you.

20 (4.48 pm)

21 (The hearing adjourned until 10.00 am  
22 on Monday, 3 December 2018)

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