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<p>1 Tuesday, 23 October 2018</p> <p>2 (10.02 am)</p> <p>3 MR PENNICOTT: Good morning.</p> <p>4 CHAIRMAN: Good morning.</p> <p>5 MR PENNICOTT: Sir, just before Mr Boulding delivers his</p> <p>6 opening address, can I just mention two things, in fact</p> <p>7 just two names, really.</p> <p>8 First of all, Mr Cohen is not here at the moment.</p> <p>9 Mr Paul Barrett, counsel, is here.</p> <p>10 CHAIRMAN: We had you in writing yesterday but not in</p> <p>11 person.</p> <p>12 MR BARRETT: I noticed, sir, that the transcript referred to</p> <p>13 me as Mr Barrette, so I just wanted to point out that</p> <p>14 I have no specialist engineering knowledge of barrettes,</p> <p>15 despite the fact my name tends to indicate that.</p> <p>16 MR PENNICOTT: And also, so far as Pypun are concerned, they</p> <p>17 are now represented by my learned friend Russell Coleman</p> <p>18 SC, and we welcome him here as well.</p> <p>19 CHAIRMAN: Yes, Mr Coleman.</p> <p>20 MR COLEMAN: Good morning, sir. Perhaps in a lighter momen</p> <p>21 I should say it's not true what Mr Shieh has been</p> <p>22 saying, that I did try to come here yesterday but only</p> <p>23 found my way here today.</p> <p>24 Thank you for accepting me here.</p> <p>25 MR PENNICOTT: Sir, it's Mr Boulding.</p>	<p>1 many, many significant railway projects in Hong Kong and</p> <p>2 indeed in other locations throughout the world.</p> <p>3 This has been achieved, amongst other things, by</p> <p>4 using its own project integrated management system,</p> <p>5 which I'm going to refer to as PIMS, which I emphasise</p> <p>6 is certified to be compliant with ISO 9001 international</p> <p>7 standards.</p> <p>8 Now, what does this comprise? It comprises a set of</p> <p>9 project management documents which set out the</p> <p>10 procedures and practices to be followed by MTR staff,</p> <p>11 and in fact it's now been used in managing MTR's railway</p> <p>12 projects for over 20 years.</p> <p>13 In those circumstances, we emphasise that it's been</p> <p>14 tried and tested over a very lengthy period of time, and</p> <p>15 that in itself, we would submit, constitutes cogent</p> <p>16 evidence of the adequacy, suitability and effectiveness</p> <p>17 of PIMS for railway projects.</p> <p>18 Now, what does it do? It sets out various</p> <p>19 requirements, some of which I'm going to refer to.</p> <p>20 Firstly, requirements in terms of design and</p> <p>21 development. Secondly, design verification and</p> <p>22 validation. Thirdly, control of design changes.</p> <p>23 Fourthly, control of non-conforming products. Fifthly,</p> <p>24 corrective and preventative actions, and also training</p> <p>25 of personnel, which of course is very, very important</p>
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<p>1 Opening submissions by MR BOULDING</p> <p>2 MR BOULDING: Good morning, sir, Professor. We have served</p> <p>3 our written opening and we trust you have had</p> <p>4 an opportunity to read that.</p> <p>5 What I would like to do today is to emphasise</p> <p>6 certain parts of that opening as well as taking the</p> <p>7 opportunity to elaborate upon certain matters that we</p> <p>8 consider are important to your consideration of this</p> <p>9 matter.</p> <p>10 But we say, at the very beginning, that as far as</p> <p>11 this SCL project is concerned, MTR has been the subject</p> <p>12 of unfair and critical but generally unreliable and</p> <p>13 unsubstantiated newspaper and media reports, in</p> <p>14 particular, alleging inadequate attention to safety.</p> <p>15 Contrary to what the uninformed reader might think,</p> <p>16 MTR takes its duties and responsibilities in terms of</p> <p>17 safety very, very seriously indeed and in fact, in the</p> <p>18 recent past, it's taken a number of very important steps</p> <p>19 to address any public concerns arising out of its</p> <p>20 capital projects. In fact, it is fair, indeed accurate,</p> <p>21 to say that its approach is one of constant improvement.</p> <p>22 In this context, it emphasises that it's got a long</p> <p>23 history of safety and reliable railway construction and</p> <p>24 operation. Indeed, over the last 20 years or so, it's</p> <p>25 managed to deliver -- successfully, I might add -- many,</p>	<p>1 indeed.</p> <p>2 I emphasise that the robustness of PIMS has been</p> <p>3 endorsed by various independent organisations, and</p> <p>4 importantly PIMS is not meant to be prescriptive and to</p> <p>5 supplant the professional judgment of MTR's construction</p> <p>6 professionals, who, as you will realise and indeed you</p> <p>7 will hear from them, are educated, trained and</p> <p>8 qualified, and indeed experienced, in their respective</p> <p>9 spheres of responsibility.</p> <p>10 So, taking account of that fact, it is important to</p> <p>11 emphasise that PIMS combines both a solid framework of</p> <p>12 tested guidelines and procedures as well as experienced</p> <p>13 construction professionals' abilities to adapt to</p> <p>14 developments and changing circumstances based upon their</p> <p>15 own professional judgment.</p> <p>16 As one would expect, MTR staff are required to</p> <p>17 familiarise themselves with the requirements of the</p> <p>18 latest version of PIMS, and indeed the MTR managers have</p> <p>19 an obligation to ensure that their staff comply with it.</p> <p>20 As one would expect with any organisation like MTR,</p> <p>21 its frontline staff, like all others, are requested to</p> <p>22 enrol in induction training when they join the</p> <p>23 organisation, and this is designed to provide them with,</p> <p>24 as one would expect, an overview of the PIMS system and</p> <p>25 indeed practical guidance in terms of how, for example,</p>

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<p>1 to use what's referred to as ePMS, which is MTR's</p> <p>2 web-based information and document workflow processing</p> <p>3 system.</p> <p>4 Having said all that, MTR is not a complacent</p> <p>5 organisation. On the contrary, it is what I would refer</p> <p>6 to as a learning organisation. Why do I say that?</p> <p>7 I say that because it makes continuous efforts to</p> <p>8 develop and enhance its management systems, and it</p> <p>9 learns from its experiences, not only the successes,</p> <p>10 I add, or emphasise, but also the challenges experienced</p> <p>11 in the projects it undertakes.</p> <p>12 I would say that as a result of the recent incidents</p> <p>13 on the SCL project, MTR has already identified various</p> <p>14 areas for enhancement in relation to documentation and</p> <p>15 the recording of site supervision.</p> <p>16 So what's the evidence of the fact that MTR</p> <p>17 constantly strives for improvement? Well, I have to go</p> <p>18 back one or two years but not that long: in or around</p> <p>19 2012, MTR created an additional project quality</p> <p>20 compliance unit. This was within the quality assurance</p> <p>21 team, to ensure that its project management system was</p> <p>22 enhanced. The following year, 2013, again to enhance</p> <p>23 its project management system, the MTR established</p> <p>24 self-quality audits, and these involved an arrangement</p> <p>25 whereby different teams from different MTR contracts</p>	<p>1 new engineering division was as follows: firstly, to</p> <p>2 strengthen -- because of course it existed before --</p> <p>3 MTR's check and balance framework; and secondly, to help</p> <p>4 provide the requisite controls and oversight of its</p> <p>5 capital projects.</p> <p>6 The Independent Expert Panel -- of which you, sir,</p> <p>7 were a member -- perhaps I can be permitted to read from</p> <p>8 it. It's B9/6113 -- we don't need to turn it up -- it</p> <p>9 stated that "Lloyd's Register was of the opinion that</p> <p>10 MTRCL's project management processes and controls 'are</p> <p>11 known to be robust and in line with industry best</p> <p>12 practice. They are regularly reviewed and audited by</p> <p>13 outside bodies and have been proven and refined through</p> <p>14 the delivery of many high-quality railway projects by</p> <p>15 MTRCL in Hong Kong and abroad."</p> <p>16 In addition, the IEP noted that independent</p> <p>17 assessments in 2009 by Ernst & Young and by the Scott</p> <p>18 Wilson business consultancy, had also found that MTR's</p> <p>19 project controls were appropriate and stated that "the</p> <p>20 panel is of the view that MTRCL's contract management is</p> <p>21 exemplary".</p> <p>22 "Exemplary".</p> <p>23 Now, in direct response to recommendations made by</p> <p>24 the IEP with respect to the XRL project MTR implemented</p> <p>25 specific actions to further improve its project</p>
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<p>1 cross-audited each other. It didn't stop there because</p> <p>2 as recently as April 2014, MTR set up the Independent</p> <p>3 Board Committee, known as the IBC.</p> <p>4 Now, it's important to emphasise that the IBC is</p> <p>5 comprised of independent, non-executive directors, and</p> <p>6 this was in response to public concerns at the time over</p> <p>7 the XRL project, and the IBC, assisted by two</p> <p>8 independent project management experts, reviewed MTR's</p> <p>9 internal systems, controls and management for the XRL.</p> <p>10 You, sir, will be familiar with some of this because</p> <p>11 it resulted in two reports being prepared in July 2014</p> <p>12 and October 2014, which included various</p> <p>13 recommendations, all of which were implemented.</p> <p>14 And having referred to you, sir, the MTR also</p> <p>15 received recommendations from the Independent Expert</p> <p>16 Panel chaired by you. And these recommendations from</p> <p>17 the IEP were set out in a report dated December 2014 and</p> <p>18 again they were implemented.</p> <p>19 So what was the consequence of this implementation?</p> <p>20 Well, first of all, MTR made changes to strengthen its</p> <p>21 corporate governance, as well as the systems and</p> <p>22 processes which apply to large-scale capital projects.</p> <p>23 Secondly and importantly, it established the Capital</p> <p>24 Works Committee, the CWC. It also established a new</p> <p>25 engineering division, and the purpose of the CWC and the</p>	<p>1 management systems. An example of this was that its</p> <p>2 progress reporting was enhanced, including the addition</p> <p>3 of a scheduled recovery index in monthly progress</p> <p>4 reports, with traffic lights to indicate the status of</p> <p>5 any particular matter.</p> <p>6 I have emphasised already the setting up of a CWC.</p> <p>7 I do want to say a little bit more about it because it</p> <p>8 is important. It is important in the context of the</p> <p>9 matters which are the subject matter of this Commission</p> <p>10 of Inquiry. The CWC comprises seven non-executive</p> <p>11 directors, six of whom are independent, non-executive</p> <p>12 directors of MTR. All directors are appointed by the</p> <p>13 MTR board.</p> <p>14 The principal functions and responsibilities of the</p> <p>15 CWC include the following, and they are important.</p> <p>16 Firstly, overseeing MTR's capital projects. Now, this</p> <p>17 involves projects both in and outside of Hong Kong. The</p> <p>18 projects have to be the design and construction</p> <p>19 activities involving railway projects with a capital</p> <p>20 value in excess of HK\$10 billion. So obviously it</p> <p>21 covers the SCL project and indeed most other projects as</p> <p>22 well.</p> <p>23 It also has to oversee any other projects which are</p> <p>24 four months or more behind programme.</p> <p>25 Secondly, the CWC has to review the progress of such</p>

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<p>1 projects both from a programming and cost perspective.</p> <p>2 Importantly, it has to check that there are adequate</p> <p>3 resources for the projects, including the fact that</p> <p>4 there are enough resources for the proper supervision</p> <p>5 thereof.</p> <p>6 It also has to review MTR's communication strategy</p> <p>7 and its crisis management plan in respect of each of the</p> <p>8 projects. And finally, I emphasise that it reports on</p> <p>9 matters falling within its sphere of responsibility to</p> <p>10 the MTR board on a quarterly basis, but it can also</p> <p>11 report on an ad hoc basis as and when it considers</p> <p>12 appropriate if the need arises.</p> <p>13 Currently, I emphasise that the CWC, in the light of</p> <p>14 what's occurred on the SCL, is reviewing MTR's project</p> <p>15 management and monitoring system, and when that review</p> <p>16 is complete I can assure you that the recommendations</p> <p>17 will be implemented.</p> <p>18 It doesn't stop there though, because the MTR also</p> <p>19 has a risk committee, and it's of note in the current</p> <p>20 context. It's comprised of non-executive directors and</p> <p>21 independent non-executive directors, and it plays</p> <p>22 an important role in managing the risks arising out of</p> <p>23 capital project works.</p> <p>24 Its functions and responsibilities include the</p> <p>25 following. First of all, it has to review MTR's</p>	<p>1 director. That's the first line.</p> <p>2 What about the second line of defence? This covers</p> <p>3 risk management and compliance oversight, and includes</p> <p>4 the following. Firstly, assurance within the project</p> <p>5 division. Now, this includes quality audits, safety</p> <p>6 management audits and inspection, environmental</p> <p>7 management audits, programme audits, system assurance</p> <p>8 audits, and enterprise risk management.</p> <p>9 It doesn't stop there though, because it also</p> <p>10 includes gateway reviews by the engineering division</p> <p>11 which is independent from the projects team and reports</p> <p>12 directly to a separate member of the executive</p> <p>13 committee.</p> <p>14 Now, what do these reviews involve? First of all,</p> <p>15 they take into account both qualitative and quantitative</p> <p>16 information, but in doing so -- and this is important --</p> <p>17 they provide an alternative, an additional view, on the</p> <p>18 overall health of a project from a cost and a schedule</p> <p>19 point of view. So far, so good.</p> <p>20 What about the third line of defence? Well, this</p> <p>21 involves an exhaustive internal auditing process which</p> <p>22 reports directly to both MTR's CEO and, as one would</p> <p>23 expect, MTR's board.</p> <p>24 Now, I have already mentioned safety and the fact</p> <p>25 that we have been unfairly criticised in terms of our</p>
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<p>1 enterprise risk management framework guidelines, policy</p> <p>2 and procedures for risk assessment and risk management.</p> <p>3 Secondly, it has to review MTR's top risks and key</p> <p>4 emerging risks and the controls in place to mitigate</p> <p>5 such risks. It has to monitor MTR's risk profile. It</p> <p>6 also conducts what are referred to as deep dive,</p> <p>7 deep-dive reviews on key risk areas. It reviews the</p> <p>8 effectiveness of the enterprise risk management</p> <p>9 function. And finally it reviews MTR's crisis</p> <p>10 management arrangements.</p> <p>11 I emphasise in this context that as a result of the</p> <p>12 IBC reports and the IEP reports that I've already</p> <p>13 referred to, the MTR implemented another important</p> <p>14 measure as a result of the contents of the report. This</p> <p>15 is referred to as the three lines of defence, three</p> <p>16 lines of defence architecture. This applies to MTR's</p> <p>17 project management, which of course comes under sharp</p> <p>18 focus in this Commission of Inquiry.</p> <p>19 What does it involve? It involves the following.</p> <p>20 The first line of defence comprises a detailed project</p> <p>21 management system which by way of a checking process is</p> <p>22 designed to cover the following very important matters:</p> <p>23 quality, environmental management, safety, programming,</p> <p>24 risk, and costs. This line of control reports to the</p> <p>25 project teams, which teams are led by the project</p>	<p>1 record, but MTR regards safety as paramount. Paramount.</p> <p>2 It places supreme importance on public safety and indeed</p> <p>3 on transparency in handling any issues of concern.</p> <p>4 I say here and now that MTR is determined to ensure that</p> <p>5 issues of the kind that you are going to consider, the</p> <p>6 alleged cutting of threaded rebar and inadequate or</p> <p>7 non-existent connections of rebars to couplers, is</p> <p>8 determined to ensure that this will not reoccur.</p> <p>9 To this end, I emphasise that we have already taken</p> <p>10 seven steps, already. First of all, at the Highways</p> <p>11 Department's Railway Development Office's request, MTR's</p> <p>12 engineering division has reviewed MTR's site supervision</p> <p>13 and communications system within MTR, and with</p> <p>14 government, for the SCL project, with a view to</p> <p>15 improving it. Indeed, a letter setting out the initial</p> <p>16 findings was submitted to the RDO, the Railway</p> <p>17 Development Office, on 6 July. For the record, that's</p> <p>18 document B9/6718-6722.</p> <p>19 Second step, Turner & Townsend, who I'm sure you've</p> <p>20 heard of, a world-class independent expert, has been</p> <p>21 engaged to review the processes and procedures within</p> <p>22 MTR's PIMS, and that's notwithstanding all the goods</p> <p>23 things that have been said about it already. It's been</p> <p>24 asked to review it. And Turner & Townsend's terms of</p> <p>25 reference focus specifically on the following matters:</p>

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<p>1 detection, recording, reporting, and finally remedying 2 non-compliant works; very important matters. 3 Thirdly, MTR's management has been directed to 4 strengthen its monitoring and supervision over all SCL 5 project contracts. 6 Fourthly, the CWC, its terms of reference is in the 7 process of being revised, to enhance its oversight of 8 the quality of the capital works projects. We have 9 already seen, we have already heard what it does to 10 date, but they are going to be enhanced. It's going to 11 be given even greater powers of insight and 12 recommendation. 13 Fifthly, so far as non-conformance reports, referred 14 to as NCRs, are concerned, a system has been introduced 15 for categorising works-related NCRs involving the 16 implementation of a management protocol for escalating 17 NCRs upwards. In addition, a review of the NCRs is 18 carried out on a weekly basis by the MTR construction 19 management team members for each contract. And since 20 17 July 2018, a register of NCR works with open status 21 has been submitted to Highways' Railway Development 22 Office on a weekly basis. 23 Sixthly, MTR has initiated an initiative to put in 24 place some structure for using smartphone applications 25 such as WhatsApp to capture and report quality issues.</p>	<p>1 contract 1112 works which fall within your terms of 2 reference, particularly of course given the limited time 3 which you are operating under. 4 With that in mind, we respectfully suggest that 5 there are two principal areas upon which you should 6 concentrate. The first will come as no surprise: 7 coupler connections. We say that you should consider 8 the nature and extent of any non-compliant rebar 9 couplers. This is of course raised in paragraph 35 of 10 Mr Pennicott's opening address. This requires, we 11 submit, the Inquiry to identify those instances in which 12 it can be established, having regard to the evidence 13 placed before it, that there really was unacceptable 14 trimming down of the threaded ends of the rebar using 15 cutting tools, with the consequence that such rebar was 16 not connected into the couplers either properly or at 17 all. That's your primary concern. That's your primary 18 focus. 19 Now, what does the evidence say in this regard? 20 What's the weight of the evidence? You've already been 21 introduced to this aspect of the matter by my learned 22 friends, in particular Mr Paul Shieh, but we would say 23 that the evidence of MTR, Leighton, Fang Sheung and 24 Intrafor on the one hand should be compared with the 25 unsubstantiated, confused, misleading and non-credible</p>
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<p>1 And finally, seventh, a project division quality working 2 group has been set up which has organised experience 3 sharing and training sessions for MTR staff, and already 4 these sessions have covered important topics such as 5 quality supervision plan, the on-site quality assurance 6 quality control processes for couplers, the management 7 of NCRs and keeping records systematically. 8 Now, what about further enhancements? As to any 9 further enhancements which are considered to be 10 necessary or desirable to the procedures which the MTR 11 already implements in respect of its various projects, 12 I'm instructed to say that MTR will not, sir, shy away 13 from any shortcomings on its part if identified by the 14 Commission of Inquiry. And, moreover, it will promptly 15 address and remedy the same, and of course will 16 implement any of your recommendations. 17 So, against that introductory background, what 18 approach should the Commission of Inquiry adopt? It's 19 our position, our submission, that you should not be 20 drawn into lines of enquiry which fall outside or, 21 perhaps more importantly, are irrelevant to your terms 22 of reference, and specifically we would invite you to 23 focus on areas where there may be a genuine and 24 realistic -- and we emphasise the phrase "genuine and 25 realistic" -- public safety concern arising out of the</p>	<p>1 evidence of China Technology's Jason Poon. 2 And in the light of the evidence that is currently 3 before the Commission of Inquiry, we would say that the 4 situation can be summarised as follows. All of the 5 occurrences, we would say most likely maximum of five, 6 although Leighton say just three, of trimming down the 7 threaded ends of the rebar occurred in a relatively 8 short period of time. That was between August to the 9 end of December 2015. 10 We emphasise they were discovered during MTR's 11 regular site surveillance of the relevant works, and we 12 would say that that supports the adequacy and the 13 effectiveness of MTR's supervision and inspection of the 14 works. We would say there is no evidence, and certainly 15 no credible evidence, of the non-compliance being 16 widespread. On the contrary, we would say that if the 17 non-compliances were on the industrial scale as Poon now 18 alleges, it is truly remarkable that he never raised the 19 matter at the time with MTR nor Leighton, according to 20 the factual evidence that it served, given of course 21 that he had both numerous and obvious opportunities to 22 do so, but he never did that. 23 The non-compliances, we emphasise, were drawn to 24 Leighton's attention as part and parcel of MTR's site 25 surveillance process, and the weight of the evidence</p>

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<p>1 from both MTR and Leighton is that they were rectified 2 immediately to MTR's satisfaction. In fact, only one of 3 the occurrences were seen to warrant an NCR by Leighton. 4 That was NCR no. 157, which it issued on 18 December 5 2018 to Fang Sheung. That was apparently because 6 whereas previously the occurrences were dealt with very 7 satisfactorily by the site procedures, I think this was 8 the third occurrence, enough was enough and an NCR had 9 to be raised. But that's as far as it goes.</p> <p>10 So that's the first matter to focus on, and we would 11 say that when you take account of the evidence you will 12 agree with our assessment of the situation as supported 13 by Leighton and indeed Fang Sheung and Intrafor.</p> <p>14 Now, what about the second matter? The second 15 matter you ought to focus on would be the errors in the 16 15 June 2018 report which was produced by MTR. Now, 17 what's the situation there? Allegations appeared in the 18 media, as we know, at the end of May 2018, concerning 19 defective coupler installation, fed of course by one 20 Jason Poon. This resulted in Highways' Railway 21 Development Office, by a letter dated 31 May 2018, 22 requiring MTR to produce a report on what had been going 23 on. And, as we know, the objective of this report was 24 to demonstrate that, firstly, any -- any -- 25 irregularities in steel bar fixing works had been fully</p>	<p>1 that the number of couplers had been counted by MTR's 2 construction management and design management teams, as 3 well as by Leighton, using the BA14 as-built drawings 4 for the diaphragm walls as submitted to the Buildings 5 Department between January 2015 and January 2016. The 6 number of couplers was incorrect and the problem was 7 that the BA14 as-built drawings for the diaphragm walls 8 failed to take into account the change in connection 9 detail to the east diaphragm wall, which of course you 10 have already heard had resulted in a reduction in the 11 number of couplers that were ultimately required in the 12 construction process.</p> <p>13 Now, I'm going to go into the change in connection 14 detail in a little more detail later on in this opening, 15 by way of a slide demonstration, but the change in 16 connection detail essentially comprised the following. 17 Steel reinforcement bars in the upper part of the EWL 18 slab, in certain locations, were not connected to the 19 east diaphragm wall by the cast-in couplers that had 20 previously been installed at the top of the east 21 diaphragm wall during its construction.</p> <p>22 Now, instead of that, in certain locations, at the 23 top section of the east diaphragm wall, the concrete had 24 been broken down and removed in varying depths from 25 approximately 400 to 500 millimetres, which included the</p>
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<p>1 rectified before concreting, and secondly that the works 2 were up to the required quality requirements.</p> <p>3 It does bear emphasis that the focus of the report 4 at the time was allegedly defective steelworks. That's 5 what Poon was alleging in the media. It also bears 6 emphasis that MTR had to produce a report very quickly 7 and indeed did so on 15 June 2018 under considerable 8 pressures of time. It was produced in just two weeks 9 and at the same time as there were still substantial 10 ongoing works on contract 1112 to progress, and 11 of course the people who were involved in the work were 12 also responsible for those ongoing works.</p> <p>13 The 15 June report that MTR presented to the Railway 14 Development Office unfortunately contained an error, and 15 they put their hand up to that, and the error concerned 16 the number of couplers connecting the EWL slab and the 17 diaphragm walls. The report stated that there were more 18 couplers in the structure, I think approximately 23,500, 19 than were actually there, and this reduction stemmed 20 from the fact that there had been a change in the 21 connection detail for the steel rebar in parts of the 22 east diaphragm wall in areas B and C, and this change 23 of course is something that Mr Pennicott raises in 24 paragraph 36 of his opening statement.</p> <p>25 And the errors, unfortunately, stem from the fact</p>	<p>1 concrete and the steel reinforcement and the couplers 2 that had previously been there, and that was done to 3 allow the concrete used in the construction of the top 4 of the EWL slab, the diaphragm wall and the OTE, to be 5 cast monolithically.</p> <p>6 And when this was done, when the 400 or 7 500 millimetres was chipped away and what had previously 8 been there taken away, when this was done, the steel 9 reinforcement for the EWL slab was extended, and 10 I emphasise, using straight-through rebars -- 11 straight-through rebars -- continuously across the top 12 of the broken-down diaphragm wall and into the OTE base 13 slab on the other side -- we refer to that as the soil 14 side -- of the diaphragm wall. You are going to see in 15 slides what happened in the next 20 or 30 minutes or so.</p> <p>16 But we do say that on the basis of evidence to 17 date -- and it may well be that Prof Hansford has a view 18 on this already -- the change in connection detail 19 represents an improvement on the original detail with 20 a minimised risk of workmanship issues so far as the 21 splicing assemblies were concerned.</p> <p>22 Secondly, it does not have an impact on the 23 structural integrity of the EWL slab or the diaphragm 24 wall.</p> <p>25 Sir, that, by way of a very short, truncated</p>

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<p>1 summary, is what happened. More later. 2 But I do emphasise that whilst MTR puts its hand up 3 to the error, there was certainly no intention to 4 mislead anybody by the terms of the 15 June report. 5 I emphasise that the error arose because at the time in 6 2015 when the connection detail was changed, Leighton 7 had not formalised the change in a work proposal, or 8 permanent works design report, for review by MTR's 9 construction management or construction design teams. 10 The change in connection detail was going to be 11 reflected in the final as-built submissions for the EWL 12 slab to the Buildings Department, which Leighton is 13 still in the process of preparing as of this date, and 14 unfortunately, the reality is that the change was simply 15 forgotten in the rush to get the report out. 16 How did the error come to light? Well, it finally 17 came to light when MTR's construction management team 18 reviewed site photographs of what had actually been 19 built in the EWL slab, together with other related 20 information, in or around July 2018, and once they knew, 21 they put their hand up to it. Unfortunate, but that's 22 the way it occurred. 23 Now, what about ancillary matters? They are the two 24 important matters that we say you should focus on. What 25 about ancillary matters? There are, we would suggest,</p>	<p>1 which is dated February 2009, and that's, for the 2 record, B16/B12548. Section 19.77, dealing with 3 "Diaphragm wall, secant pile wall and contiguous pile 4 wall", it states, and I read: 5 "(1) The contractor is responsible for constructing 6 a watertight wall, such that the leakage is restricted 7 to damp patches with no visible flow of water in any 8 area of the wall. Single leaks indicated by jetting or 9 spraying shall not be present. 10 (2) Upon initial excavation of panels/piles, the 11 total inflow over a given area shall not exceed 12 0.12 litres per square metre per day overall, and 13 0.24 litres per day on any separate square metre. No 14 leakage occurring in the form of a water jet or spraying 15 of water shall be allowed." 16 So one can see what is permitted by the contract, 17 and we would emphasise that it's not at all uncommon 18 that underground water which is connected in the soil 19 and the rock strata exits through the joints of the 20 diaphragm wall panels causing damp patches to form. And 21 indeed you might have seen one or two when you inspected 22 the site on Sunday. 23 As I have emphasised already, this is perfectly 24 acceptable, provided that the tolerance level specified 25 in the materials and workmanship specification is not</p>
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<p>1 three minor defects or alleged defects which fall for 2 your consideration but which should not occupy too much 3 of your time. 4 These matters are as follows. Firstly, cracks and 5 water leakage through the diaphragm walls as constructed 6 by Intrafor. Secondly, the alleged use of lightweight 7 concrete as backfill in area A. And thirdly, peeling 8 and honeycombed concrete, which I suspect you both saw 9 again on Sunday when you viewed the site. 10 Now, so far as we are concerned, you can dismiss the 11 first two and park the last one, ie the honeycombed 12 concrete. Why do I say that? First of all, dealing 13 with the cracks and the water leakage on the diaphragm 14 walls, again the press and media have reported on this 15 in their reports. However, we are in full agreement 16 with Intrafor that the diaphragm walls have been built 17 in full compliance with the stringent requirements of 18 contract 1112. Specifically, the need to control 19 underground seepage has been taken into consideration in 20 the design and construction of these walls. And the 21 reality of the situation, we would emphasise, is that 22 a diaphragm wall is an underground structure so it's 23 technically difficult to achieve full watertightness. 24 Indeed, this fact is recognised by MTR's Materials and 25 Workmanship Specification for Civil Engineering Works</p>	<p>1 exceeded, which we say it's not. 2 But in any event, grout injection, which is a common 3 and standard practice in the construction industry, is 4 used, where necessary, to manage cracks and seepage 5 issues in the walls. In fact, in various localised 6 areas of seepage on the diaphragm walls on the NSL 7 level, which the MTR identified and marked up on sets of 8 drawings, were indeed treated with grout injections in 9 or around early 2018 under the daily site surveillance 10 of its inspectors. And after those grout injections, 11 which were successful, there was only minimal water 12 leakage in the diaphragm walls, such that the relevant 13 tolerances have not been exceeded. 14 But it doesn't stop there, because after the media 15 reports of 30 May 2018, Mr Ralph Li, the Railway 16 Development Office's chief engineer, carried out 17 inspections at the Hung Hom Station Extension, and he 18 discovered that there were no serious cracks or serious 19 water leakage in the concrete structures. Just for 20 reference, that's paragraphs 19 to 21 of Mr Ralph Li's 21 witness statement dated 7 September 2018. 22 Finally, we would say that any water seepage and 23 damp patches are unrelated to the steel bar fixing works 24 and indeed constitute no safety threat to the public, or 25 in fact anyone else. So that's water leakage.</p>

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<p>1 What about the use of mass concrete for backfilling 2 in area A? There is absolutely no dispute that mass 3 concrete was used for backfilling in area A in the space 4 between the in situ wall and the diaphragm wall on the 5 SCL level. 6 CHAIRMAN: Sorry, just help me a second. 7 MR BOULDING: Sorry, sir. 8 CHAIRMAN: No, no. How did this issue of the concrete mass 9 filling arise? I've got a sudden blank spot there. 10 MR BOULDING: You will not be surprised, sir, it was because 11 a certain Jason Poon made allegations during the 12 Legislative Council subcommittee meeting held on 13 July 13 2018. 14 CHAIRMAN: And he said -- what was wrong with this? 15 MR BOULDING: He said that lightweight concrete, being 16 concrete of a different density, had been used to fill 17 the area, which, not surprisingly, is incorrect. 18 CHAIRMAN: All right. I'll let you proceed. Thank you. 19 But different types of concrete are commonly used 20 depending on the weight. 21 MR BOULDING: That's correct, but Jason Poon's allegation 22 was that the concrete in question, which was to be used 23 as a deadweight for the structure, to counter 24 hydrostatic uplift, was in effect too light for its 25 purpose. That's not the situation at all. Indeed, what</p>	<p>1 Firstly, various pullout tests, including at the EWL 2 track slab soffit and concrete core tests at the top of 3 the EWL and NSL track slabs have been carried out. And, 4 happily, the results of all these tests indicate that no 5 honeycombing was found at the pullout or core sample 6 locations in the EWL and NSL track slabs. 7 Further tests, including a load test, and 8 investigations are proposed and are in the course of 9 being implemented. By way of example only, Leighton's 10 independent consultant engineer, CEEK Ltd, is carrying 11 out a study, and already its registered structural 12 engineer has issued a preliminary statement that the 13 slab is safe to allow -- I emphasise, the slab is safe 14 to allow -- the continuation of construction activities, 15 including the continued running of trains above and 16 below the slab. 17 But, in addition, Leighton has also engaged 18 a specialist sub-contractor to remedy the poor concrete 19 quality identified on site, and Leighton's proposed 20 remedial works will address any public concerns arising 21 from the issue of honeycombed concrete. 22 So we would say that subject to any further 23 investigations and statements and report, the poor 24 concrete quality observed by MTR to date does not pose 25 any material or structural risks, but of course we will</p>
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<p>1 happened was that the mass concrete which was used was 2 proposed at the initiative of Leighton but MTR and 3 Leighton jointly agreed to this proposal because, 4 firstly, it reduced the cost of the works, which was 5 a value engineering exercise, particularly important 6 under a target cost contract, and secondly it was 7 environmentally friendly. 8 But we emphasise the type of the concrete used to 9 backfill the area was mass concrete, which was the same 10 type of concrete as the concrete to be poured. There 11 was absolutely nothing in Jason Poon's allegation at all 12 that in fact the wrong sort of concrete had been used. 13 We emphasise that Leighton used the same material for 14 backfilling as the material to be poured in the area, 15 simply to act as a deadweight to counter hydrostatic 16 uplift, and indeed again there is absolutely no public 17 safety or structural concern arising from the 18 backfilling. 19 So those two matters -- dampness, wrong sort of 20 concrete -- we would say you can dismiss; you don't need 21 to worry about that at all. 22 Moving on to the third ancillary matter, honeycombed 23 concrete at the soffit of the EWL track slab. The 24 situation here is that to date the following tests have 25 been performed on China Technology's concreting works.</p>	<p>1 keep you updated as and when further progress in this 2 regard is made. That's the matter that I was 3 respectfully saying that you would be in a position to 4 park until you know something about that. 5 So they are the ancillary matters. I'm now going to 6 say just a little bit about MTR's obligations under the 7 entrustment agreement, because of course the 8 construction of the SCL was undertaken by MTR pursuant 9 to an entrustment agreement dated 29 May 2012. And 10 under this entrustment agreement, you will not be 11 surprised to hear that both the government and MTR had 12 a number of important duties and responsibilities. This 13 is dealt with in the witness statements. See, for 14 example, Philco Wong's statement dated 14 September, 15 B1/140-142. 16 Importantly, and we have to accept this, by 17 clause 4.1, the MTR agreed to carry out or procure the 18 carrying out of the entrustment activities which 19 included the following, as defined in the agreement 20 itself: the railway works, the essential public 21 infrastructure works, the reprovisioning remedial and 22 improvement works, the property development enabling 23 works, and finally the interfacing works. You will not 24 be surprised to hear that in return, and under clauses 25 2.1 and 2.2, the government agreed to pay MTR lots of</p>

Page 29	1 money. 2 But staying with MTR's responsibilities and duties 3 for the present -- because of course that's what's under 4 the focus of the Commission of Inquiry -- we accept, we 5 emphasise, that pursuant to clause 4.1, MTR had to carry 6 out or procure the carrying out of the entrustment 7 activities in accordance with all applicable laws, 8 regulations, bylaws, the Mass Transit Railway Ordinance, 9 the operating agreement, and the entrustment agreement. 10 It didn't stop there because by clause 4.4 we had to 11 comply with and satisfy all relevant statutory or other 12 legal requirements applicable to the entrustment 13 agreement, including, without limitation, the obtaining 14 of all requisite licences, authorisations, permits, 15 approvals or exemptions. 16 Then finally, I think, in the context of clause 4, 17 clause 4.6(c), we had to act in accordance with MTR's 18 management systems and procedures, much of which you 19 have heard already. 20 We also gave a warranty, you will not be surprised 21 to hear -- this was clause 5.1(a) -- that related to the 22 provision of our project management services, and we 23 warranted that the entrustment activities would be 24 carried out with the skill and care reasonably to be 25 expected of a professional and competent project manager	Page 31	1 COMMISSIONER HANSFORD: Sorry, Mr Boulding, can I interrupt 2 just one moment? 3 MR BOULDING: Of course you can. 4 COMMISSIONER HANSFORD: In paragraph 39 of your written 5 statement, and you have just referred to it, where you 6 talk about "the 'concession approach' 'to which the 7 Buildings Ordinance is not applicable' ... [and it is] 8 therefore applied contractually (with modifications) 9 under the terms of EA3" -- will evidence take us to 10 further details of what you are referring to in that 11 paragraph? 12 MR BOULDING: We would say, sir, that we don't need evidence 13 on that because that would be a matter of law, but 14 obviously, if you have any questions for any of the 15 witnesses who you think can assist you on that matter, 16 you can either tell me and I will elucidate that 17 in-chief, alternatively you could raise the questions 18 yourself. 19 COMMISSIONER HANSFORD: For my part, I would like to 20 understand in greater detail what's being said in 21 paragraph 39. 22 MR BOULDING: Okay. We will do that. 23 Thank you for that interruption, sir, and we will 24 deal with that. 25 They are our responsibilities, but what about
Page 30	1 and whose role included the procurement, coordination, 2 administration, management and supervision, including 3 testing and examining the plant, goods, materials and 4 workmanship of the design and construction of the works. 5 We do not shy away from the fact that we had those 6 obligations and indeed we say that we complied with 7 them. 8 I do emphasise that the entrustment agreement 9 clause 35.1 acknowledges that the SCL project was 10 constructed under the concession approach, "to which", 11 and I quote, "the Buildings Ordinance is not 12 applicable". We say that the Buildings Ordinance is 13 therefore applied contractually, with modifications, 14 under the terms of the entrustment agreement. 15 So, just drawing those threads together, we would 16 say that it can be seen that the MTR had various 17 important obligations and responsibilities under the 18 entrustment agreement in relation to the contract, 19 specifically as the project manager therefor, and it was 20 principally responsible for the safety aspects of the 21 construction of the works to be executed, the progress 22 of the works in accordance with the programme, the 23 quality of the works in accordance with the terms and 24 specifications of the contract, and the budget for the 25 works.	Page 32	1 Leighton's duties and responsibilities? As you have 2 heard, they were the main contractor, registered general 3 building contractor, appointed by the MTR for the 4 construction of the works under the contract. It was 5 a target cost contract, as I've said, and Leighton's 6 obligations included ensuring the compliance, quality, 7 safety and integrity of the works, and in particular 8 that related to the system of supervision, the 9 monitoring, the inspection and the reporting. And we 10 know already, because we have heard, that Leighton 11 appointed various domestic sub-contractors for the 12 contract, including BOSA, Intrafor, China Technology and 13 Fang Sheung. 14 We emphasise that MTR was not required to 15 communicate or deal with Leighton's sub-contractors and 16 indeed we did not do so. I don't want to say anything 17 more about Leighton at the moment. I might return to 18 that in due course. But I would like to move on and say 19 a little bit about MTR's interaction and relationship 20 with the government on site and on a day-to-day working 21 basis. 22 We say that there was obviously substantial 23 interaction between MTR and the government so far as the 24 project was concerned, and indeed MTR's PIMS, that you 25 heard about already, provided that various of the MTR's

<p style="text-align: right;">Page 33</p> <p>1 departments were responsible for interacting with 2 government on their respective areas of the works, and 3 these departments included the project engineering 4 department, the civil & planning department, the project 5 safety department, the project management department, 6 and the town planning department. And PIMS also 7 referred to the need for numerous meetings for various 8 purposes, a number of which were attended by government 9 departments. These included important matters such as 10 cost control, site safety -- safety, I emphasise that 11 again -- land surveys, electrical and mechanical works, 12 the environment, design, consultants and contractors' 13 performance reports, and finally audits. 14 But it didn't stop there, because there was 15 a project management plan for the design and 16 construction of the SCL, which included a three-tier 17 meeting protocol at working level, management level and 18 senior management level. And MTR's interfacing with 19 government involved it in preparing for RDO, Railway 20 Development Office, monthly progress reports on 21 entrustment activities for the SCL project on all 22 matters of concern regarding the SCL project. Now, this 23 included progress, as one would expect, safety, and 24 cash flow and expenditure. There were also regular 25 meetings held between MTR representatives and the</p>	<p style="text-align: right;">Page 35</p> <p>1 the NSL track slab commenced in December 2015 and ended 2 in May 2016. 3 When those works were going on, you might ask what 4 systems and measures did MTR implement to ensure that 5 steel bars in the diaphragm walls and the platform slabs 6 were properly installed and connected? 7 Well, first of all, I emphasise that under the 8 instrument of exemption and the Buildings Department's 9 requirements and conditions imposed upon MTR under the 10 entrustment agreement, under those conditions MTR was 11 obliged to submit site supervision plans to the 12 Buildings Department before the commencement of the 13 relevant works. And these site supervision plans were 14 both sophisticated and detailed, and of course covered 15 the couplers. The process was that MTR and Leighton 16 would jointly prepare a site supervision plan which 17 would set out details of the name, the grade and the 18 number of the responsible technically competent 19 responsible persons who would carry out the inspections 20 as well as their frequency levels. And the site 21 supervision plans would then be implemented by three 22 different functional streams, firstly the competent 23 persons' stream; secondly, the registered geotechnical 24 engineers' stream; and thirdly the registered 25 contractors' stream.</p>
<p style="text-align: right;">Page 34</p> <p>1 government, such as the SCL monthly progress meetings. 2 Now, in these meetings, MTR's representatives, 3 representatives of the RDO, Railway Development Office, 4 and Pypun, who were the RDO's consultant who assisted 5 RDO in reviewing plans, carrying out site inspections 6 and witnessing tests, they'd all discussed varying 7 issues relating to the SCL project, and it will be 8 interesting to see, when we get Pypun's witness 9 statements, which I understand we are going to get, what 10 they knew about what was going on on site. 11 But in any event the matters that were discussed 12 included, again, safety, design management, project 13 management, stakeholder engagement, and programming. 14 So we would say that the government were kept fully 15 informed and indeed by having Pypun on site in effect 16 had their own eyes and ears in terms of what was going 17 on. 18 Now, when were the construction of the steel fixing 19 works in the diaphragm walls carried out? No great 20 dispute about this. The construction of the steel 21 fixing works in the diaphragm walls commenced in July 22 2013 and ended in May and June 2015. The construction 23 of the steel fixing works in the EWL slab commenced in 24 2015, March 2015, and ended in August 2016. Then, 25 finally, the construction of the steel fixing works in</p>	<p style="text-align: right;">Page 36</p> <p>1 Each of these streams was required to have 2 a representative and technically competent person who 3 was responsible for carrying out the inspections, and 4 the duties and responsibilities of the various 5 representatives and the technically competent persons 6 relating to site supervision and safety are set out in 7 tables 4.1 to 4.4 of the Code of Practice for Site 8 Supervision 2009, which I can tell you was issued by the 9 Buildings Department for the purpose of providing 10 guidance to practitioners on the adoption of good 11 practices for site supervision. 12 The competent person, the registered geotechnical 13 engineer and the authorised signatory, all three streams 14 of course had to devise checklists for themselves and 15 their respective technically competent persons to carry 16 out site inspections. And if any item on the checklist 17 proved to be unsatisfactory upon inspection, and posed 18 an imminent danger or material concern for safety, the 19 following procedure had to be adopted. The technically 20 competent person had to complete a non-conformity and 21 rectification report, which was in form B to the Code of 22 Practice, to record the details of the non-conformance, 23 and once that had been done the competent person or the 24 registered geotechnical engineer had to issue 25 instructions to Leighton to rectify the non-conformity</p>

<p style="text-align: right;">Page 37</p> <p>1 and, in addition, notify the Buildings Department. 2 After Leighton had completed the rectification works 3 to the satisfaction of the competent person or the 4 registered geotechnical engineer, the competent person 5 or the RGE would certify completion of the rectification 6 works in the non-conformity and rectification report. 7 So it was a tight procedure which was to be operated 8 on site, and it bears emphasise that the Buildings 9 Department's requirements and conditions included a set 10 of conditions entitled, "Mechanical couplers for steel 11 reinforcement bars for ductility requirements", and MTR 12 had to comply with this when progressing with the steel 13 fixing works within the diaphragm walls, the EWL slab 14 and the NSL slab. 15 This document contained various conditions. The 16 first condition was that an experienced and competent 17 person had to be provided to ensure that mechanical 18 splice works were properly supervised, and that was so 19 that they were carried out in accordance with the agreed 20 proposal and that they were also of the required 21 quality. 22 There was also a condition that a copy of the 23 manufacturer's quality assurance scheme had to be 24 submitted to the Buildings Department prior to the 25 commencement of the mechanical coupler works.</p>	<p style="text-align: right;">Page 39</p> <p>1 that signed report had to be provided on completion of 2 the mechanical splice works. 3 Now, what happened in practice was that on 12 August 4 2013, the MTR submitted to the Buildings Department the 5 document entitled, "Quality Supervision Plan on Enhanced 6 Site Supervision & Independent Audit Checking by MTR and 7 RC for Installation of Couplers", and that's document 8 B5/2640-2658. I don't think we need to turn it up, but 9 it's important that this quality supervision plan 10 appended BOSA's technical manual for the installation of 11 couplers and stated the quality control and assurance 12 schemes therefor. 13 In order to comply with the Buildings Department's 14 requirements, MTR submitted six batches of quality 15 supervision reports of the coupler for diaphragm wall 16 barrettes to the Buildings Department, and this was as 17 part of the submission for completion of the works for 18 the foundation load-bearing diaphragm wall barrette. It 19 did this to confirm that the quality supervision had 20 been adequately provided in respect of the diaphragm 21 walls. 22 It bears emphasis that MTR was obliged to prepare 23 and implement a project management plan to demonstrate 24 that its proposed management process complied with the 25 exemption requirements under the instrument of</p>
<p style="text-align: right;">Page 38</p> <p>1 Then, thirdly, there was also a condition, 2 an important condition, that the quality supervision 3 plan of the competent person and the registered general 4 building contractor also had to be submitted to the 5 Buildings Department prior to the commencement of the 6 mechanical couplers' works. 7 In terms of the degree of inspection required, 8 I emphasise that the quality supervision included the 9 following details. Firstly, the frequency of quality 10 supervision of the mechanical coupler works which had to 11 be at least 20 per cent of the splicing assemblies by 12 the competent persons, quality control supervisor and 13 full-time continuous supervision by the registered 14 general building contractor/quality control coordinator. 15 Secondly, the frequency of quality supervision for 16 the couplers used at the top of the pile cap and the 17 transfer plate, that had to be at least 50 per cent of 18 the splicing assemblies by the competent person's 19 quality control supervisor and full-time continuous 20 supervision by the registered general building 21 contractor. So that was that. 22 But, importantly, the competent person had to sign 23 a quality supervision report and submit it to the 24 Buildings Department to confirm that the requisite 25 quality supervision had been adequately provided, and</p>	<p style="text-align: right;">Page 40</p> <p>1 exemption, and it did this in the form of a project 2 management plan for the design and construction of 3 Shatin to Central Link, and this outlined the scope of 4 the works for the SCL project. In addition, in 5 high-level terms, it explained how the MTR would manage 6 the SCL project, and it also set out the responsibility 7 of different levels of MTR's professional staff. 8 Now, it bears emphasis that MTR regularly reviewed 9 and updated this project management plan to take into 10 account any changes in personnel arrangements as well as 11 MTR's project management procedures. 12 Of course, at the same time, MTR also implemented 13 PIMS. I mentioned Leighton's obligations under 14 contract 1112 in terms of execution of the works, but 15 I would like to say just a little bit more about their 16 obligations under contract 1112 in terms of supervision, 17 monitoring and inspection of the works. You will not be 18 surprised to hear that contract 1112 imposed obligations 19 on Leighton to ensure that the steel bars in the 20 diaphragm walls and the EWL and the NSL platform slabs 21 were properly installed and connected. Specifically, 22 the contract required Leightons to comply with MTR's own 23 project management systems and procedures -- those 24 systems and procedures are of course what I've already 25 referred to -- and these provided detailed guidelines</p>

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<p>1 for both MTR and Leighton's personnel to follow.</p> <p>2 The reality of the situation was that MTR's PIMS was</p> <p>3 embedded within the construction contract, so that</p> <p>4 Leighton was required to comply with the requirements</p> <p>5 stipulated in the instrument of exemption and indeed to</p> <p>6 adopt a certified quality management system for the</p> <p>7 construction of the works, and that's set out in its</p> <p>8 General Specification.</p> <p>9 Of particular importance was the fact that Leighton</p> <p>10 was required to submit a quality assurance plan for</p> <p>11 MTR's approval and to implement an effective quality</p> <p>12 management system in accordance with the quality</p> <p>13 assurance plan. And this quality assurance plan set out</p> <p>14 how Leighton would manage and control the quality of the</p> <p>15 works to comply with MTR's requirements under</p> <p>16 contract 1112.</p> <p>17 Now, it's important to emphasise that each and every</p> <p>18 panel of the diaphragm wall was covered by an RISC form</p> <p>19 and/or a countersigned shop drawing showing the rebar</p> <p>20 cages in the diaphragm walls. This was to confirm, so</p> <p>21 far as the MTR is concerned, that it had properly</p> <p>22 inspected all the rebar cages and the diaphragm wall</p> <p>23 panels.</p> <p>24 Now, other than the formal inspections at the hold</p> <p>25 points, MTR's inspectorate team, which of course was</p>	<p>1 follow the relevant quality procedures of its own</p> <p>2 certified quality management system as approved by MTR's</p> <p>3 project team, and Leighton did this by issuing its own</p> <p>4 NCRs to its sub-contractors, but in fact MTR also got</p> <p>5 a copy of Leighton's NCR as issued to its contractor,</p> <p>6 its sub-contractor, and it got this so that it could</p> <p>7 ensure that it was properly carried out and indeed</p> <p>8 oversee the matters.</p> <p>9 Now, in terms of the site supervision and inspection</p> <p>10 of the EWL slab construction process, including the</p> <p>11 installation of couplers, it seems to me that I can</p> <p>12 summarise it accurately as follows. First of all, each</p> <p>13 rebar cage for a given diaphragm wall is prefabricated</p> <p>14 by the steel fixing sub-contractor in the bending yard</p> <p>15 or in situ at the panel location, and we heard about</p> <p>16 that yesterday from my learned friend Mr Cohen. But</p> <p>17 once this had been fabricated, at Leighton's request,</p> <p>18 MTR's inspectors would inspect it to check that firstly</p> <p>19 it complied with Leighton's or Intrafor's shop drawings,</p> <p>20 and secondly that it complied with the method statement</p> <p>21 for diaphragm walls.</p> <p>22 Now, in terms of the sequence, the sequence was as</p> <p>23 follows. The installation of the rebar cages into the</p> <p>24 trenches started with the rebar cage at the bottom of</p> <p>25 the trench, which of course were typically prefabricated</p>
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<p>1 generally on site on a continuing basis, was also</p> <p>2 responsible for carrying out regular site surveillance</p> <p>3 to monitor the day-to-day works of Leighton, and this</p> <p>4 of course was to identify any concerns or issues as</p> <p>5 early as possible so that remedial action could be taken</p> <p>6 by Leighton as necessary and appropriate.</p> <p>7 And if MTR identified a significant non-conforming</p> <p>8 product during its inspection of Leighton's works, first</p> <p>9 of all, MTR could issue an NCR to Leighton, and if this</p> <p>10 occurred what then happened was that the non-conforming</p> <p>11 works had to be corrected and rectified before Leighton</p> <p>12 proceeded to the next stage of the works or indeed</p> <p>13 before the works were covered up.</p> <p>14 If this NCR was raised to Leighton, Leighton had to</p> <p>15 propose corrective measures to the MTR to rectify the</p> <p>16 works and to eliminate the causes of non-conformance to</p> <p>17 prevent a recurrence. And if MTR approved that</p> <p>18 proposal, Leighton could proceed to execute those</p> <p>19 corrective measures or preventive actions to correct the</p> <p>20 non-conforming works, and of course at that point MTR's</p> <p>21 construction management team had to take the necessary</p> <p>22 follow-up measures to ensure that the issues had been</p> <p>23 properly closed out.</p> <p>24 In the event that Leighton -- Leighton, not MTR --</p> <p>25 identified any non-conforming works, Leighton had to</p>	<p>1 at the bending yard, as Mr Cohen told us. Then it</p> <p>2 proceeded to the next layer of the rebar cages from the</p> <p>3 bottom upwards. And then the process was that each new</p> <p>4 layer of rebar cage had to be fixed to the layer below</p> <p>5 with couplers, typically using what were referred to as</p> <p>6 type B connections. At that point, the coupler splicing</p> <p>7 assemblies would be inspected and checked.</p> <p>8 Now, Leighton's engineers, sub-agents, site agents,</p> <p>9 whatever, would normally request MTR to inspect the</p> <p>10 rebar cages for a panel by submitting RISC form, and</p> <p>11 then, after completion of the diaphragm works, the rebar</p> <p>12 fixing works for the EWL slab would be carried out bay</p> <p>13 by bay. There would then be hold point inspections and</p> <p>14 relevant RISC forms for the rebar fixing works in each</p> <p>15 bay with the top and bottom layers of the rebars in each</p> <p>16 bay typically inspected on separate occasions.</p> <p>17 Now, these hold point inspections for the rebar</p> <p>18 fixing works in the EWL slab were carried out largely by</p> <p>19 reference of the working drawings, as I mentioned</p> <p>20 already, and these working drawings were prepared by</p> <p>21 Atkins' team A, who were MTR's design consultant for the</p> <p>22 contract. These working drawings would of course have</p> <p>23 been issued by the MTR to Leighton for construction</p> <p>24 purposes, and MTR's contract engineers, it must be</p> <p>25 emphasised, also used their engineering experience and</p>

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<p>1 professional judgment when carrying out the inspections. 2 Now, in addition to the hold point inspections, as 3 requested under the RISC form, whilst the prefabrication 4 or in situ fabrication of the rebar cages at the 5 diaphragm walls and the rebar fixing works in the EWL 6 slab was being carried out, the MTR inspectors were 7 often present on site as part of their routine site 8 activities. But when they were on site, MTR's 9 inspectors were obviously conscious of and relied upon 10 Leighton's obligations to provide continuous site 11 supervision of all the works, and that's what they say 12 in their witness statements. And of course they were 13 not expected to scrutinise each and every single work 14 activity carried out by the workers on the site. 15 The couplers which were used in the construction 16 process had to be installed in accordance with the 17 quality supervision plan, and by way of summary only, 18 I would say that for the type A connections which were 19 described to you yesterday, the rebar itself was rotated 20 and screwed into a coupler fixed to another rebar, and 21 the length of the threaded end of a type A rebar had to 22 be half of the length of the coupler. 23 For type B connections -- there were two types, 24 type A and type B -- the couplers were completely 25 screwed into the threaded ends of the rebars of one</p>	<p>1 already in the layer immediately below, so as to confirm 2 that the length and alignment of the threaded ends of 3 the rebars, screwed into the couplers, conformed to the 4 requirements under the quality supervision plan. And, 5 as one would expect, this checking process was intended 6 to minimise, if not totally exclude, the risk of 7 non-conformance in the splicing assemblies. 8 Moving on to the detail of the type A splicing 9 assemblies, when MTR's inspectors conducted site 10 surveillance of the EWL slab works, they generally pay 11 attention to whether they were within the tolerance of 12 not more than 1 to 1.5 full pitches of threading being 13 exposed, in accordance again with the requirements set 14 out in the quality supervision plan. And MTR's relevant 15 personnel's evidence, and I assume you have read this, 16 is that experienced inspectors could use a visual 17 inspection with the assistance of a tape measure to 18 measure the length of the threaded end, to verify 19 whether the couplers had been properly connected, and 20 indeed no special equipment had to be used. 21 We do not shirk from repeating the point that in the 22 event that there had been wholesale non-compliance in 23 terms of the cutting of the threaded ends of rebars and 24 such rebars not being properly screwed into couplers, 25 the extensive checking process to which they were</p>
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<p>1 cage, and after that the cage had to be properly aligned 2 with another cage and it would be rotated and screwed 3 into the threaded end of the rebars of the other cage 4 below. This process was necessary to connect the two 5 separate rebar cages. But, unlike the type A rebars, 6 the length of the threaded end of a type B rebar had to 7 be the same as the length of the coupler. 8 Now, for the EWL slab rebar fixing works, 9 Fang Sheung's workers would normally insert a type A 10 rebar into a coupler by hand to ensure proper alignment 11 and then use a pipe wrench to screw the rebar fully into 12 the coupler, and for construction of the diaphragm walls 13 Intrafor would do the same with the type B rebars and 14 couplers. 15 Now, for steel rebar cages for the diaphragm walls 16 which were typically connected using type B connections, 17 it bears emphasis that MTR's inspectors would normally 18 check the splicing assembly by measuring the exposed 19 type B threading, which, as I've said, should not be 20 more than half of the full length of the threaded end as 21 specified in the quality supervision plan. And in 22 practice, what happened, sir, was that Leighton's 23 workers would often be asked, by way of random 24 spot-checking, to unscrew the couplers connecting the 25 bottom of a rebar cage with the top of the rebar cage</p>	<p>1 subjected, as I just described, would have discovered 2 the non-compliance. 3 Now, other than the five occurrences that I referred 4 to 15-20 minutes ago -- 5 CHAIRMAN: I'm sorry, Mr Boulding, I'm wondering, would this 6 be an opportune moment? 7 MR BOULDING: Yes. 8 CHAIRMAN: I know you are going to move on to some slides. 9 MR BOULDING: I am, yes. 10 CHAIRMAN: But it's now nearly 11.20. 11 MR BOULDING: That's most convenient, sir. 12 CHAIRMAN: Thank you very much. It's no criticism 13 whatsoever but I'm aware it's not broken up as 14 cross-examination or examination or interchange is, and 15 the transcription provider, fingers start to fall off 16 after a while. 17 So we will just have ten minutes only, just to have 18 a quick break. 19 MR BOULDING: No problem. 20 (11.19 am) 21 (A short adjournment) 22 (11.32 am) 23 MR BOULDING: May it please you, sir, Professor. Before we 24 come to show time and our slide show, I would just like 25 to say a little bit more about the likely five</p>

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<p>1 occurrences, but in particular when MTR personnel became 2 aware of the allegedly defective steelworks, apart from 3 of course those five occurrences. 4 We say that apart from the likely five occurrences, 5 MTR first became aware of the alleged continued 6 existence of the defective steelworks at the end of May 7 2018 from the press reports. 8 Now, it does bear emphasis that before this, MTR had 9 been provided with an email from Jason Poon to Leightons 10 dated 6 January 2017, which my learned friend Paul Shieh 11 referred to yesterday, wherein he alleged that there was 12 the malpractised use of couplers on contract 1112. 13 It bears emphasis that Mr Zervaas's evidence -- he's 14 Leighton's project manager -- concerning in this email 15 is as follows. It came out of the blue, this email. It 16 was the first time he had ever heard of this alleged 17 malpractice, and this was despite the fact that the 18 allegations appeared to relate to events back in 2015. 19 Now, a few weeks later -- you have probably read our 20 evidence -- Aidan Rooney says that on the basis of his 21 understanding of events on site, he thought that the 22 coupler issue had been satisfactorily resolved and he 23 told Philco Wong that that was the situation. 24 But then it didn't stop there because again, as we 25 saw yesterday, on 15 September 2017, Jason Poon sent</p>	<p>1 say they ran into Jason Poon regularly, sometimes during 2 site walks which he accompanied them on. Poon also 3 attended some of MTR's weekly works meetings where any 4 concerns relating to the works would be discussed, but 5 remarkably Jason Poon nor anyone else from China 6 Technology ever brought up the issue regarding the 7 cutting of steel bars. 8 We do not shirk from saying that Jason Poon's 9 allegations in his media interviews, that he told MTR 10 representatives, including Rooney, about the cutting, 11 are pure fantasy. And you will have heard from 12 Mr Paul Shieh's opening yesterday that Leighton regard 13 Poon's allegations as similarly fantastic. 14 We agree with them that Jason Poon's real motivation 15 appears to be that he made his allegations -- false 16 allegations, we would say -- concerning the alleged 17 defective steelworks to pressurise Leighton into paying 18 China Technology substantial additional moneys which it 19 contended it was due in respect of the sub-contract 20 works, and it was only, it would appear, after this 21 tactic failed that Jason Poon went to the press and the 22 TV stations with his incredible and unsubstantiated 23 allegations that there were over 1,000 lengths of rebar 24 and at one stage even up to 30,000 lengths of rebar that 25 had been affected by this malpractice.</p>
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<p>1 an email to the Secretary for Transport and Housing of 2 that date and MTR received a copy of that, and it was 3 suggested by Jason Poon that China Technology had 4 an important issue on the execution of the works which 5 it had found and reported in January 2017 and which it 6 wanted to discuss. 7 Again, as we heard yesterday, what happened next was 8 that on 18 September, MTR received an email from Jason 9 Poon to the Secretary for Transport and Housing of the 10 same date, and that stated that "the suspecting subject 11 has been cleared now and no significant impact is 12 retained", and that China Technology "believe it is 13 a full and final end of the issue and may [China 14 Technology] invite to close all relevant files 15 accordingly". Having received that email -- and we 16 would say quite reasonably -- MTR considered that the 17 domestic dispute regarding payment between China 18 Technology and Leighton had been resolved and that no 19 follow-up was required. 20 Indeed the fact that a domestic dispute existed was 21 known to Rooney and thus MTR, and Mr Rooney deals with 22 that in his evidence. 23 Importantly I do emphasise, because this is 24 incredibly important in terms of assessing the 25 credibility of Mr Poon's evidence, MTR's representatives</p>	<p>1 Obviously, and as was emphasised to you yesterday, 2 the veracity of Poon's evidence will obviously be 3 subjected to close scrutiny during the course of this 4 hearing. 5 Now, with that, I would like to go to the slides, 6 please. These can be found -- I'm told they will be 7 flicked up on our screen -- it's tab 5A of bundle OS. 8 In the first instance, we are going to concentrate on 9 the change in the connection detail between the EWL 10 slab, the diaphragm wall and the overhead track exhaust, 11 and this is a matter which is, unsurprisingly, raised in 12 my learned friend Mr Pennicott's opening at 13 paragraph 36. 14 I start by saying that it is common ground that 15 there was a change in the steel reinforcement connection 16 details of the EWL and the OTE slabs and the diaphragm 17 wall connections at areas B and C, that's between 18 gridline -- 19 CHAIRMAN: Just a second. Another senior moment. "OTE" 20 again means ...? 21 MR BOULDING: Overhead track exhaust. 22 CHAIRMAN: Thank you. That's right. 23 MR BOULDING: Sorry about that. 24 CHAIRMAN: Sorry, the only reason is I think we have been 25 referring to it on our site visits as "duct". It's</p>

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<p>1 an area for ducting to come through.</p> <p>2 MR BOULDING: I think that's right, but it's referred to</p> <p>3 here as the OTE.</p> <p>4 CHAIRMAN: OTE, yes. I have it.</p> <p>5 MR BOULDING: Yesterday, Mr Pennicott raised the point about</p> <p>6 the change not being uniform. He is correct. We've not</p> <p>7 had an opportunity yet to try to agree this with</p> <p>8 Leighton, as I think Mr Pennicott suggested, but the</p> <p>9 matter is dealt with in MTR Louis Kwan's witness</p> <p>10 statement, paragraph 39. That's bundle WS2, tab 68, at</p> <p>11 pages B384-385. He says, in short, that there were</p> <p>12 still 14 panels with couplers.</p> <p>13 For the record, that's EH40, EH44, EH45, EH48, EH50,</p> <p>14 EH51, EH57, EH69, EM70, EH71, EM72, EH73, EH74 and EH75.</p> <p>15 So far as this slide show is concerned, sir, we hope</p> <p>16 you are going to find it helpful. There are</p> <p>17 introductory remarks and we emphasise that it is</p> <p>18 a schematic illustration, and the diagrams are</p> <p>19 simplified and indicative only; they are not to scale.</p> <p>20 The as-built drawings in due course will reflect the</p> <p>21 as-built connections between the EWL slab, the OTE slab</p> <p>22 and the east diaphragm walls, and they are being</p> <p>23 prepared, and of course in due course they will be</p> <p>24 submitted to the Buildings Department.</p> <p>25 The first slide comes up, please. It is in colour.</p>	<p>1 by the Buildings Department in March 2013. As I've</p> <p>2 said, the colours have been continued.</p> <p>3 Then if we go over to slide 4, this is important.</p> <p>4 It's the original design, again as accepted by the</p> <p>5 Buildings Department in March 2013, and there are</p> <p>6 various points to note. Firstly, note 1, connections of</p> <p>7 the bottom layer of rebar in the EWL slab are not shown.</p> <p>8 That's to simplify it. Before these rebars, the two</p> <p>9 rows of rebars -- below the two rows of rebars at the</p> <p>10 top, there are in fact more rows of rebar, and that's</p> <p>11 located further down in the pink area.</p> <p>12 We also point out that for the purpose of</p> <p>13 simplifying it, we only show the transverse rebars.</p> <p>14 That's the sort of golden colour going into the pink.</p> <p>15 There are in fact longitudinal bars as well going across</p> <p>16 those transverse bars, but for the purposes of</p> <p>17 simplifying it we do not show it.</p> <p>18 Typically, we emphasise, there are two rows of</p> <p>19 rebars with couplers at the top of the slab, and you can</p> <p>20 see those likely golden rings, and they depict the</p> <p>21 couplers, and the rebars were intended to go into those</p> <p>22 couplers, and I just ask you to note that whilst there</p> <p>23 are not measurements on the slide, the rebar is fixed</p> <p>24 at uniform 150 millimetre centre-to-centre spaces.</p> <p>25 So, so far, so good. Then if we go on to the next</p>
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<p>1 Splendid. What I would ask you to note from that is</p> <p>2 that it is the original design as accepted by the</p> <p>3 Buildings Department in March 2013, and this depicts</p> <p>4 areas B and C of the EWL slab. The diagram is obviously</p> <p>5 simplified and indicative and it's extracted from the</p> <p>6 working drawing which is referred to under the slide, at</p> <p>7 the bottom of the slide.</p> <p>8 The diagram shows, on the left, in green, the EWL</p> <p>9 slab, in the middle, the D-wall, and then the OTE slab,</p> <p>10 coloured green, pink and a lilac colour respectively,</p> <p>11 and they are carried through.</p> <p>12 What I do ask you to notice, sir, is that at the top</p> <p>13 of the EWL slab -- the pointer is not working -- you can</p> <p>14 see two horizontal bars and they depict two rows of</p> <p>15 rebar, and that's T1 and T3. If you follow them just</p> <p>16 into the pink of the D-wall, you can see that there are</p> <p>17 two couplers there; do you see them, two couplers?</p> <p>18 CHAIRMAN: Yes.</p> <p>19 MR BOULDING: Splendid. Obviously, that shows the two</p> <p>20 couplers with the rebar being connected to them.</p> <p>21 We are going to have to come back to this in due</p> <p>22 course when I deal with the change of U-bars at the top</p> <p>23 of the wall, but that will suffice for present purposes.</p> <p>24 If we could go to slide 2, please, this is a very</p> <p>25 simplistic depiction of the original design as accepted</p>	<p>1 slide, please, 5. Again, this is the original design as</p> <p>2 accepted by the Buildings Department in March 2013, and</p> <p>3 this is a cut-away drawing to show what was going on in</p> <p>4 the diaphragm wall. You can see that what was happening</p> <p>5 in there is that, on the other side of the couplers,</p> <p>6 there were two layers of rebar in the EWL slab which</p> <p>7 were connected to two layers of top L-bars cast within</p> <p>8 the D-wall. You can see the L-bars there, bending as</p> <p>9 they get to the right-hand side of the diaphragm wall,</p> <p>10 and that again was accepted. That design was accepted.</p> <p>11 Then if we could go over to slide 6, please, and</p> <p>12 this is the revised design wall detail during the D-wall</p> <p>13 construction. This arrangement was reflected in</p> <p>14 Intrafor's shop drawings at the time of the construction</p> <p>15 of diaphragm walls, as well as in the BA14 as-built</p> <p>16 submissions to the BD for the diaphragm walls which was</p> <p>17 accepted by the Buildings Department on 5 May 2017.</p> <p>18 What you can see, sir, is that the blue pipe, it's</p> <p>19 the tremie pipe which is used for concreting, there was</p> <p>20 a problem with the fact that the tremie pipe clashed</p> <p>21 with the rebar which was to be constructed or located in</p> <p>22 the D-wall. So the two rows of couplers and the rebar</p> <p>23 which we saw on the previous slide has been re-arranged</p> <p>24 to three or four rows. Indeed, instead of the bent bars</p> <p>25 we saw in the previous slide, we have couplers</p>

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<p>1 connecting through to straight bars. 2 Now, it bears emphasis that this revised D-wall 3 design was ultimately accepted by the Buildings 4 Department in 2017. The bundle reference is provided 5 there. 6 But it didn't stop there because if we can now go to 7 the next slide, slide 7, this is the as-built condition 8 of the D-wall in 2015. What then happened is that the 9 requirement for monolithic casting of the EWL and the 10 OTE slabs meant that the top of the east diaphragm wall 11 had to be hacked off by about 400 to 500 millimetres. 12 It followed that the top layer of cast-in couplers, 13 that's the three to four top layers of couplers as shown 14 in the amended details reflected in the BA14 as-built 15 submissions to the Buildings Department, had to be 16 hacked off. 17 COMMISSIONER HANSFORD: Could I just understand -- does that 18 mean they were therefore discarded? 19 MR BOULDING: Yes. 20 COMMISSIONER HANSFORD: Right. Thank you. 21 MR BOULDING: If you just imagine coming down, Professor, 22 the top 400 or 500 millimetres, everything that's shown 23 there, chipped off, thrown away. 24 COMMISSIONER HANSFORD: Right. 25 MR BOULDING: Then we have a situation -- and I ought to say</p>	<p>1 say there was no longer any need to use couplers, as 2 there was no joint or connection between the top layers 3 of the EWL slab and the diaphragm wall, and indeed 4 between the diaphragm wall and the OTE slab. 5 We do emphasise that the detail as constructed was 6 consistent with the design of the top layer of the slab 7 rebars reflected in the working drawings current at the 8 time when the rebar fixing works for the EWL slab 9 commenced, ie -- again I emphasise -- that the rebar is 10 uniformly spaced and there are generally two layers of 11 reinforcement. 12 Then finally, to go over to 10, this is a simplified 13 version of what was actually constructed. You can see 14 on the left-hand side the uniformly spaced two rows of 15 rebars, which go right the way through the dappled grey 16 area. 17 I repeat myself but it's nevertheless an important 18 point: MTR's construction team considers that the change 19 was only a minor one, from an engineering perspective, 20 and moreover, and importantly, did not affect the 21 overall structural stability of the diaphragm walls and 22 the EWL slab. Again, and I'm sorry to repeat myself, 23 but it's an important point, it was indeed a better 24 connection detail as the number of joints there would 25 remove or at least reduce the number of workmanship</p>
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<p>1 that the hacking off was not approved. There is, as 2 Leighton said yesterday, a debate as to whether or not 3 it was accepted. Leightons say that the Buildings 4 Department knew about it. Frankly, our position is we 5 are not so sure. But that's the situation as 6 I understand the opening position of Leighton at the 7 moment. 8 Coming on to the next slide, slide 8, if I may, this 9 details during the construction of the EWL slab in 10 2015-2016 part of the D-wall demolished, and one can see 11 by the light pink what was chipped off. 12 Then, coming on to slide 9, and this is what's 13 there. Details during construction of the EWL slab, 14 2015 to 2016. Now, as the three or four rows of cast-in 15 couplers at the top of the east diaphragm wall had been 16 hacked off, and there was no longer any clash with the 17 tremie pipes necessitating the re-arrangement of rebars, 18 what happened was that it was agreed between MTR's 19 construction team and Leighton that two rows, ie rows T1 20 and T3, of the top layer through-bars would be used to 21 connect the EWL slab to the east diaphragm wall, again, 22 with a uniform spacing of 150 millimetres 23 centre-to-centre, consistent with the original design 24 intent which I showed you two or three slides ago. 25 By using those three bars in areas B and C, sir, we</p>	<p>1 issues which might come into play. 2 Now, Leighton and Atkins team B -- Atkins team B, 3 you have heard, were the team of consultants from Atkins 4 who were advising Leightons -- should have submitted the 5 proposal for the change in the permanent works design to 6 MTR's design management team, and Atkins team A, who 7 of course were advising MTR, for review and approval, so 8 that, having looked at it and approved it, they could 9 have issued working drawings for construction to 10 Leighton. 11 But unfortunately, that didn't happen and the 12 consequence was that the changes would have to be 13 reflected in the final as-built submissions for the EWL 14 slab. 15 So that, I hope, sir, is a helpful but simplified 16 summary of what occurred. You will see that some of the 17 witnesses speak to that, as one would expect, in 18 considerably more detail than I have, purely for the 19 purpose of trying to explain it in simplified terms, and 20 I hope I have achieved that. 21 Whilst we are with the slides, sir, I do want to 22 respond to my learned friend Ian Pennicott's point about 23 the change in reinforcement steel detailing in the east 24 diaphragm wall, the top of the east diaphragm wall, in 25 Intrafor's works. This matter is raised specifically by</p>

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<p>1 Mr Pennicott in paragraph 34 of his opening statement, 2 and for this purpose I need to go back to slide 2, if 3 I possibly could. 4 If you look at slide 2, in the pink, you can see, 5 sir, a U-bar going around the top of the D-wall. Thank 6 you very much. It looks as though the -- do you see the 7 U-bars? 8 The original design of the east D-wall for areas B 9 and C, as accepted by the Buildings Department in March 10 2013, had those U-bars in it. 11 Then, in addition, if we go to slide 5 again, 12 please -- it's something I have mentioned -- we can see 13 that the two layers of top rebars in the EWL were 14 connected to two layers of top L-bars cast within the 15 D-wall. If you look there, you can see the L-bars. 16 What happened, sir, is that in practice the 17 implementation of that design faced considerable 18 challenges in terms of its construction. That was, in 19 particular, because of the spatial constraints and rebar 20 congestions at the top of the D-wall. 21 Just to go to slide 6, please, to resolve those 22 constructability issues, Intrafor and Leighton made the 23 following changes with which Atkins agreed. They 24 deleted the top U-bars and replaced the top L-bars as 25 well by the straight rebars running from the EWL slab</p>	<p>1 There's no doubt about that. It's referred to in Mr Ho 2 Hon Kit's witness statement at paragraphs 55 to 56. 3 That's bundle WS2/96/H2203-2205. 4 Hence, we would say there is no issue with this 5 change in the reinforcement details of the east D-wall. 6 Indeed, it has been closed out by the Buildings 7 Department and in fact it's of historical interest only. 8 So, sir, that's all I intended to say about the 9 slides. I've just got one more issue to deal with, 10 which I can take fairly shortly, and it's something that 11 I need to face head-on. That was the matter of the 12 retrospective coupler installation checklists. 13 The situation here is that MTR staff prepared 14 retrospective coupler installation checklists, and 15 I want there to be no doubt as to when, why, and for 16 what purpose, they were prepared. 17 As I've mentioned already, the quality supervision 18 plan required the quality control supervisor record 19 sheets which applied to all splicing assemblies to be 20 kept by Leighton in an inspection logbook on site for 21 inspection, and indeed MTR's inspectors, in this case 22 the senior inspector of works, was charged with 23 monitoring compliance with this requirement. 24 As you have already heard, on 6 January 2017, Jason 25 Poon sent Leighton an email where he alleged that he had</p>
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<p>1 through into the D-wall slab and the OTE slab. They 2 deleted all that, and the two layers of top rebars were 3 changed into three or four layers on both sides of the 4 tremie pipe. 5 But importantly, MTR were aware of this change at 6 the time it was made, as they were copied in to emails 7 when Leighton sought comments on its revised shop 8 drawings from Atkins. But in circumstances where no 9 formal proposal had been made by Leighton to MTR for 10 a consultation submission to be made to the Buildings 11 Department in either years 2013 and 2014, what actually 12 happened was that MTR raised a non-conformance report, 13 non-conformance report no. 21, dated 9 April 2015, in 14 respect of these changes. 15 But, and importantly again, the as-built condition 16 of the D-wall reinforcement details was reflected in six 17 batches of BA14 submissions for the D-walls to the 18 Buildings Department made between January 2015 and 19 January 2016. In addition, this as-built situation, ie 20 the deletion of the U-bars and the L-bars being replaced 21 by straight-through rebar, was also the subject of 22 a permanent works design report submitted to the 23 Buildings Department on 30 July 2015. 24 Buildings Department accepted all batches of the 25 BA14 as-built submission for the D-walls on 5 May 2017.</p>	<p>1 found plenty of records concerning malpractice so far as 2 the couplers are concerned. Now, MTR were provided with 3 a copy of this email, and as you would expect carried 4 out an internal quality assurance and quality control 5 review. As a result it was discovered, unfortunately, 6 that Leighton had not kept any record sheets or 7 inspection logbook. It also confirmed that MTR's 8 inspector of works had not been provided with any record 9 sheets for countersigning. 10 What happened next was that after the media reports 11 on 30 May 2018 alleging defective steelworks and coupler 12 installations in the diaphragm walls and the EWL slab, 13 on 13 June 2018, Leighton provided MTR with RISC forms 14 for each of the 32 bays in the EWL slab. These attach 15 certain checklists entitled "As-built for on site 16 assembly for EWL slab to D-wall/slab couplers". And MTR 17 concluded that these were similar to, albeit not exactly 18 the same as, the template which formed part of 19 appendix B to the quality supervision plan. They also 20 concluded that they were obviously based on the 21 information contained in the as-built BA14 drawings for 22 the diaphragm wall as submitted to the Buildings 23 Department. 24 However, because Leighton had never prepared any 25 record sheets or inspection logbook as required by the</p>

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<p>1 quality supervision plan, unfortunately MTR had nothing 2 to countersign to fulfil the requirements under the 3 quality supervision plan. 4 What happened then is that MTR, realising this 5 omission, took the necessary steps to urgently obtain 6 information as to its compliance with the relevant 7 supervision and inspection requirements for the 8 contract, which I referred to before the coffee break. 9 This revealed that its inspection team had in fact 10 carried out sufficient quality control supervision in 11 respect of the splicing assemblies in the EWL slab, 12 albeit that unfortunately there was no contemporaneous 13 paper trail. 14 In these circumstances, MTR's Derek Ma and Kobe Wong 15 say that in 2018, they set about preparing a set of 16 checklists to record the areas and the bays where the 17 MTR inspection team had carried out the requisite site 18 surveillance. 19 The checklists were dated 10 February 2017, after 20 they had been prepared, but I emphasise they were 21 expressly marked as a retrospective record of coupler 22 installation. They were dated 10 February because they 23 had been prepared in response to the follow-up action 24 recommended in MTR's internal review report dated and 25 issued 8 February 2017.</p>	<p>1 information in the BA14 as-built drawings for the 2 diaphragm wall in respect of the relevant areas and 3 bays. 4 Now, when did the balloon go up? It went up in 5 about July 2018, because at that point MTR's 6 construction management team became aware of the 7 inaccuracies in the coupler checklists. But by then, 8 unfortunately, the number of couplers as referred to 9 therein had found its way into the 15 June report, 10 contrary to all of the author's intentions and designs. 11 And MTR became aware of the inaccuracies in the coupler 12 checklists at that stage, because by this time they had 13 had the opportunity to review the site photographs 14 documenting the rebar fixing works in progress for the 15 purposes of the BA14 as-built submissions for the EWL 16 slab. And of course, having seen those photographs and 17 as I've referred earlier today, it was recalled that 18 a change had occurred back in 2015 concerning the 19 connection detail at the top of the east diaphragm wall, 20 which I've just explained to you by way of the slides. 21 Just to conclude this bit, again it is emphasised 22 there was absolutely no intention to deceive, and the 23 explanation for the omission is that back in 2015, MTR's 24 construction management team did not consider the change 25 to be major issues, and indeed there were considerably</p>
<p>Page 66</p> <p>1 I also emphasise that they were to act as 2 an internal reference point for the MTR only, to record 3 the areas and the bays where the coupler splicing 4 assemblies were covered by the MTR's inspectors' daily 5 site surveillance, and they were never intended to form 6 part of any submission to the Buildings Department or 7 indeed the Railway Development Office. With that point 8 in mind, they deliberately omitted MTR's logo from the 9 sheets. 10 The facts surrounding the preparation of the 11 checklists -- and this is emphasised in the MTR witness 12 statements -- were emphasised to the Buildings 13 Department, the RDO and Pypun's representatives when 14 they were shown these coupler checklists at MTR's site 15 office on 7 and 8 June 2018. All these facts were 16 emphasised to them. 17 Now, MTR's construction team witnesses say that they 18 never had an opportunity to check the information in the 19 checklists against the final as-built condition of the 20 joint between the east diaphragm wall and the EWL slab. 21 This of course was because the final amendments to the 22 as-built drawings for the diaphragm walls had not at 23 that stage been submitted by Leighton. 24 In preparing the checklists, the MTR 25 representatives, Ma and Kobe Wong, had to rely on the</p>	<p>Page 68</p> <p>1 more pressing matters for the MTR on-site team which 2 simply had to be dealt with on a day-to-day basis. 3 There we are, it's unfortunate, but that's the 4 explanation and I've been told to be completely candid 5 about it and I have been candid about it. 6 Unless I can give you any further assistance, sir, 7 I have nothing further to say. I'm sorry I have overrun 8 my time by a little bit. 9 COMMISSIONER HANSFORD: Let's see if I have anything. No, 10 that's fine. Thank you. 11 CHAIRMAN: Thank you very much. 12 Yes, Mr Khaw. 13 Opening submissions by MR KHAW 14 MR KHAW: Mr Chairman and Professor, perhaps at this stage, 15 unless one is a big fan of abbreviations, one might be 16 struggling to remember all the terms referred to by all 17 the parties so far. Unfortunately, I may need to 18 introduce a few more in the course of the government's 19 opening submissions, but hopefully, if these terms are 20 used time and again during the course of these 21 proceedings, they will start to become easier to 22 comprehend and remember. 23 We can always have a quiz at the end of this 24 hearing. 25 The Commission can see from our written opening that</p>

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<p>1 we aim to focus primarily on introducing the 2 government's monitoring and control mechanism. While 3 doing so, Mr Chairman and Professor, we intend to refer 4 the Commission to some key documents. By doing so, 5 hopefully the references to the relevant documents at 6 this stage will lay some necessary groundwork which will 7 help everyone understand the evidence from the 8 government better when our witnesses come forward to 9 give evidence.</p> <p>10 The government's monitoring system has primarily 11 been taken care of by two departments, namely the 12 Highways Department, HyD, which is under the Transport 13 and Housing Bureau, THB, and the Buildings Department, 14 BD, which is under the Development Bureau, DevB. So two 15 bureaus and two departments have become parties to this 16 Inquiry.</p> <p>17 If I may go to paragraph 3 of my written opening, 18 there we say the suspected defective works were first 19 raised by the media in late May 2018, and since then 20 there have been public concerns over the related safety 21 issues. One of the terms of reference of the Commission 22 is to enquire into the facts and circumstances 23 surrounding such suspected defective works. It is 24 envisaged that there will be factual disputes on the 25 nature, cause, extent and implications of the alleged</p>	<p>1 is always a case of public concern, public expectations, 2 regarding the safety of our railway system, which is of 3 paramount public interest.</p> <p>4 This is why the government has in fact fully 5 committed itself to doing whatever it can to address and 6 also hopefully alleviate public concerns by offering 7 assistance to this Commission and also by conducting its 8 own investigations and actions.</p> <p>9 If I may then turn to paragraph 4 of my written 10 opening. The government is highly concerned about the 11 suspected defective works and will do its utmost to 12 alleviate any concern over the issues of public safety 13 and quality of works. Since the media reports in May, 14 the government has been taking active steps to 15 investigate the matter. The government has also set up 16 an expert adviser team -- this is probably an easy 17 abbreviation, EAT -- to conduct an overall review of 18 MTRCL's project management system and advise on the most 19 pragmatic methodology for MTRCL to ascertain the 20 as-built condition and the structural safety of the 21 diaphragm wall and platform slab construction works of 22 the Hung Hom Extension.</p> <p>23 Perhaps just a bit of an update in this respect. 24 The THB, Transport and Housing Bureau, including the 25 EAT, the panel, Highways Department and Buildings</p>
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<p>1 problems, which will obviously be closely examined by 2 the Commission.</p> <p>3 Pausing here, Mr Chairman and Professor, some of the 4 submissions we heard yesterday have referred to the 5 evidence of Mr Jason Poon, the whistleblower in this 6 case, and no doubt his evidence will be under close 7 scrutiny at this hearing, and I believe there is likely 8 to be a competition at least between Mr Pennicott and 9 Mr Shieh on the number of questions they might have for 10 Mr Jason Poon.</p> <p>11 The government takes the view that it may be more 12 appropriate to conduct an evaluation of all the evidence 13 after we have had a chance to hear from all witnesses, 14 and we reserve our right to make submissions on the 15 analysis of evidence at the end of this hearing. But 16 I only wish to add that even if Mr Jason Poon fails to 17 prove his case, such an outcome will have a material 18 impact on how the systems implemented by the parties 19 will be assessed by the Commission.</p> <p>20 But from the government's point of view, even if 21 Mr Jason Poon fails to come up to proof at the end of 22 the day, that will not be the end of the matter. 23 Mr Shieh refers to whether there is a case to answer if 24 Mr Poon fails to prove his case. From the government's 25 point of view, there is always a case to answer. There</p>	<p>1 Department, have held a number of meetings over the past 2 two months or so, for the purpose of following up on 3 this matter, because there are always concerns over the 4 uncertainty as to what was actually built inside the 5 slabs and also the connections between the walls and the 6 slabs.</p> <p>7 MTR has agreed to formulate a holistic strategy for 8 assessing the acceptability of the build structures 9 which would consider a variety of methods of diagnosis, 10 including verification of available objective evidence, 11 inspections, tests through opening up the structures, as 12 well as non-destructive tests.</p> <p>13 I also note from Mr Pennicott's opening yesterday 14 that he has raised some queries on the work of EAT. 15 I would like to inform the Commission that the first 16 interim report of the EAT will become available very 17 soon and in any event by the end of this month. The 18 report will summarise the work that EAT has done so far 19 and also their recommendations on the issues of 20 structural integrity of the build structures at the 21 Hung Hom Station Extension. The government will 22 certainly keep the Commission informed of all further 23 work to be conducted by the EAT.</p> <p>24 Paragraph 5 of my written opening is the 25 introduction of our monitoring and control mechanisms of</p>

<p style="text-align: right;">Page 73</p> <p>1 the Highways Department, mainly, in this part, under 2 THB.</p> <p>3 The SCL project is implemented by way of 4 a concession approach whereby the government funded the 5 construction works and MTRCL was entrusted to implement 6 the project.</p> <p>7 Just a bit of history. Before the railway merger in 8 2007 between KCRC and MTR, the railway projects were 9 implemented under the ownership scheme. Under the 10 ownership scheme, the two railway corporations, ie MTR 11 and KCRC, were responsible for the funding, design, 12 operation and maintenance of railways, et cetera.</p> <p>13 But in view of the merger in 2007, the government 14 was given a discretion to consider whether, in future 15 projects, a concession scheme would be adopted. So that 16 is how the concession idea came into place, as a result 17 of the merger between the two corporations.</p> <p>18 As I said in paragraph 5 of my written opening, 19 under the EAs, ie the entrustment agreements, MTR, as 20 the project manager, was required to carry out or 21 procure the carrying out of the design, construction, 22 testing and commissioning of the SCL.</p> <p>23 Mr Chairman and Mr Commissioner, you may have read 24 or have been referred to three entrustment agreements: 25 EA1, EA2 and EA3. I can just briefly say that two EAs</p>	<p style="text-align: right;">Page 75</p> <p>1 So I believe MTR's opening has picked up 35.1 and 2 they say the Buildings Ordinance is not applicable to 3 SCL project, and hence the Buildings Ordinance, in their 4 words, is only contractual. That is how they describe 5 the regime.</p> <p>6 Perhaps I just need to supply some further 7 background in this regard, in order to fully understand 8 this regime. As a matter of fact, there are various 9 parts of the project which concern new works on 10 government land. In that case, the BO does not apply to 11 those parts which are governed under the IoC, ie the 12 instrument of compliance, which would be taken care of 13 by the Highways Department, not the Buildings 14 Department.</p> <p>15 There are other parts which include the Hung Hom 16 Station Extension where the present diaphragm walls and 17 slabs were constructed, and they are works built on land 18 leased to KCRC, or they were built on land given to MTR. 19 In that case, the construction works are still subject 20 to the Buildings Ordinance, and the building safety and 21 also the health standards contained in the Ordinance.</p> <p>22 In fact, perhaps I will just try to illustrate that 23 point by referring all of you to paragraph 13 of the 24 witness statement of the Director of Buildings. It's 25 H7/2111. I believe this paragraph summarises the</p>
<p style="text-align: right;">Page 74</p> <p>1 are not relevant for the present purposes. EA1 is only 2 for design and site investigation. EA2 is for advanced 3 work, and EA3 is for the actual construction and 4 commissioning of the project. Hence, we will be looking 5 at EA3 only.</p> <p>6 Mr Boulding, in his opening submissions, has 7 helpfully set out MTR's obligations and duties under the 8 entrustment agreement. I do not wish to repeat them.</p> <p>9 There is only point I wish to address. That is the 10 question raised by the Commission regarding clause 35.1. 11 If I may just turn to that page.</p> <p>12 It's G7, page 5643. Under the heading of "Design 13 submissions and construction":</p> <p>14 "Without prejudice to the rights and obligations of 15 the parties under the instrument of compliance and 16 notwithstanding the difference in respect of 17 applicability of the Buildings Ordinance to the works in 18 relation to a railway project carried out by the 19 corporation under the ownership approach (subject, in 20 any event, to section 54(2) of the Ordinance) and the 21 works in relation to a railway project carried out by 22 the corporation under the concession approach (as in the 23 case of the SCL, to which the Buildings Ordinance is not 24 applicable), the corporation agrees that it shall carry 25 out consultation in relation to the railway works ..."</p>	<p style="text-align: right;">Page 76</p> <p>1 regime. Paragraph 13:</p> <p>2 "The SCL project consists of two parts, namely, the 3 East West Line and the North South Line. The Hung Hom 4 Station Extension is the interchange station for EWL and 5 NSL. Building works of the SCL project may fall under 6 the purview of the BA or the Highways Department. Those 7 works to which the BO applies will be regulated by the 8 BA.</p> <p>9 (1) The expansion of Hung Hom Station and the 10 construction of Sung Wong Toi Station of the SCL project 11 are within the land leased to the KCRC and the 12 government land given to the MTR respectively. The 13 construction works at these locations are therefore 14 subject to the BO and the building safety and health 15 standards therein. Following the scheme explained in 16 section B above, the BA issued an instrument 17 an exemption [IoE] ... to exempt MTR from several 18 requirements under the BO in relation to the leased land 19 portion of the SCL project.</p> <p>20 (2) On the other hand, pursuant to section 41(1) of 21 the BO, building works of the SCL project which are 22 located at government land and unleased land are 23 exempted from the control of the BO. For these building 24 works, the Director of Highways, in accordance with the 25 entrustment agreement signed between the government and</p>

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<p>1 MTR, issued an instrument of compliance requiring MTR to 2 follow the administrative procedures ... as stipulated 3 in the IoC for carrying out building works", et cetera. 4 So these are the two different regimes governing 5 different parts of the works. 6 From our point of view, it may not be entirely 7 correct to say that the Buildings Ordinance does not 8 apply to the SCL project in general. It really depends 9 on which parts of the project you are talking about. If 10 you are talking about the project in relation to the 11 current diaphragm walls and slabs that we are talking 12 about on the Hung Hom Extension, they will be governed 13 by the BO, only with sort of some modifications as 14 granted under the IoE. I will further explain that 15 a little bit later. 16 COMMISSIONER HANSFORD: Thank you for that clarification. 17 MR KHAW: I am grateful. 18 It may not be agreed by the MTR but we shall see 19 when we are dealing with that point later, at the 20 hearing. 21 COMMISSIONER HANSFORD: I understand. 22 MR KHAW: According to the entrustment agreement, the 23 government will be entitled to engage an expert, outside 24 consultant, to conduct monitoring and verification works 25 for the project.</p>	<p>1 Then the next page, 7659, we have the heading of 2 "Review reports" that would need to be compiled by the 3 consultants. 4 More importantly, if we go to 6.3, under the heading 5 of "Monitoring", it sets out more details regarding the 6 work to be done by the M&V expert. 7 And 6.3.4, there's a description regarding checking, 8 and also review and comments on method statements. That 9 is 7661. 10 Then, on "Verification", that's 7662, that sets out 11 the scope of work regarding verification. 12 Then 6.5 relates to the interim and final reports on 13 monitoring and verification. 14 6.6 is also important, because 6.6 at 7664 deals 15 with the professional services to be provided by the M&V 16 consultant on assessment of building submissions and 17 compliance with the building safety standards. This is 18 the work that the M&V consultant worked closely on with 19 the Buildings Department's officers. 20 If I can just take the Commission to 7665, 21 clause 6.6.4, (f): 22 "Conduct audit and surprise checks to construction 23 sites on aspects of the structural safety and integrity 24 of foundation, tunnel, superstructure and et cetera for 25 safety assurance and for compliance with the building</p>
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<p>1 Perhaps it's a convenient point to have a look at 2 the M&V agreement that the government entered into with 3 the M&V consultant. It's at G9/7638. This is the front 4 page with a seal, and then if I may invite the 5 Commission to have a look at the brief, starting from 6 7646, and then there's a table of contents. 7 I will just very briefly refer to section 4, first 8 of all, under the heading of "Description of the 9 assignment", where we can see a brief description of the 10 duties that have been undertaken by the M&V expert or 11 consultant under this brief. 12 I can skip a few pages and then ask the Commission 13 just to put down a marker, at 7658, which deals with the 14 services to be provided by the consultants. I'm not 15 going to deal with all the details here. I will just 16 highlight the relevant section. 17 CHAIRMAN: 7658? 18 MR KHAW: 7658, which is section 6 of this agreement. 19 CHAIRMAN: Ah, sorry. 20 MR KHAW: Under the heading of "Services to be provided by 21 the consultants". 22 CHAIRMAN: Yes. 23 MR KHAW: Regarding the scope of work, I am sure that those 24 representing the M&V consultant will have quite a lot to 25 say in due course.</p>	<p>1 safety standards, and examine the remedial proposals 2 submitted by MTR if contravention is detected". 3 So this bit closely relates to the monitoring and 4 control mechanism undertaken by the Buildings 5 Department. 6 If I can then move back to my written opening, 7 paragraph 6. The SCL project adopts a project 8 management approach which essentially covers three 9 elements: (1) entrustment of the whole project to MTR 10 and utilisation of MTR's pre-existing project management 11 and control processes; (2) adoption of a "check the 12 checker" approach, with support from a monitoring and 13 verification consultant; and (3) adoption of a building 14 safety control mechanism. So these are the three 15 elements that I will further discuss during the course 16 of my submissions. 17 In respect of the first element, the entrustment 18 agreement specified the MTR's pre-existing project 19 management and control processes would be used to 20 deliver the SCL project, and allow the government's 21 monitoring and representation in key control procedures. 22 In other words, the MTR is responsible for devising and 23 implementing its own project management procedures, with 24 skill and care reasonably expected of a professional and 25 competent project manager as required under the EAs.</p>

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<p>1 Mr Boulding's submissions have also referred to the</p> <p>2 requirement that MTR has to comply with all the</p> <p>3 statutory regulations, et cetera.</p> <p>4 Then the government's role is to monitor and verify</p> <p>5 that MTRCL fulfils its obligations under the EAs.</p> <p>6 According to the EAs, MTRCL warrants that the entrusted</p> <p>7 works shall achieve a professional and reasonable level</p> <p>8 of skill and supervision, including the assurance of</p> <p>9 quality of the works up to the required standards.</p> <p>10 In paragraph 8, we refer to the Lloyd's</p> <p>11 recommendation, which has also been referred to by</p> <p>12 Mr Boulding. According to Lloyd's, MTRCL's project</p> <p>13 management processes and controls are known to be robust</p> <p>14 and in line with industry best practice. They are</p> <p>15 regularly reviewed and audited by outside bodies and</p> <p>16 have been proven and refined through the delivery of</p> <p>17 many high-quality railway projects, both in Hong Kong</p> <p>18 and also abroad. Under the said project management</p> <p>19 system, many railway projects have been successfully</p> <p>20 delivered by MTR in the past.</p> <p>21 That is the reason why the government saw fit, under</p> <p>22 a concession approach, to place trust and reliance on</p> <p>23 the MTR for the implementation of the SCL project.</p> <p>24 In respect of the second element, ie the "check the</p> <p>25 checker" approach, it is a risk-based sampling approach</p>	<p>1 After the completion of any outstanding works and</p> <p>2 rectification, HyD and the M&V consultant will attend</p> <p>3 further inspections.</p> <p>4 At this stage, if I may just very briefly refer the</p> <p>5 Commission to some parts of the M&V reports which show</p> <p>6 that in fact structural matters, including difficulties</p> <p>7 in relation to installing layers or couplers, were</p> <p>8 actually picked up in the M&V report.</p> <p>9 Just as an example, if I can ask the Commission to</p> <p>10 have a look at G10/7880. This is a report prepared by</p> <p>11 Pypun. You can see from this page that there's</p> <p>12 a description of the project and also "Site visited" and</p> <p>13 then the date, 10 September 2013, and there is also</p> <p>14 a drawing at the bottom of this page.</p> <p>15 If we can then take a look at 7895. It's just</p> <p>16 an example. One can see that there's a table --</p> <p>17 CHAIRMAN: Sorry, I missed that. One can see ...?</p> <p>18 MR KHAW: One can see this table, and there is some</p> <p>19 description in different columns. If I can just pick</p> <p>20 the last two items, "Uncontrolled ground movement due to</p> <p>21 removal of existing bore pile", and then the next one is</p> <p>22 "Obstruction to ... track/damage to ... train",</p> <p>23 et cetera. Then, in relation to the second-last item,</p> <p>24 under the heading of "Main cause(s)", the Commission</p> <p>25 will see that there's a description regarding "Spatial</p>
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<p>1 to verify delivery of the requirements of the project</p> <p>2 scope and authorised expenditure, bearing in mind the</p> <p>3 government's resources should be utilised effectively to</p> <p>4 avoid repetition and micromanagement of the project.</p> <p>5 That is particularly so when we work with</p> <p>6 an experienced railway operator, MTR, in this case.</p> <p>7 Paragraph 10. Highways Department maintains its</p> <p>8 role in monitoring and verifying MTR's compliance with</p> <p>9 its obligations under the entrustment agreements.</p> <p>10 Highways Department has since 2012 appointed Pypun, who</p> <p>11 has conducted regular site visits and regular audits</p> <p>12 during the construction, testing and commissioning phase</p> <p>13 of the SCL project. Through review and various reports</p> <p>14 and submissions by MTR and the M&V consultant, such as</p> <p>15 audit reports and progress reports prepared by the M&V</p> <p>16 consultant, the Highways Department keeps track of the</p> <p>17 latest developments of the project.</p> <p>18 The M&V consultant is required to witness the site</p> <p>19 testing and commissioning activities undertaken by MTRCL</p> <p>20 and also its contractors during the system integration</p> <p>21 test and trial operation stage under the direction of</p> <p>22 the Highways Department. Highways Department and also</p> <p>23 the M&V consultant attend MTRCL's pre-completion</p> <p>24 inspections and receive copies of any lists of</p> <p>25 outstanding works or defective works prepared by MTR.</p>	<p>1 constraint, proximity of D-wall alignment with</p> <p>2 underpinning pile cap". Then the last item under "Main</p> <p>3 cause(s)", it says, "Formwork collapse", et cetera.</p> <p>4 If I can take another example, at 7900. If we can</p> <p>5 go to just a bit below the middle, can Mr Chairman and</p> <p>6 Professor see 50415, the description of "D-wall"?</p> <p>7 CHAIRMAN: Yes.</p> <p>8 MR KHAW: D-wall, then the risk description is,</p> <p>9 "Difficulty/safety in installing three layers of</p> <p>10 couplers at D-wall", and then the "Main cause(s)" are</p> <p>11 described as "Low headroom means couplers need to be</p> <p>12 used to connect small cages together".</p> <p>13 This is just an example to show that in the M&V</p> <p>14 consultant's report, matters like this were picked up,</p> <p>15 and this relates to the building aspect regarding the</p> <p>16 project.</p> <p>17 If I can then go back to paragraph 11, where we set</p> <p>18 out different levels of meetings, first of all meetings</p> <p>19 of PSC, the project supervision committee, a high-level</p> <p>20 interdepartmental committee chaired by the Director of</p> <p>21 Highways and comprises senior officers of the RDO,</p> <p>22 representative from THB, the project directors and other</p> <p>23 senior staff of MTR.</p> <p>24 The PSC meets monthly to review project progress and</p> <p>25 monitor procurement activities, post-tender award cost</p>

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<p>1 control and resolution of contractual claims. It also 2 provides steers at top management level on key matters 3 requiring attention. For example, in 2015, several 4 incidents of non-conformities in respect of the 5 construction works at the Hung Hom Extension and the 6 remedial works taken by MTR and Leighton were reported 7 to the Director of Highways and discussed at PSC 8 meetings. 9 We have various witnesses who will give evidence on 10 the details regarding those non-conformities which were 11 discovered in 2015. 12 (2) Project coordination meetings, co-chaired by the 13 government engineer/railway development (1) of the RDO 14 and a general manager of the MTR, with the attendance of 15 other senior staff of MTR, chief engineers and other 16 professional officers of the RDO and the M&V consultant. 17 Meetings are convened monthly to discuss and monitor 18 matters including those relating to progress and 19 programme, construction issues, safety and environmental 20 issues, et cetera. 21 Then PPM, another level of meetings, chaired by 22 MTR's general manager of SCL and attended by other 23 senior staff of MTR, chief engineers and other 24 professional officers of the RDO and the M&V, et cetera. 25 They took care of the major civil and electrical and</p>	<p>1 regarding the building control regime under the BO. 2 Perhaps 14 is important: the building control regime 3 under the BO is a self-regulatory system, which requires 4 every person for whom building works are to be carried 5 out to appoint relevant personnel registered under the 6 BO to perform their duties as required under the BO. It 7 is the responsibility of the registered building 8 professionals and registered contractors to ensure that 9 the works fully comply with the BO, and also all the 10 subsidiary legislations, notwithstanding that BD will 11 conduct curtailed and audit checks on plan submissions 12 and audit checks on completed building works and street 13 works. BD acts as a regulator with powers conferred by 14 the BO, and may instigate prosecution against any person 15 who commits an offence under the Buildings Ordinance. 16 Paragraph 15 in fact repeats the earlier point that 17 I said about the applicability of the Buildings 18 Ordinance to the project. As the Hung Hom Extension is 19 within leased land, the construction works are in 20 general governed by the BO. Having regard to the 21 exceptional nature of the building works related to 22 railway construction, the BA, in accordance with 23 section 54(2) of the MTR Ordinance, had issued an IoE to 24 exempt MTR from various requirements under the BO in 25 relation to the leased land portion of the project.</p>
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<p>1 mechanical engineering contracts and other key issues 2 for discussion. 3 There is also PCG, an internal establishment of MTR, 4 for taking care of the cost issue. 5 Then there are other informal liaison meetings and 6 also ad hoc meetings, as set out in paragraphs (5) and 7 (6). 8 In respect of the third element, ie the building 9 safety control mechanism, insofar as the works for 10 diaphragm walls and platform slabs at the Hung Hom 11 Extension of the SCL project are concerned, professional 12 staff members from BD have been seconded to HyD to form 13 a BO team to handle matters arising from the instrument 14 of exemption. 15 The BO team, as we have described here, consists of 16 staff originally working in the Buildings Department, 17 they were seconded to help with the project, and they 18 also worked closely with the M&V consultant in relation 19 to building safety issues. 20 The BO team acts under the dedicated authority from 21 the Building Authority and seeks BD's advice as 22 necessary on matters under the BO and handles matters 23 relating to the IoE including advising on the building 24 safety standards, practices and procedures under the BO. 25 Paragraphs 13 and 14 are general descriptions</p>	<p>1 More specifically, for the works under the contract, the 2 part concerning modification of existing structures in 3 Hung Hom Station is fully governed by BO, while the new 4 works, namely the EWL and also NSL slab and diaphragm 5 wall, are covered by the IoE. 6 Perhaps it's important to understand the operation 7 of the IoE. If I can just take the Commission to have 8 a look at certain provisions of the IoE. H7/2220. 2220 9 is a cover letter issued by the Buildings Department in 10 relation to the IoE. Paragraph 2 is relevant: 11 "In recognition of the exceptional nature of the 12 said buildings and associated building works and having 13 regard to the draft 'project management plan' ... I now 14 grant exemption from the BO in respect of the said 15 buildings and associated building works, details of 16 which are as listed in the reference schedule to the IoE 17 attached. I would like to remind you to submit the 18 formal PMP as soon as possible." 19 Now, it's important to understand the meaning of 20 exemption under the IoE; what has actually been 21 exempted? This actually has been set out quite clearly 22 at 2222. 23 The first sentence is simply a sentence setting out 24 the power for the grant of this IoE: 25 "... I hereby exempt from the Buildings</p>

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<p>1 Ordinance ... those works connected with the design and 2 construction of Hung Hom Station Compound within the 3 KCRC vested land and leased land and station at 4 Sung Wong Toi within the leased land ..." 5 Then if I can skip the gazette and also the plans, 6 which are not particularly interesting. 7 Then we go to the word "BUT", the capital letters 8 BUT: 9 "... BUT only in respect of the categories and types 10 of structures specified in the reference schedule 11 attached at the annex and subject to the conditions 12 thereafter specified. MOREOVER", and I stress, "the 13 exemption is confined to those procedures and 14 requirements relating to the appointment of authorised 15 person and registered structural engineer as 16 appropriate, approval of plans, consent to commencement 17 and resumption of works and occupation of buildings 18 provided for in [various sections] of the Buildings 19 Ordinance, such that my duties and sanctioning powers to 20 ensure standards of health and safety are not 21 undermined." 22 What it means is that various administrative 23 procedures have been exempted under the IoE, but those 24 procedures are required under the BO, but in view of the 25 unique nature of this project, the administrative</p>	<p>1 (1) Appoint a CP, competent person, who shall take 2 up the responsibilities and duties of AP and RSE to 3 coordinate and supervise the works, and to submit plans 4 for consultation with the BD. The appointment of CP 5 shall be subject to prior agreement of BD with regard to 6 qualifications and experience. 7 (2) appoint a registered geotechnical engineer for 8 building works involving significant geotechnical 9 content; 10 (3) appoint registered general building contractors 11 and registered specialist contractors, as appropriate, 12 to supervise and carry out each area of the works; and 13 (4) instigate an assurance system and control scheme 14 to ensure that management of the construction of the 15 works are at a standard not inferior to that required 16 under the BO and regulations. This assurance system and 17 control scheme come in the form of a PMP, which has been 18 introduced by Mr Boulding this morning, submitted by MTR 19 setting out the standards and procedures to be followed 20 by MTR for the implementation of the project. 21 Perhaps I can just complete paragraph 17 as well. 22 The IoE further provides that the Building Authority 23 would reserve the right to take any action including 24 suspension and preventative or remedial action in the 25 event of any works materially deviating from the agreed</p>
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<p>1 procedures and requirements have been exempted. 2 The Buildings Department still retains the overall 3 power under the BO in relation to building safety. So 4 it's not the case that even the building safety 5 requirements have been somehow compromised or exempted. 6 It's not the case. We still apply the BO standards 7 regarding building safety, even under the IoE. So 8 I believe this needs to be made clear. 9 Perhaps I will just finish paragraph 16 before we 10 break for lunch. 11 It is important to note that the IoE is not for 12 exemption from compliance with BO standards. The 13 exemption is confined to those procedures and 14 requirements relating to the appointment of AP and 15 registered structural engineer. 16 So, under the IoE, for this project, there is no AP, 17 there is no RSE, but there is an important personnel who 18 is a CP, who takes care of a lot of issues. 19 Approval of plans, consent to commencement, 20 et cetera, et cetera -- so these have been exempted. As 21 such, BA's duties and sanctioning power to ensure 22 compliance with the standards of health and safety 23 prescribed under the BO are not undermined. 24 Then we have set out various important conditions 25 under the IoE:</p>	<p>1 design or working procedures, and the exemption may be 2 withdrawn if any of the conditions contained in the IoE 3 are not observed or in any circumstances necessitating 4 such withdrawal. 5 I wonder whether that would be a convenient moment. 6 CHAIRMAN: Yes. Are you able to say how much longer you 7 expect to be? 8 MR KHAW: Perhaps half an hour. 9 CHAIRMAN: Okay. Good. 10 Mr Pennicott, yesterday we traversed the possibility 11 of the two new parties putting in brief oral submissions 12 at this opening stage. Do you know if there's been any 13 development in that regard? 14 MR PENNICOTT: No, sir. I had a brief word with Mr Coleman 15 this morning, and I think the intimation he gave me, 16 unless things have changed during the course of the 17 morning, is that he probably would not like to say 18 anything at this moment. 19 I'm not sure about Mr Connor. Very briefly, 20 apparently, but orally; nothing in writing. I imagine 21 it would be very short. 22 CHAIRMAN: Then we would start with the evidence after that? 23 MR PENNICOTT: Yes, sir. 24 CHAIRMAN: And that would be -- I'm not quite sure as to 25 how --</p>

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1 MR PENNICOTT: Mr Gillard. 2 CHAIRMAN: We've anglicised him, unless he is anglicised 3 already. I assumed he's French, it would be Gillard. 4 We will find out. 5 MR PENNICOTT: We will find out, but it's him. 6 CHAIRMAN: Good. How long do we anticipate he will be 7 giving evidence? 8 MR PENNICOTT: There is, I know, going to be some 9 evidence-in-chief, because I have invited Mr Cohen to 10 take the witness to the video, so we will be looking at 11 a video. 12 CHAIRMAN: Good. 13 MR PENNICOTT: So I have asked, as I say, Mr Cohen to do 14 that in-chief, rather than me do it in examination. So 15 I imagine that won't take too long but it's going to 16 take 15 or 20 minutes, I imagine. Then I will ask some 17 questions, and I anticipate probably being maybe an hour 18 to an hour and a half with Mr Gillard, perhaps slightly 19 shorter; I don't know. To be fair, I haven't asked any 20 of my learned friends whether anybody else wishes to ask 21 Mr Gillard any questions. 22 CHAIRMAN: Mr Gillard may well then, in all probability, be 23 held over until tomorrow as well. 24 MR PENNICOTT: It's possible. It depends on how my learned 25 friends want to play it and whether they've got any	1 If I can turn to the next page, which sets out all 2 the requirements imposed. If we can then turn to one of 3 the appendices, it should be at page 3901, appendix 9, 4 which deals with the mechanical couplers and steel 5 reinforcement bars for ductility requirements. 6 Then various conditions are imposed here. We can 7 see that one of the conditions is the qualified site 8 supervision of mechanical splice works by an experienced 9 and competent person; and also, b, the assignment of 10 a quality control supervisor to supervise the works, 11 determine the necessary frequency of inspection. Then 12 the RGBC, the registered general building contractor, 13 and the registered specialist contractor, should assign 14 a quality control coordinator to provide full-time 15 on-site supervision, et cetera. And then the names and 16 qualifications of the supervisory personnel representing 17 the competent person and also the contractors. 18 If we can then turn to 3903, one of the conditions 19 is: 20 "A submission of a quality supervision plan of the 21 competent person", ie competent person of MTR, and also 22 the contractors, "is required to be submitted to this 23 department prior to the commencement of the mechanical 24 couplers work. The quality supervision plan should 25 include the following details:
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1 questions for him. 2 CHAIRMAN: Good. We will see how we go. Thank you very 3 much. 2.15. 4 (1.00 pm) 5 (The luncheon adjournment) 6 (2.18 pm) 7 CHAIRMAN: Yes. 8 MR KHAW: If I may start from paragraph 19 of my written 9 opening, where we deal with the design stage drawings, 10 et cetera, and then, basically, it's about the 11 submission of plans by the CP to the government for the 12 purpose of fulfilling the conditions under the IoE. 13 Then paragraph 20 actually deals with the acceptance 14 of plans submitted for consultation and also the BO 15 team's acceptance letter, et cetera. 16 What I want to highlight here is only perhaps two 17 matters. One is the acceptance letter, set out in 18 paragraph 20, and the other is the QSP. 19 Perhaps we can take a look at the acceptance letter 20 first. The acceptance letter is at H9/3873. 21 This acceptance letter is dated 25 February 2013. 22 We can see from the table below, it says "Substructure 23 below EWL platform level", and also we've got 24 "Foundation (load bearing diaphragm wall, barrette pile 25 [et cetera])".	1 Assignments of quality control supervisor of the 2 competent person and the quality control coordinator of 3 the [contractors] to supervise the manufacturing process 4 of the connecting ends of the steel reinforcing bars, 5 and the installation of steel reinforcing bars to the 6 couplers. 7 Frequency of quality supervision, which should be at 8 least 20 per cent of the splicing assemblies by the 9 quality control supervisor of the competent person and 10 full-time continuous supervision by the quality control 11 coordinator of the RGBC/RSC ... 12 For couplers to be used at the top of pile cap and 13 transfer plate, the frequency", et cetera. 14 In response to such conditions, MTR then submitted 15 the QSP, ie the quality supervision plan, which can be 16 found at H9/4269. The letter starts at 4262, a letter 17 from MTR to the government, where it says "Quality 18 supervision plan submission" has been put forward. 19 If we go to the contents, 4265, Mr Chairman and 20 Professor can see the front page of this quality 21 supervision plan on enhanced site supervision and 22 independent audit checking, regarding installation of 23 couplers. 24 The relevant provisions are set out at 4269. You 25 can see that the heading of this document is "Quality

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<p>1 supervision plan on enhanced site supervision and 2 independent audit checking ... for installation of 3 couplers". 4 Paragraph 5, "Supervision on site works": 5 "Beside the site supervision system as stipulated in 6 the Code of Practice for Site Supervision, the 7 followings additional inspection will be carried out." 8 First of all, by RC, so Leighton in this case: 9 "Quality control supervisors will be responsible to 10 carry out full-time and continuous supervision of the 11 splicing assemblies on site. 12 Supervision and inspection will be recorded in the 13 record sheet and write into the inspection logbook ... 14 Checking includes length of thread and correct 15 connection of 2 bars with couplers." 16 Then subparagraph 2 deals with "Supervision and 17 inspection by MTR ... -- installation works": 18 "Frequency of quality supervision should be not less 19 than 20 per cent of the splicing assemblies by MTR ... 20 Quality control supervisors will record the 21 inspection by countersigning the inspection record 22 sheet ..." 23 Then 6 refers to the inspection logbook that was 24 required to record the details regarding supervision and 25 inspection.</p>	<p>1 considered to be completed satisfactorily, then no 2 objection letters will be issued by the Buildings 3 Department. 4 Then finally I come to the regime on regulating 5 action by DevB -- 6 MR PENNICOTT: Before my learned friend gets to that, I just 7 wonder if it might be helpful if the government could 8 indicate, not necessarily now while my learned friend is 9 on his feet, but perhaps at some convenient moment, 10 relatively soon, whether the government accepts that at 11 least the paperwork was in order, in terms of what was 12 submitted by MTRC, Leighton, Intrafor, and so forth, to 13 the government. 14 Compliance, of course, is a completely different 15 question which is obviously a matter of contention and 16 we will need to look into, but in terms of the 17 documentation, and obviously Mr Khaw has been very 18 usefully taking us to some of this material, but it 19 would be helpful certainly for me to know, in terms of 20 questioning certain of the witnesses, whether the 21 government accepts and is not taking any point that the 22 paperwork was in fact in order. 23 MR KHAW: I will deal with that when it comes to this 24 question regarding the change in design, because we 25 would like to make our position clear, and that is, in</p>
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<p>1 So these are the relevant bits in relation to 2 installation of couplers, and these are also the 3 requirements agreed by MTR and they have been submitted 4 to the government. 5 So if we go back to my written opening, 6 paragraph 21, then again, at the construction stage, 7 there is a mechanism to ensure that contractors and 8 sub-contractors will be able to execute the works in 9 accordance with accepted plans. Perhaps in the middle 10 of this paragraph, starting from, "The CP": the CP of 11 MTRCL and AS of Leighton and Intrafor are further 12 required to provide qualified site supervision of such 13 works in accordance with the SSP and QSP. It is 14 important to note that it is the responsibility of MTR 15 and its contractors to ensure that construction works 16 are carried out in accordance with the project 17 management plan, SSP and requirements specified by the 18 BO team, notwithstanding that the BO team would, if 19 necessary, carry out site inspections and site audits 20 with the assistance of the M&V consultant during the 21 construction stage. 22 Then paragraph 22 deals with the completion stage, 23 the requirement for certificates of completion and also 24 further inspection, et cetera. I'm not going to deal 25 with the details. But of course, if the works are</p>	<p>1 response to the Commission's question yesterday, 2 Mr Shieh actually dealt with the point regarding whether 3 acceptance was given by the BD in relation to the change 4 in design. 5 That point, regarding the paperwork, we can deal 6 with now. I am prepared to deal with it now. But in 7 relation to the general paperwork, I'm not sure which 8 particular aspect Mr Pennicott would like me to deal 9 with, but I believe that can be dealt with by our 10 witnesses in due course. 11 So I will focus on the paperwork in relation to the 12 change in design for the purpose of today. 13 MR PENNICOTT: Sir, all I had in mind is that we know that, 14 under the instrument of exemption and the Buildings 15 Ordinance, and so forth, various statutory requirements, 16 we know that the MTRC, the registered contractor, the 17 registered specialist contractor, are required to 18 submit, before commencement of the works or on 19 commencement of the works, certain documentation, the 20 quality supervision plan being one of them, that Mr Khaw 21 has just taken us to. 22 I am just really trying to understand, whilst this 23 is all very interesting, whether the government says 24 that it accepts that all the necessary paperwork under 25 the regime that we are operating under, the IoE, and how</p>

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<p>1 that interacts with the Buildings Ordinance, and so 2 forth, whether they accept that the paperwork was in 3 order. 4 CHAIRMAN: You're talking about the paperwork generally -- 5 MR PENNICOTT: Generally, yes. 6 CHAIRMAN: -- and not merely paperwork restricted to 7 a particular instance such as the change of plan? 8 MR PENNICOTT: No, generally. Were all the statutory 9 provisions, supervision plans in order, and so forth. 10 CHAIRMAN: So on a general basis what would be the 11 government's position as to the question of paperwork? 12 MR KHAW: On a general basis? 13 CHAIRMAN: Yes. 14 MR KHAW: Yes, Mr Chairman. On a general basis, I don't 15 think the government is taking any issue in relation to 16 any particular paperwork which is not satisfactory. 17 That is our stance. I don't think we have actually put 18 in any evidence which disputes the sufficiency of any 19 paperwork, save and except the point in relation to the 20 change in design which I'm going to deal with later. 21 CHAIRMAN: Yes, of course. 22 COMMISSIONER HANSFORD: Can I just ask, presumably, if the 23 government did have an issue with the paperwork, it 24 would have made that clear at the appropriate stage 25 during the contract?</p>	<p>1 public works contractors from which contractors are 2 invited for tendering such contracts. Two lists 3 being -- one is the general contractors list and the 4 other one is the specialist contractors list. To be 5 included in the approved lists, contractors are required 6 to meet the financial, technical and management criteria 7 for admission and retention on the lists. 8 Since the SCL project has been entrusted to MTRCL, 9 the framework and procedures for public works contracts 10 are not applicable to the same. However, DevB's right 11 to take regulating actions against contractors is not 12 limited to public works contracts because of one of the 13 provisions in the handbook which sets out that the 14 circumstances which may lead to the taking of regulating 15 actions includes "serious or suspected serious poor 16 performance or other serious causes in any public or 17 private sector works contract". 18 Accordingly, DevB may take regulating action in 19 respect of contract 1112 if there is serious or 20 suspected serious poor performance. Amongst the 21 contractors involved in the contract, Leighton is on 22 DevB's list of approved contractors, whereas Intrafor is 23 on the list of approved suppliers of materials and 24 specialist contractors for public works. On 8 October 25 this year, DevB has taken regulating action against</p>
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<p>1 MR KHAW: Yes, certainly. 2 COMMISSIONER HANSFORD: Thank you. 3 MR KHAW: Of course one aspect of the paperwork that in fact 4 has been raised by the MTR, in fact has been identified 5 by the MTR as an issue, and that is the retrospective 6 records. Obviously our stance is that, in relation to 7 the retrospective records, we say that that is not in 8 accordance with the PMP requirement, but that has been 9 omitted by the MTR -- 10 CHAIRMAN: Yes. I think we accept that on a quite clear and 11 plain, common-sense basis, that falls outside of any 12 concession you have just made. 13 MR KHAW: Right. 14 CHAIRMAN: You are talking about regular, everyday paperwork 15 during the course of the contract. If there had been 16 any problems, they would have been dealt with at the 17 time, and looking at it holistically now, there is no 18 problem with the paperwork generally, other than in 19 respect of certain limited issues which will come up 20 before the Commission. 21 MR KHAW: Yes. 22 CHAIRMAN: Thank you. 23 MR KHAW: Regarding the regime by DevB, I will be rather 24 brief on this. It's just that there is a regime where 25 the Works Branch of DevB maintains two approved lists of</p>	<p>1 Leighton in accordance with paragraphs 5.1.2 to 5.1.4 of 2 the handbook. As for Intrafor, DevB is still examining 3 whether regulating action should be taken or not. 4 At this juncture, if I may just deal with the point 5 regarding whether the Buildings Department has accepted 6 the change in design which was discussed yesterday, 7 during Mr Shieh's submissions. The Commission may 8 recall that in this respect, there are two issues raised 9 by MTR and Leighton. One by Leighton is that submission 10 was made to the BD, and BD accepted it, and that was the 11 stance taken by Leighton. Another point taken probably 12 by both Leighton and MTR is that the change only 13 involved minor change in construction details, which in 14 fact did not require acceptance by the BD. 15 So these are the two issues which would need to be 16 examined. 17 In relation to the first issue, ie the acceptance 18 point, perhaps we can look at the alleged submission 19 made by MTR. It's B12/8888. Perhaps it is important to 20 note that on this question, MTR's position is that 21 Leighton or Atkins failed to provide the necessary 22 submission to the Buildings Department for acceptance. 23 This is the alleged submission for the change in 24 design, put forward by MTR to the Buildings Department. 25 One can see that the title of this letter is, "Design</p>

<p style="text-align: right;">Page 105</p> <p>1 report for Hung Hom Station excavation and lateral 2 support for area C1 and C2 -- excavation below minus 3 0.5mPD (amendment submission)". 4 Our position is that this submission related to the 5 submission for temporary excavation works. One can see 6 from 8891 that there's a certificate of preparation of 7 plans or documents. 8 If the Commission can look at the submission title, 9 it says, "Strutting for area C". It's areas C1 and C2 10 at grid 22 to 40. This is signed by a competent person. 11 Then there's another certificate on the next page, 12 signed by the registered geotechnical engineer, with the 13 same submission title, "Strutting for area C (area C1 14 and C2 ...)", at the same part of the grid. 15 Then if one looks at the design calculations, at 16 page 8894. Again, when we look at the subject matter, 17 it says, "Strutting for area C (area C1 and C2 ...)". 18 As I understand, strutting is for the temporary lateral 19 support for the excavation works. 20 If we go into the details of the report, 8895, 21 "Design calculation", again it is all about "Strutting 22 design for area C". 23 So the whole submission, together with these 24 supporting documents, related to the submission in 25 relation to the temporary excavation works, not in</p>	<p style="text-align: right;">Page 107</p> <p>1 slabs for temporary load cases: area C ..." 2 If we then go to the contents of the report, 8993, 3 there is an executive summary which sets out the primary 4 changes in relation to area C. The Commission will see, 5 at point 6, there's a reference to: 6 "Incorporates the justification of reinforced 7 concrete design for the as-built reinforcement detail at 8 the interface between the diaphragm wall and the EWL 9 slab ... because of the missing U-bar in diaphragm 10 wall." 11 But then if we go to the bottom of this page, it 12 says: 13 "The scope of the report is limited to the temporary 14 load cases only for the change of point 1 to point 7." 15 So this sets out the scope of this report. 16 If we can then go to 9028, which is a part regarding 17 structural design criteria, after 5.4.4, "Construction 18 loads", there's a note: 19 "This submission is restricted to temporary load 20 cases only. Long-term load cases are striked through 21 below." 22 Then we see 5.4.5, "Earthquake loads". This part 23 has been deleted. 24 Then we also have 5.4.6, "Train and track form 25 loads", which is also deleted.</p>
<p style="text-align: right;">Page 106</p> <p>1 relation to any change in design regarding the 2 connection between platform slabs and the diaphragm 3 walls. 4 I will go into further details where it actually 5 mentioned permanent design. 6 CHAIRMAN: Sorry, just so that I understand. 7 MR KHAW: Yes. 8 CHAIRMAN: Whatever the title -- and I'm not denigrating the 9 importance of descriptive titles, but whatever the 10 title -- in the body of this documentation, is there 11 reference made in fact to trimming down the diaphragm 12 walls and putting in these straight bars and getting rid 13 of the couplers? 14 MR KHAW: There is reference, but what I'm going to 15 demonstrate to the Commission is that when we look at 16 the letter, it sets out the purpose of this particular 17 submission, and that's for temporary excavation works. 18 Then we have all the details regarding calculation and 19 also design in relation to strutting, which was also for 20 that particular purpose. 21 Now, the reference regarding the permanent 22 structure, ie the slab and also diaphragm wall, can be 23 found -- there is a design report which starts at 8985, 24 the front page of the design report which says, "Design 25 report for Hung Hom Station primary structure: primary</p>	<p style="text-align: right;">Page 108</p> <p>1 Our case is that, if the submission is for permanent 2 change in design, then obviously these details would 3 need to be considered, because it will have a material 4 bearing on the loading regarding the diaphragm walls and 5 the slab, but these are deleted because it is only for 6 the temporary load cases. 7 Then if we go to 9031, there's another note which 8 says: 9 "This submission is restricted to temporary load 10 cases only. Long-term load cases are striked through 11 below." 12 CHAIRMAN: Sorry, if we are talking about trimming down the 13 D-walls in certain areas, which means getting rid of the 14 concrete, getting rid of whatever bars are in there, and 15 putting in new bars across, which will enable a slab to 16 be joined, and then putting in a monolithic concreting, 17 how is that temporary? That's not meant to be 18 facetious; it's a genuine question. 19 MR KHAW: In fact the trimming of the top of the diaphragm 20 wall, that actually appeared at 9034. 21 CHAIRMAN: That I can understand. On its own, I can see why 22 that may be temporary. But are you saying that these 23 applications -- it's just so that I understand it -- 24 these papers relate only to that, or do they include 25 a requirement to put in rebars that will lock in a slab</p>

<p style="text-align: right;">Page 109</p> <p>1 to the D-wall? 2 MR KHAW: If we look at 9034, when it sets out the 3 construction sequence, one of the points summarised 4 there is the trimming of the top of the diaphragm wall. 5 It's just below -- 6 CHAIRMAN: I see that. It will be trimmed, yes. 7 MR KHAW: And also: 8 "The top rebar ... at the D-wall panel will then fix 9 to the top rebar of OTE slab to achieve full tension 10 laps." 11 Also -- 12 CHAIRMAN: Then it says that the EWL slab -- 13 MR KHAW: "... at the D-wall panel will then fix to the top 14 rebar of OTE slab ..." 15 And then: 16 "The EWL slab and OTE slab will be casted 17 concurrently with temporary openings around the existing 18 columns and pile caps." 19 These are the submissions regarding the sequence of 20 construction which would occur for the purpose of 21 accommodating the temporary excavation works. That is 22 why the construction sequence is set out here. But it 23 does not represent a submission for the change of 24 a permanent design regarding slabs and the diaphragm 25 walls.</p>	<p style="text-align: right;">Page 111</p> <p>1 amounted to submission regarding the change in design or 2 not. 3 CHAIRMAN: Absolutely, and I appreciate that, but that's the 4 more refined point. 5 MR KHAW: Yes. 6 CHAIRMAN: I'm looking at the more general point which 7 perhaps was aired in the press the other day, with the 8 suggestion that the MTR in respect of this had deceived 9 the government. 10 MR BOULDING: Sir, I would just point out that my learned 11 friend misquoted the second paragraph in highlighted 12 colour. It does read, I emphasise: 13 "The top rebar of EWL slab at the D-wall panel will 14 then fix to the top rebar of OTE slab to achieve full 15 tension laps." 16 That might be thought to have some importance. 17 CHAIRMAN: Yes. 18 MR KHAW: I stand to be corrected. 19 CHAIRMAN: Thank you very much. It just to help me at this 20 stage. Thank you. 21 MR KHAW: So, from the document, we can certainly see the 22 reference to the trimming of the top of the diaphragm 23 wall and also the other construction details regarding 24 the construction of the diaphragm walls and also the 25 platform slabs. There is reference here. But, as I set</p>
<p style="text-align: right;">Page 110</p> <p>1 MR WILKEN: Sir, as far as Leighton is concerned, our 2 position is that we don't agree with this analysis and 3 we will make submissions on it in due course, just for 4 the record. 5 CHAIRMAN: No, certainly. 6 I don't want to belabour it. It's just that I was 7 given something the other day, I think it was a press 8 report, emanating from one of our public bodies here, 9 suggesting that this might have been a cover-up 10 generally. The implication to the casual reader perhaps 11 being that this was all done without any form of 12 notification or otherwise to the Buildings Department. 13 I just want to make sure what we are talking about, and 14 I'm not in any way denigrating the seriousness of making 15 sure that your applications are properly worded and 16 clearly understood and dealt with. That's of paramount 17 importance. 18 But there's a more fundamental, perhaps, general 19 issue I wanted to see if we could put to one side, which 20 is, whether we were passing each other in the night 21 slightly or not, the fact remains that information was 22 put to the Buildings Department concerning this work. 23 MR KHAW: Yes. 24 CHAIRMAN: Thank you. 25 MR KHAW: The question really is whether that actually</p>	<p style="text-align: right;">Page 112</p> <p>1 out earlier, the question is really whether the 2 submission amounted to a submission for the change in 3 design. 4 If we then go to a further page which has been 5 included in the whole package, B13/10292. There's 6 appendix B regarding "Diaphragm wall coupler check at 7 NSL base and EWL roof level". 8 Then if we go to 10295, "Case 3", the last sentence: 9 "... it is proposed to demolish the top portion of 10 D-wall and add the required number and diameter of rebar 11 as per design drawings and achieve the full anchorage 12 length with the diaphragm wall vertical reinforcement. 13 For details refer to attached drawings." 14 If we go to the attached drawings here, 10428, if we 15 look at the top-left diagram and also the diagram at the 16 top, in the middle, they are still showing designs which 17 require the use of L-bars. 18 CHAIRMAN: Yes. 19 MR KHAW: Then if we go to 10434, the diagram in the 20 middle -- the most complicated one, probably, the one in 21 the middle -- we can still see a design drawing in 22 relation to this particular structure, which would 23 require the use of a U-bar, L-bars, and also couplers. 24 If we then go to 10557, the diagram in the middle, 25 under "Panel width".</p>

<p style="text-align: right;">Page 113</p> <p>1 CHAIRMAN: Yes.</p> <p>2 MR KHAW: Mr Commissioner and Professor can see there are</p> <p>3 four hatched lines, and then, under "Panel width", there</p> <p>4 are three layers, and underneath the hatched lines we</p> <p>5 can still see the rectangular-shaped boxes, which</p> <p>6 signify the use of couplers.</p> <p>7 So if one is saying at that time, "We already</p> <p>8 submitted the change in design", which actually led to</p> <p>9 what is alleged to be the as-built status now, then</p> <p>10 which drawing was the Buildings Department supposed to</p> <p>11 refer to here?</p> <p>12 CHAIRMAN: Again -- we will come to this later -- I wouldn't</p> <p>13 want my question to become too sophisticated in its</p> <p>14 answer, my question was a reasonably simple one: it's</p> <p>15 a case that there was correspondence, there were plans</p> <p>16 filed. The issue is what were the nature of those</p> <p>17 plans, what was the intent of the correspondence?</p> <p>18 MR KHAW: Yes.</p> <p>19 CHAIRMAN: It's not as though there was simply darkness upon</p> <p>20 the land.</p> <p>21 MR KHAW: No. That I have to accept.</p> <p>22 If we look at the response from the government,</p> <p>23 H14/35344, this is the government's reply which again</p> <p>24 refers to the submission for excavation and lateral</p> <p>25 support works.</p>	<p style="text-align: right;">Page 115</p> <p>1 to the excavation works, but here the Commission can see</p> <p>2 that this submission is for area C3. The previous one</p> <p>3 was for areas C1 and C2; this one is for C3.</p> <p>4 In response to this particular submission, the</p> <p>5 government's position can be found at H14/35374. In</p> <p>6 fact, the letter actually appears at 35344, a similar</p> <p>7 letter of reply from the Buildings Department, again in</p> <p>8 relation to excavation and lateral support works, and</p> <p>9 that phrase is again quoted under "Submission".</p> <p>10 If we go to appendix 1 again --</p> <p>11 MR PENNICOTT: It's the wrong letter.</p> <p>12 MR KHAW: 35348.</p> <p>13 MR PENNICOTT: That's the one we just looked at.</p> <p>14 MR KHAW: Sorry, 35374.</p> <p>15 MR PENNICOTT: That's better.</p> <p>16 MR KHAW: 35374, paragraph 6, this is the government's</p> <p>17 position in relation to -- the second submission,</p> <p>18 regarding C3:</p> <p>19 "It is noted that the steel rebar details of</p> <p>20 permanent station structure has been included in this</p> <p>21 temporary works design submission. In order to avoid</p> <p>22 ambiguity, the steel rebar details is treated as</p> <p>23 providing information to justify that the ELS effects</p> <p>24 has been considered in the permanent works design. You</p> <p>25 are required to submit all change in the permanent</p>
<p style="text-align: right;">Page 114</p> <p>1 If we can go to appendix 1, paragraph 15,</p> <p>2 H14/35348 -- in fact, the Buildings Department actually</p> <p>3 pick up the reinforcement details of permanent slab of</p> <p>4 the station, and it says "reinforcement details ... have</p> <p>5 been included in this temporary works design submission.</p> <p>6 "In order to avoid ambiguity, it is recorded that</p> <p>7 the said reinforcement details were submitted for</p> <p>8 information only and you are required to ensure the</p> <p>9 corresponding permanent station structure submission are</p> <p>10 fully compatible with this ELS design submission."</p> <p>11 So, obviously, it was envisaged by the Buildings</p> <p>12 Department that, "Ah, I got your submission in relation</p> <p>13 to the temporary excavation works, but there I saw</p> <p>14 something in relation to the permanent design regarding</p> <p>15 slabs and diaphragm walls, but I anticipated that you</p> <p>16 would submit further materials for such corresponding</p> <p>17 permanent station structure", which would need to be</p> <p>18 compatible with this ELS design submission.</p> <p>19 So this paragraph of the appendix attached to our</p> <p>20 letter could not be regarded, we say, as an acceptance</p> <p>21 of the change in permanent design regarding slabs and</p> <p>22 diaphragm walls.</p> <p>23 CHAIRMAN: Yes.</p> <p>24 MR KHAW: There was a second submission, and that appears at</p> <p>25 C26/1996. It's a similar submission, again in relation</p>	<p style="text-align: right;">Page 116</p> <p>1 station structure in the appropriate design package for</p> <p>2 consultation agreement."</p> <p>3 We do not see any evidence where MTR or Leighton</p> <p>4 came back and said, "What we have submitted is already</p> <p>5 a proper submission; we don't need to send you anything</p> <p>6 else." It has not been the case.</p> <p>7 CHAIRMAN: Yes.</p> <p>8 MR KHAW: Perhaps just one more document I wish to refer the</p> <p>9 Commission to. That is appendix 9 to PMP at H7/2498.</p> <p>10 This is part of the PMP which has been accepted and</p> <p>11 agreed by MTR. If we look at the administrative</p> <p>12 procedure for consultation submissions under the IoE,</p> <p>13 the second box relates to "New submission/amendment",</p> <p>14 and then we have the requirements there: drawings,</p> <p>15 design calculation, reports, if required, et cetera, for</p> <p>16 BD's consideration.</p> <p>17 So, according to this PMP, it is important for any</p> <p>18 new submission or amendment submission to be made and</p> <p>19 submitted to the BD for consideration and approval or</p> <p>20 acceptance. So this has been clearly set out in</p> <p>21 appendix 9 to the PMP.</p> <p>22 Just to complete the picture in this regard,</p> <p>23 Leighton has referred to one practice note issued by the</p> <p>24 Buildings Department to say that certain minor changes</p> <p>25 would not require approval. The relevant practice note</p>

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<p>1 appears at C13/8555. This deals with "Building approval 2 process". As I said earlier, under the IoE, certain 3 administrative processes and requirements have been 4 exempted. But if we go into the practice note, 5 paragraph 9 -- perhaps I can start from paragraph 6: 6 "For submissions of general building plans, 7 superstructure plans and drainage plans, a curtailed 8 check system has been adopted to check on fundamental 9 issues only. 10 In respect of GBP, the BD will check issues 11 concerning density, safety ... 12 For superstructure plans, the BD will check the 13 master framing plans, notes, design loads, design 14 methods ... 15 For drainage plans, the BD will check the disposal 16 system, underground ... 17 As regards other types of plans, such as demolition, 18 site formation, foundation ... the items to be checked 19 are provided in appendix D." 20 COMMISSIONER HANSFORD: Sorry, Mr Khaw, it is unclear to me 21 as to whether diaphragm wall is considered to be 22 superstructure works or what category it comes under. 23 MR KHAW: We say it belongs to foundation works. 24 COMMISSIONER HANSFORD: Foundation works. 25 MR KHAW: In fact there's a reference in the practice note</p>	<p>1 That is something that we will dispute. 2 COMMISSIONER HANSFORD: Yes. I am with you. 3 MR KHAW: Just to complete the point or my answer to the 4 professor earlier regarding the practice note, if I may 5 just ask the Secretariat to turn up H20/40065. This is 6 the relevant practice note, and if we go to the internal 7 page 3, "Minor amendments", clause 20: 8 "Subject to a modification of Building 9 (Administration) Regulation ... being granted by the BA 10 under ... the BO, prior approval and consent to the 11 minor amendments of building, superstructure (including 12 curtain wall ...) and drainage works, for which first 13 consent has already been given, would not be required 14 except for the following amendments". 15 So this is the bit that I mentioned in relation to 16 whether consent to minor amendments would be required. 17 But if we go back to internal page 2, clause 9 deals 18 with the general building plans. "Buildings Department 19 will check the fundamental issues", et cetera. "The 20 items to be checked are [contained] in appendix A." 21 Then "superstructural plans, including those of 22 curtain wall", et cetera, that we have just seen, "BD 23 will check the master framing". Then 11: 24 "For drainage plans, the BD will check the disposal 25 system, underground drain layout ..."</p>
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<p>1 saying that if it relates to superstructure works, then 2 certain minor changes to superstructure work would not 3 require approval or further acceptance from the BD. 4 But we say the foundation work actually does not 5 fall within that particular revision. Hence, if one 6 relies on that practice note to say that minor changes 7 to superstructure works would not require acceptance 8 from the BD, that is wrong because we are talking about 9 foundation works in relation to the diaphragm walls and 10 also the slabs. 11 COMMISSIONER HANSFORD: Thank you. 12 MR KHAW: I initially wanted to also deal with the issue 13 regarding retrospective records, but since I have heard 14 what Mr Boulding has said in that particular regard, 15 I probably would not need to trouble the Commission on 16 that, save and accept that Mr Boulding, in his 17 submission, actually mentioned that during the site 18 visits in June this year, their staff actually 19 emphasised that the records were retrospective. In 20 fact, we have evidence from the staff from the BD and 21 also the Highways Department which would probably 22 dispute that point. But that is a relatively minor 23 point in relation to what was said or exchanged during 24 the site visits, whether this retrospective nature was 25 highlighted or emphasised during those site visits.</p>	<p>1 As regards other types of plans (eg demolition, site 2 formation, structural works other than superstructure), 3 processing will continue to be generally on a curtailed 4 basis." 5 When clause 20 deals with minor amendments to 6 general building plan, superstructure and also drainage, 7 such changes will not cover changes in relation to 8 foundation work which in fact, according to 9 paragraph 12, has been excluded. 10 That probably takes me to the final bit of my 11 written opening. 12 In the area of building and construction, public 13 safety and quality of works are always the government's 14 top priorities. The government will have no hesitation 15 in working with MTR to arrange for the most suitable and 16 reliable tests to be conducted for the purpose of 17 addressing public concerns over structural integrity and 18 durability of the works under the SCL project, upon 19 considering all expert opinions and professional advice. 20 We also acknowledge that government departments 21 of course play a very important role in public safety 22 and quality of works, regarding the SCL. So does MTR, 23 which receives project management fees of around 24 HK\$8 billion from the government for managing and 25 implementing this project. And the government obviously</p>

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<p>1 has every reason to envisage that such fees paid would 2 enable MTR to employ the necessary manpower to manage 3 the SCL project with the required skills.</p> <p>4 Finally, we wish to highlight and also emphasise 5 that the government will do its utmost in this Inquiry 6 in order to allow the Commission and also the public to 7 conduct an assessment of its monitoring and control 8 mechanism. But we hope that in assessing our system, 9 one should not be too quick in applying wisdom after the 10 event, even though it may always be tempting to do so. 11 Obviously, in devising the system and also formulating 12 its details, it was necessary to consider numerous 13 factors, including of course time and cost, risk 14 assessment, which differentiates high-risk from low-risk 15 factors, anticipation of human errors, et cetera. These 16 factors will determine whether a particular area would 17 need to be closely examined or whether a slightly less 18 proactive approach could be followed for another aspect.</p> <p>19 In the present case, naturally, one of the key 20 factors in the overall exercise was that MTR had a good 21 track record. Its project management processes and 22 controls were known to be robust and in line with 23 industry best practice.</p> <p>24 So in fact it is not a case where we chose to only 25 rely on MTR's experience and expertise. As I have</p>	<p>1 Mr Pennicott, it seems to me that you should hear 2 directly from me. As you know, we have come to be 3 involved in this Inquiry at a very late stage, very 4 recently. As a result, there will be no oral opening 5 submissions from me today and no opening statement, save 6 of course to say that we will do everything we can to 7 assist the Commission in its task.</p> <p>8 CHAIRMAN: Thank you very much.</p> <p>9 MR CONNOR: Thank you. Mr Chairman and Mr Commissioner, 10 Atkins of course, as you know, is in a similar position 11 to that of Pypun. As has been fairly described by 12 Mr Pennicott yesterday, Atkins' role in relation to this 13 project arises in two ways, one under contract to MTR 14 Corporation, one under contract to Leighton Asia. What 15 we have heard so far indicates that, as you would 16 expect, there is quite a body of material that needs to 17 be considered by Atkins in the course of the preparation 18 of its evidence. That exercise is underway, thanks to 19 the good cooperation of Mr Pennicott and his team 20 already, but as you would expect it will take some time 21 to continue.</p> <p>22 A date has been set for the submission of evidence 23 on behalf of Atkins of 13 November, and we are working 24 hard to achieve that. In the meantime, the only caveat 25 to the participation in the proceedings which will</p>
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<p>1 outlined above, we do have our own monitoring and 2 control mechanism, with the assistance of experts 3 engaged by the government.</p> <p>4 Mr Chairman and Professor, we say all this not 5 because we want to take any sort of defensive stance; 6 quite the contrary. We are here to listen to and duly 7 consider views from all angles. We only wish to 8 highlight certain facets of reality at the outset of 9 this Inquiry in the hope that our system will be fairly 10 and objectively assessed.</p> <p>11 That takes me to the last sentence of our written 12 opening. While the government has been conducting 13 reviews as a result of the present incident, it will 14 keep an open mind and welcome any recommendations that 15 the Commission may make for the purpose of further 16 strengthening and improving our system.</p> <p>17 Unless I can assist the Commission further, that is 18 all I wanted to say.</p> <p>19 CHAIRMAN: Thank you, Mr Khaw. That's been excellent. 20 Thank you.</p> <p>21 MR PENNICOTT: Sorry, I think it's time to find out whether 22 Pypun and Atkins want to say anything. Perhaps Pypun 23 first.</p> <p>24 CHAIRMAN: Yes, Mr Coleman.</p> <p>25 MR COLEMAN: Although you have heard indirectly through</p>	<p>1 proceed from now on is really the extent to which, with 2 those preparations continuing, Atkins is in a position 3 to make application for leave to question or examine any 4 of the witnesses who come.</p> <p>5 I have discussed this point already with 6 Mr Pennicott. It is not known at this stage whether or 7 not, in the next week or two, that would be necessary on 8 behalf of Atkins. If it does become necessary, we may 9 not appreciate it until the time, and therefore, as 10 a matter of courtesy to the Commission, it's probably 11 right to say that it's possible, and no higher at this 12 stage, that an application for recall might have to be 13 made at a later stage. But at this point we cannot 14 tell.</p> <p>15 CHAIRMAN: Thank you very much. That sounds a sensible 16 reservation on your part, yes.</p> <p>17 MR CONNOR: Thank you, sir. With that, all I need to add is 18 to express on behalf of Atkins China Ltd their 19 willingness to assist this Commission in all its work 20 over the coming months.</p> <p>21 CHAIRMAN: Good. Thank you.</p> <p>22 MR PENNICOTT: Thank you, sir. I don't think I need to 23 respond to that.</p> <p>24 CHAIRMAN: No.</p> <p>25 MR PENNICOTT: It probably would be convenient to break at</p>

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<p>1 this stage.</p> <p>2 CHAIRMAN: With the first witness coming in, we just want to</p> <p>3 see the administrative matters are working well.</p> <p>4 MR PENNICOTT: Yes. Can I just raise one point that has</p> <p>5 been raised with me. For reasons I can't quite fathom,</p> <p>6 apparently the media are quite interested in</p> <p>7 Mr Boulding's slides. It seems to me that there's</p> <p>8 absolutely no problem in releasing that material. I've</p> <p>9 had a quick look at the Rules of Procedure. There's</p> <p>10 nothing that really covers it. This is not information</p> <p>11 that's been given to the Commission that has then been</p> <p>12 given to involved parties. This is something that has</p> <p>13 been introduced by MTRC during the course of their</p> <p>14 opening and if they wish to disseminate it, I can't see</p> <p>15 why they shouldn't. But I thought, as a matter of</p> <p>16 precaution, I would just mention it to you.</p> <p>17 CHAIRMAN: I agree. It's a matter obviously for Mr Boulding</p> <p>18 and those who work with him.</p> <p>19 MR BOULDING: Thank you, sir. As Mr Pennicott said, for</p> <p>20 some unknown reason at the moment, the media is</p> <p>21 interested in the slide show, for which I'm eternally</p> <p>22 grateful to Mr Jason Leung who prepared it. If you are</p> <p>23 prepared to allow that to be disseminated to the media,</p> <p>24 I suspect --</p> <p>25 CHAIRMAN: Certainly. Well, it's been put up outside for</p>	<p>1 information provided by the slides. That is just for</p> <p>2 clarification purposes.</p> <p>3 Also, we understand from MTR's own information,</p> <p>4 there are in fact 11 different types of connections</p> <p>5 regarding the installation of reinforcement bars in</p> <p>6 relation to different areas. So we just want to make</p> <p>7 sure that people who get hold of the slides would know</p> <p>8 that the slides are for illustration purposes only and</p> <p>9 they do not actually represent the actual connection</p> <p>10 details. That is the only marker that I wish to put</p> <p>11 down.</p> <p>12 CHAIRMAN: Thank you very much.</p> <p>13 MR BOULDING: Sir, I accept those reservations. I only say</p> <p>14 that I did endeavour to make it clear, when I introduced</p> <p>15 the slides, that Mr Pennicott, the previous day, had</p> <p>16 been right to point out that the change was not uniform</p> <p>17 and indeed I identified the panels on the EWL where that</p> <p>18 illustration on the slides did not apply. As I've said,</p> <p>19 there are further details in Mr Louis Kwan's witness</p> <p>20 statement.</p> <p>21 CHAIRMAN: Thank you.</p> <p>22 MR PENNICOTT: Sir, I think we come to the first witness.</p> <p>23 CHAIRMAN: Yes.</p> <p>24 MR PENNICOTT: On that basis, I hand over to Mr Cohen.</p> <p>25 MR COHEN: Good afternoon, sirs.</p>
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<p>1 everybody to see. All they had to do was pick up their</p> <p>2 iPhone and go click, click, click and they would have</p> <p>3 had it in any event.</p> <p>4 MR BOULDING: Mr Jat Sew Tong has just pointed out to me</p> <p>5 that there is a notice up there saying that you can't</p> <p>6 take photographs. That's one of the problems.</p> <p>7 CHAIRMAN: Okay. I wish I could say that sotto voce but of</p> <p>8 course I haven't; it's gone through the entire building.</p> <p>9 Thank you for correcting me.</p> <p>10 Five minutes.</p> <p>11 (3.27 pm)</p> <p>12 (A short adjournment)</p> <p>13 (3.37 pm)</p> <p>14 MR KHAW: Mr Chairman and Professor, I am certainly not</p> <p>15 seeking to do a second opening. I just would like to</p> <p>16 put down a marker here, since we just discussed the use</p> <p>17 of the slides before the break, we only wish to clarify</p> <p>18 that, first of all, I understand Mr Boulding has very</p> <p>19 fairly put that the slides have been simplified for</p> <p>20 illustration purposes only.</p> <p>21 CHAIRMAN: Yes.</p> <p>22 MR KHAW: And from the government's point of view, since we</p> <p>23 still have not yet received the so-called as-built</p> <p>24 drawings, so we are not able to comment on or accept the</p> <p>25 accuracy or the construction details as shown in the</p>	<p>1 Mr Gillard, can you give the Commission your full</p> <p>2 name, please?</p> <p>3 WITNESS: Good afternoon, everybody. I am Jean-Christophe</p> <p>4 Jacques-Olivier Gillard.</p> <p>5 MR COHEN: Can I ask you -- you've got quite a gentle</p> <p>6 voice -- to speak up so that everybody can hear you very</p> <p>7 clearly.</p> <p>8 WITNESS: Thank you.</p> <p>9 MR JEAN-CHRISTOPHE JACQUES-OLIVIER GILLARD (affirmed)</p> <p>10 Examination-in-chief by MR COHEN</p> <p>11 MR COHEN: Mr Gillard, you have given I think three witness</p> <p>12 statements to this Commission; is that correct?</p> <p>13 A. This is correct.</p> <p>14 Q. If we could please turn to bundle F1, page 32. That</p> <p>15 should hopefully be the first page of your first witness</p> <p>16 statement.</p> <p>17 A. This is correct.</p> <p>18 Q. If we go, please, to F1, page 102, that should hopefully</p> <p>19 be the last and signed page of your witness statement;</p> <p>20 is that correct?</p> <p>21 A. This is correct.</p> <p>22 Q. If we then go to F19761 -- the pagination I've got is</p> <p>23 19761. That should hopefully be the start of your</p> <p>24 second witness statement. Yes.</p> <p>25 A. This is correct.</p>

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<p>1 Q. Then if we go further on to 19772, that should be the 2 final and signed page of your second witness statement. 3 A. This is correct. 4 Q. Then if we go to F24260, that should be the start of 5 your third witness statement. 6 A. Yes, that's correct. 7 Q. And page 24272. 8 A. Yes. 9 Q. That is the last and signed page of your third witness 10 statement; is that correct? 11 A. This is correct. 12 Q. I understand that there are some corrections and 13 clarifications you wish to make to each of those 14 statements. 15 A. Yes. 16 Q. Sir, have you got the corrections? (Handed). 17 Mr Gillard, you should have three documents in front 18 of you. The first is headed, "Corrigendum to the 19 witness statement of [yourself]", the first statement; 20 do you see that? 21 A. Yes, I see that. 22 Q. That has a number of corrections and clarifications you 23 wish to make? 24 A. Yes. 25 Q. Can you confirm you wish to adopt each of the</p>	<p>1 But if we can pass those over to the witness. They are 2 quite heavy. (Handed). 3 Can you please explain to the Commission what it is 4 you have in front of you as exhibit 1? 5 A. This is a type A coupler. So this is basically -- 6 Q. Mr Gillard, you are going to need to speak up very 7 clearly. 8 A. Yes, sure. This is a type A coupler, so this is 9 basically the coupler which was generally used as 10 a starter bar, so the coupler linking the D-wall to the 11 future slabs. So these are this type of coupler, which 12 are actually different from the coupler we use 13 connecting the cages of the D-wall, yes. 14 Q. Can you unscrew, please, the two parts. 15 COMMISSIONER HANSFORD: Sorry, would it be possible for 16 Mr Gillard to stand while he does this so I can see 17 a bit clearer? 18 MR COHEN: Yes, of course. 19 COMMISSIONER HANSFORD: Thank you. 20 MR COHEN: Firstly, Mr Gillard, can you show the Commission 21 what it is that Intrafor was required to install into 22 the diaphragm wall when it comes to type A couplers? 23 A. For the type A couplers, I have explained how the 24 couplers linking the D-wall to the future slabs, so they 25 are generally L-shaped bars, and this is one of those</p>
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<p>1 clarifications or corrections on that page? 2 A. I confirm that I adopt each and every correction on this 3 page. 4 Q. There is then a second one-page document, which is also 5 signed, headed "2nd statement". Can you look at that 6 and confirm that you wish to make those clarifications 7 and corrections? 8 A. Yes, I wish to adopt those clarifications and 9 amendments. 10 Q. Finally, there is a two-page document, headed "3rd 11 statement". Can you confirm the same thing in relation 12 to your 3rd statement? 13 A. Yes, I wish to adopt those amendments. 14 Q. Mr Gillard, can you confirm that you adopt the three 15 statements that I have taken you to, as clarified or 16 corrected in those documents, as your evidence to this 17 Commission? 18 A. Yes, I confirm. 19 Q. If we go to bundle F1, page 62, in paragraph 138(iii), 20 you talk there and you give an explanation about the two 21 different types of splices of coupler. 22 These are rather heavy, so I promise to be rather 23 careful when I'm passing them over, but if we might 24 enter these, I suspect, as an exhibit, exhibit 1, which 25 is a type A coupler, and exhibit 2, which is type B.</p>	<p>1 couplers which is actually on the edge of the wall, for 2 the connection of the starter bar for the slabs. So 3 they are inserts for future works. 4 Q. And the other part you have, can you explain what that 5 is? 6 A. Okay. So this is in a type A coupler, because we are 7 talking about type A coupler. This is a secondary bar, 8 so this is a bar which is going to become later on to be 9 connected to the coupler which is cast into the D-wall. 10 Q. So the bar for that hand, is that work that Intrafor 11 would do? 12 A. No. This one is done by others. This is outside of our 13 scope of works. Our scope of works stops at the 14 installation of those couplers inside the D-wall panel. 15 CHAIRMAN: And that, in your left hand, is what we are 16 calling a rebar, I think. 17 A. Both are rebars. 18 CHAIRMAN: Of course. Okay, one rebar is in the actual 19 structure that you build; the other one is an external 20 rebar which is going to be placed into that coupler at 21 some later stage by somebody else? 22 A. Exactly. 23 MR COHEN: Can you demonstrate how that then is done? 24 A. Okay. So, basically, this bar, you take this bar, and 25 actually what's important is you screw the bar. Okay?</p>

<p style="text-align: right;">Page 133</p> <p>1 The key point is actually the bar is screwed 2 (demonstrating). Sorry, this is heavy. Okay. So, 3 basically, you screw to the turn, so by hand, to the 4 time it's up in position, and after you put a wrench 5 just to make sure it's engaged. That's it. 6 Q. When Intrafor installs the coupler in the D-wall, how is 7 that protected against any damage or foreign material? 8 A. Okay. Actually, there will be a cap, a cap installed on 9 top of this coupler, which is actually -- it's a plastic 10 cap which is protecting the coupler and particularly 11 inside the coupler with the threads. It's a protection 12 cap, plastic protection cap. 13 Q. Sir, I'm not sure whether you have anything else, whilst 14 we have the type A coupler. 15 Mr Gillard, do you know whether those samples 16 actually have been provided from BOSA? 17 A. The answer is I'm not 100 per cent sure. This is the 18 right answer. I presume, but I'm not 100 per cent sure. 19 (The witness was handed another physical exhibit) 20 Q. Mr Gillard, can you explain to the Commission what 21 you're holding? 22 A. I'm just going to check. It looks like a particular 23 type B coupler, or position coupler, position type 24 coupler. I'm going to check first, to be 100 per cent 25 sure, find out if that's what it is. I know it because</p>	<p style="text-align: right;">Page 135</p> <p>1 Okay, so here we can move it slightly, a little bit. 2 So now it's engaged. So the coupler is fully moved 3 to the bottom of the thread, so you cannot turn any 4 more. There's a range and that's it; it's engaged. 5 Then the connection is done, the splice is completed. 6 Q. Does it matter that there is exposed thread sticking up 7 at the top of the coupler? 8 A. No. It has to be. It is absolutely normal for the 9 thread to be exposed, actually. 10 CHAIRMAN: It's designed that way? 11 A. It's designed that way. 12 CHAIRMAN: You cannot do it unless you expose the thread? 13 A. Exactly. It's designed that way, so it's absolutely 14 normal to see the thread. Actually, if we don't see the 15 thread or sufficient thread, it would be a sign there is 16 a problem. 17 MR COHEN: And can you tell the Commission which type of 18 coupler was used for the vertical connection between 19 cages? 20 A. Type B, so this type of coupler, position, position 21 splice. 22 COMMISSIONER HANSFORD: I would be happy for Mr Gillard to 23 sit now. 24 MR COHEN: Can I suggest also, before they get knocked over, 25 that we possibly move the couplers as well.</p>
<p style="text-align: right;">Page 134</p> <p>1 the thread is much bigger on -- I know what it is 2 because the thread length is much longer than this one 3 (indicating type A coupler). 4 So this is a type B coupler, made of two pieces. 5 Q. Can you demonstrate how those are connected, please? 6 A. So the key advantage and the difference actually of this 7 coupler against this one, it's called a position coupler 8 because actually in this case the connection will be 9 made not by turning the rebar but by turning the 10 coupler. I'm going to show you. 11 So, basically, let's assume this is a bar from 12 a previous cage, a D-wall cage, cage number 5, for 13 example. I come and I want to connect a cage on top of 14 the previously installed cage, so there will be some 15 coupler like that, some rebars arrive like that. So 16 actually what you can see is you get the bar, the rebar, 17 is flush with the coupler, so the installation method is 18 very simple. 19 So actually we come, we position the bar to make 20 sure it's in contact with the previous bar. Okay. I'm 21 going to do it here. Let's assume it's like that. 22 Of course it has to be exactly in the right place. And 23 then after, actually (demonstrating), you turn the 24 coupler. So the key point is we are turning the 25 coupler. Okay. So by hand, you can see.</p>	<p style="text-align: right;">Page 136</p> <p>1 CHAIRMAN: Yes, please, yes. 2 COMMISSIONER HANSFORD: Can I ask if we could label these A 3 and B at some point, so we know which is which? 4 MR COHEN: Of course, sir. 5 Sirs, before I move on to a slightly different 6 topic, I'm not sure whether the Commission has any 7 questions arising out of the demonstration or out of the 8 couplers that they would wish me to address. 9 COMMISSIONER HANSFORD: That's fine. 10 CHAIRMAN: No, thank you. 11 MR COHEN: Mr Gillard, if you were to turn to page 1 of F1, 12 we see here the start of a letter from Messrs Lo & Lo to 13 Intrafor. 14 A. Yes. 15 Q. Then, if you go to page 4, there starts to be a series 16 of questions which deal with articles that appeared in 17 the Hong Kong media. 18 A. (Nodded head). 19 Q. I'm going to ask you some questions -- what we have here 20 is a summary of those articles from Lo & Lo to which you 21 have responded to that summary in your witness 22 statement. 23 A. Yes. 24 Q. And I'm now going to ask you some questions about those. 25 Can we first turn to F1, page 4 -- I'm sorry, can we</p>

<p style="text-align: right;">Page 137</p> <p>1 go in fact to F3, and at F3 can you see in bold a sort 2 of subheading saying, "An article which appeared in 3 Hong Kong 01 on 20 July 2018"?</p> <p>4 Sir, a copy of that article which we will no doubt 5 want to go to in due course can be found in Chinese at 6 A62 to 70 and in English translation at A71 to 80.</p> <p>7 There is no need at this stage to go to the 8 articles, but if I could take you back now to F4. You 9 can see a bold subheading which is, "A further article 10 which appeared in Hong Kong 01 on 18 July 2018", and, 11 sirs, the Chinese for that is at A89 to 100, and in the 12 English translation at 101 to 113.</p> <p>13 If I could then, please, take you to F6. You will 14 see at the very top of F6, in bold, reference to two 15 articles which appeared in Apple Daily on 30 May 2018.</p> <p>16 Do you see that?</p> <p>17 A. Yes.</p> <p>18 MR COHEN: And, sirs, the Chinese of the first of those 19 articles is at A32 to 40 and the second in Chinese at 20 A53 to 56. The English translation of the first one is 21 at 41 to 52 and of the second one, 57 to 61.</p> <p>22 The first, the Hong Kong 01 articles, are you aware 23 that they were posted online?</p> <p>24 A. Yes, I'm aware.</p> <p>25 Q. And there was in there an embedded link to a video clip?</p>	<p style="text-align: right;">Page 139</p> <p>1 looks like the action done by one of the steel fixers is 2 actually turning the coupler anti-clockwise. So it's 3 probably the disconnection of the two cages which were 4 fabricated inside the --</p> <p>5 Q. Can I pause you there. Can you explain why -- you say 6 that it was turned anti-clockwise, therefore you think 7 it's probably the disconnection -- can you explain why 8 you say that?</p> <p>9 A. Because actually, when you turn anti-clockwise 10 a coupler, this is to unscrew. That's why we can see on 11 this section, the footage, again it's very short, but 12 when you zoom and when you look at it a few times, it 13 appears -- we can see clearly a coupler, so the coupler 14 is linking the two cages, and we can see the action of 15 the steel fixer moving up, which means he is turning 16 anti-clockwise, so very likely this is a disconnection 17 of the two cages inside the steel fabrication yard.</p> <p>18 Q. Can you explain to the Commission why you would be 19 disconnecting cages in the fabrication yard?</p> <p>20 A. Okay. Actually, I think, as I've explained I think in 21 detail in my first witness statement, at the beginning 22 of the project that we started, we had different 23 options. We envisaged different options regarding the 24 connection of the cages, and one of the methodologies 25 was to actually prefabricate the steel cage, all the</p>
<p style="text-align: right;">Page 138</p> <p>1 A. Yes.</p> <p>2 Q. And that videolink is referenced in the bundle index as 3 A1/9A. Hopefully you can now be shown a copy -- shown 4 the actual video itself, with I think English subtitles 5 that have been added on. If you could watch that to the 6 end and then we will come back and I will ask you some 7 questions about it. Thank you.</p> <p>8 (Video played)</p> <p>9 Have you seen that video clip before?</p> <p>10 A. Yes.</p> <p>11 Q. The section which in fact we can just see a little clip 12 of now shows what -- can you explain what you believe 13 that shows?</p> <p>14 A. As I explained in my first witness statement, actually, 15 this footage was clearly taken at the steel fabrication 16 yard, not at the cage where we installed -- not at the 17 diaphragm wall panel location, because the cage is in 18 horizontal position, so this can only be done at the 19 steel fabrication yard which is within the site but not 20 at the D-wall location itself. And apparently -- okay, 21 given that I think the media indicated it was done in 22 July, this footage, so it probably can only be the rebar 23 cage of panel EM98, and this is probably because we can 24 see one of the steel fixers which is actually 25 unscrewing, it appears -- okay, it's very short, but it</p>	<p style="text-align: right;">Page 140</p> <p>1 steel cages, in the steelyard, and to connect them at 2 the steelyard, just to try to facilitate the 3 reconnection later on inside the panel.</p> <p>4 And when we first started the project, in July 2013, 5 actually we started using this first method. So all the 6 elements seem to match. July 2013 you have only one 7 panel, and this is panel EM98, and on this very first 8 panel we tried this method to start with, which implied 9 the fabrication of all the cages in the steelyard and 10 the connection of all the different cages together at 11 the steelyard prior to be sent after to the panel.</p> <p>12 So, yes, we needed to disconnect all the cages after 13 connection in the steelyard.</p> <p>14 Q. Why did you have to disconnect?</p> <p>15 A. Because we can only install the cages in short sections, 16 so we need to disconnect to be able to install them. If 17 we don't disconnect, the cage is going to be too long, 18 so we cannot install them.</p> <p>19 Q. After they have been disconnected, what's the next thing 20 that will happen?</p> <p>21 A. So, after they are disconnected, they may be stored -- 22 stored or not stored, depending on the timing -- and 23 then transported after to the location of the panel 24 itself, in the right order, and they will be installed 25 starting from the bottom cage, all the way up.</p>

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<p>1 Q. If we can go to page A115, we have in this section of 2 the bundle a series of stills which I understand the 3 Commission, or at least the Secretariat, has kindly 4 arranged to take from the video and sort of 5 freeze-frame. 6 If you look at A115, there are two photographs. Can 7 I ask you to look at the bottom photograph. Can you 8 describe to the Commission what you see in that 9 photograph? 10 A. This photograph -- I see six workers who are obviously 11 steel fixers but more importantly I see a cage which is 12 in a horizontal position with an L-frame, so basically, 13 clearly, this is our steel fabrication yard. I can also 14 see -- also you get the title -- 15 Q. Sorry, can I pause you there for a second. You say 16 there's an L-frame. It may be difficult to do this 17 given the angle of your screen, but can you try to show 18 or point out to the Commission what it is that you say 19 constitutes the L-frame? 20 A. Okay. The L-frames are actually the grey vertical 21 beams, double beams, which are made of U-channels. You 22 can see some holes inside, so actually they are used to 23 suspend, which suspend -- which support the cage which 24 is under fabrication. We call them L-frame because then 25 they go horizontally and it's supported on the ground,</p>	<p>1 Q. You were talking about a yellow beam when I paused you. 2 A. Yes, we just see the bottom, so we cannot really see 3 completely the beam, but on the top left you can see 4 some yellow elements, steel elements, but we cannot 5 really see those are beams, I would say. 6 CHAIRMAN: That looks like yellow steel girders -- 7 A. Exactly. 8 CHAIRMAN: -- coming out of a concrete column. 9 A. Yes, exactly. But actually, you have, above that, steel 10 beams. There are some other pictures in my witness 11 statement where you can -- 12 MR COHEN: If we can go to F2/1030. 13 A. Okay, yes. This is much better. 14 Q. Can you point out, please, if you see the yellow beams? 15 A. Okay. So we can see clearly on the right-hand side, you 16 can see quite, I mean, yes, at height, a yellow beam 17 with some stiffeners at regular intervals, so quite 18 a big beam, maybe 600 millimetres or maybe 1 metre tall 19 beam. You have the same, the equivalent on the 20 left-hand side, which actually appears in green or red 21 colour on the picture but actually in reality it's 22 yellow. So those beams were there when we arrived on 23 the site and I think they were existing from previous 24 structure and probably another gantry frame. 25 But very interestingly it was the only place,</p>
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<p>1 so the general shape is L-shape. But those are the 2 grey, the grey beams, with holes, a series of holes, 3 along. 4 Q. And you described -- it may be helpful if we zoom in on 5 the photograph so that we can see the actual metalwork, 6 but you described the cages as sitting horizontally. 7 Can you explain why you say that? 8 A. Okay. 9 CHAIRMAN: Well, I think it's quite obvious. You can see. 10 That's obviously lying horizontally, if I can put it 11 that way, as opposed to that way. 12 A. Exactly. 13 CHAIRMAN: I think that shows up, but thank you very much. 14 That's quite right. 15 MR COHEN: And you say in your witness statement -- and you 16 have just said now -- this is in the steelyard. 17 A. Yes. 18 Q. Why do you say that? 19 A. Okay. So very interestingly, on this picture, there is 20 this -- maybe it's not very clear on that one, but there 21 is a yellow beam on the top, so -- 22 Q. If we pause there. If we can you go to A92, please. 23 A. Yes, so everybody can see it. 24 Q. And the top photograph. So A92. 25 A. Okay. Not very clear here as well.</p>	<p>1 location, within the site where you could find such 2 beam, so I can say for sure where those pictures were 3 taken. 4 Q. Other than the steelyard, was there anywhere else where 5 you had these L-shaped platforms? 6 A. Are you talking L-shaped platform -- 7 Q. Sorry, not looking at this picture, just generally. You 8 have described there were L-shaped platforms used -- 9 A. You mean you are talking about the L-beam or supporting 10 beam? 11 Q. Yes. Did you have those L-shaped platforms anywhere 12 else? 13 A. We did move, at different period, the site, actually. 14 At some stage, we had to relocate the steel fixing yard 15 to outside -- to a different location outside the 16 building. So, yes, at different times during the course 17 of the project you had different locations. 18 Q. Were those ever at the diaphragm wall work face itself? 19 A. No, never. 20 Q. If we could please turn next -- in the video, we saw 21 some shots and a clip of workers trying to do some work 22 which you have described as going anti-clockwise. 23 A. Yes. 24 Q. You said that you believe that that may probably have 25 been disconnection.</p>

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<p>1 A. Yes.</p> <p>2 Q. Can you describe to the Commission, for EM98,</p> <p>3 specifically what sorts of problems were encountered, if</p> <p>4 any, during the disconnection of cages in the steelyard?</p> <p>5 A. Okay. It was actually not a very smooth operation, it</p> <p>6 was actually relatively difficult, therefore</p> <p>7 time-consuming, to actually disconnect the cages. One</p> <p>8 of the reasons was, first of all, you've got three</p> <p>9 layers of very big bars together, so it's congested so</p> <p>10 it's difficult to access, and probably due to the whole</p> <p>11 weight of the structure, it doesn't take much deflection</p> <p>12 on the bar actually to make it difficult to actually</p> <p>13 unscrew it, so it needed some tools to disconnect. And</p> <p>14 actually you've got, again, once everything is</p> <p>15 connected, it's difficult to use tools because you've</p> <p>16 got no more space to put your wrench or whatever to try</p> <p>17 to unscrew.</p> <p>18 So, at the end of the day, I mean, the conclusion</p> <p>19 was very clear. I mean, it was time-consuming,</p> <p>20 definitely, very much time-consuming, to disconnect the</p> <p>21 cages, and we found after, actually, at the panel</p> <p>22 location, that it was not bringing any advantage, net</p> <p>23 advantage.</p> <p>24 Q. If we could now go, please, to page A90.</p> <p>25 CHAIRMAN: Sorry, as a matter of interest, who would be</p>	<p>1 CHAIRMAN: Or an inspector taking a shot so that he's got</p> <p>2 an instant record of what has happened?</p> <p>3 A. Exactly, yes.</p> <p>4 CHAIRMAN: Thank you.</p> <p>5 MR COHEN: In front of you, you've got page A90, and there's</p> <p>6 a photograph. Can you describe to the Commission what</p> <p>7 you can see in that photograph?</p> <p>8 A. Okay. So, clearly, here the scene is very different.</p> <p>9 The main rebars are clearly in vertical position. We</p> <p>10 can see -- on the back, we can see some tracks,</p> <p>11 actually. So this is basically the tracks of a crawler</p> <p>12 crane. If you are used to equipment, you can recognise</p> <p>13 it relatively easily, maybe not so easy for people who</p> <p>14 are not familiar, but for me that's very, very clear,</p> <p>15 very easy to recognise. You've got tracks of a crane on</p> <p>16 the back. You've got a worker. So I know where it is.</p> <p>17 So it's very likely, very, very likely, this picture</p> <p>18 shows connection of two cages at the D-wall location, so</p> <p>19 most likely at the D-wall location, connecting to cages,</p> <p>20 and the need for -- we are using crawler crane actually</p> <p>21 as a lifting equipment, and we've got someone as well --</p> <p>22 we've got a man, we can see his boot, we can see his</p> <p>23 trousers, with his reflective strips just below his</p> <p>24 knee, so we know exactly where is the ground level, so</p> <p>25 it makes sense, all sense, yes.</p>
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<p>1 filming this?</p> <p>2 A. We've got a lot of -- nowadays, everybody has</p> <p>3 a telephone with a camera, especially in Hong Kong,</p> <p>4 so --</p> <p>5 CHAIRMAN: It wasn't done by you, for example, for any</p> <p>6 purpose or anything like that, that you know of? Just</p> <p>7 somebody having --</p> <p>8 A. This one was not done by me, but it could have been.</p> <p>9 I've got in my telephone footage of very basic things</p> <p>10 that sometimes I find interesting so I'm going to take</p> <p>11 my --</p> <p>12 CHAIRMAN: Yes.</p> <p>13 A. And I do it regularly, I would say.</p> <p>14 So it can be -- to answer your question, it can be</p> <p>15 an engineer, can be an inspector, yeah, and it makes</p> <p>16 sense as well. We are at the beginning of the project.</p> <p>17 People are -- we try to record and to be able to discuss</p> <p>18 after how things were going and just to be able to</p> <p>19 discuss after and to debate whether we want to continue</p> <p>20 using this method or maybe if we want to change or</p> <p>21 improve. So the need to record makes sense.</p> <p>22 CHAIRMAN: Yes. I can see -- so in fact it wouldn't be</p> <p>23 unusual at all to have people taking shots, especially</p> <p>24 at an early stage like that?</p> <p>25 A. Exactly.</p>	<p>1 So this is most very likely the installation of two</p> <p>2 cages.</p> <p>3 Q. And it's clear, I think, that some of those couplers</p> <p>4 have not yet been connected or are not connected</p> <p>5 properly; is that correct?</p> <p>6 A. That's for sure. There is one, the second one, starting</p> <p>7 from the right, is not yet connected. This is true,</p> <p>8 yes.</p> <p>9 Q. Are you able to tell from the photograph why it's not</p> <p>10 yet connected?</p> <p>11 A. Yes. Very clearly, we can cannot see -- we can see the</p> <p>12 bottom bar, the thread is fully exposed. We should not</p> <p>13 see any thread. And the top bar, we see the coupler and</p> <p>14 we don't see any thread above the coupler. If you</p> <p>15 compare with the bar on the right, or the bar on the</p> <p>16 left, it's very different. You've got the coupler, we</p> <p>17 can see the thread on the top and we cannot see any</p> <p>18 thread below the coupler. So they are an indication of</p> <p>19 most likely connected already.</p> <p>20 Q. Do you know when this photograph was taken?</p> <p>21 A. Not from this picture, but I suspect -- okay. I think</p> <p>22 we are talking about July, so again, if it's the media,</p> <p>23 they were talking about July, so if it is July, it can</p> <p>24 only be EM98, because this was the only panel, the very</p> <p>25 first panel in the construction, so it's going to be</p>

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<p>1 very likely EM98, yes.</p> <p>2 Q. Can you remember how many days it took to make sure --</p> <p>3 or to install all of the cages and connect them up in</p> <p>4 EM98?</p> <p>5 A. Okay. This is mentioned in my witness statement, but if</p> <p>6 my memory is correct, I think this is -- we started the</p> <p>7 26th to the 31st, so it should be five days, yes, so</p> <p>8 definitely --</p> <p>9 Q. Are you able to tell us at what time or which day this</p> <p>10 photograph was taken?</p> <p>11 A. No. This picture could have been taken at any time</p> <p>12 during the installation process. So it's a long</p> <p>13 installation process. It's definitely a work in</p> <p>14 progress for me.</p> <p>15 Q. Does this photograph show the connections as completed?</p> <p>16 A. No, definitely not.</p> <p>17 Q. Why do you say that?</p> <p>18 A. Because at least one of the couplers is not installed,</p> <p>19 so this is --</p> <p>20 Q. If we could go to A93, there is another photograph. Can</p> <p>21 you describe what you see in that photograph?</p> <p>22 A. Yes. So it seems to be -- it looks like a very, very</p> <p>23 similar scene. Actually, it's maybe exactly the same</p> <p>24 scene. If you really zoom -- I cannot guarantee, but</p> <p>25 you've got a lot of similarities. Like, for example, if</p>	<p>1 work -- they are here to witness how the works are</p> <p>2 progressing.</p> <p>3 Q. Before we move from this picture, can we zoom in to the</p> <p>4 left-hand side bottom. There.</p> <p>5 A. Yes.</p> <p>6 Q. If we go from there to page F1037.</p> <p>7 CHAIRMAN: As a matter of interest, on the side of that</p> <p>8 tubing, it says EM98.</p> <p>9 MR COHEN: Indeed.</p> <p>10 A. Correct. Yes.</p> <p>11 Q. And that is --</p> <p>12 A. Clearly, yes.</p> <p>13 Q. Can you tell us what that piece of tubing is?</p> <p>14 A. This is a reservation pipe, so there are -- inside the</p> <p>15 steel cages we need to put what we call reservation</p> <p>16 pipes. This one is a big diameter so probably for shear</p> <p>17 pin installation, but otherwise -- so it's a reservation</p> <p>18 pipe.</p> <p>19 CHAIRMAN: Sorry, what does a reservation pipe do?</p> <p>20 A. A reservation pipe is basically -- how to explain -- so</p> <p>21 it's a pipe, the purpose is to leave an opening inside</p> <p>22 the panel, so something which is not filled with</p> <p>23 concrete, to do an activity later on. So, for example,</p> <p>24 we've got reservation pipes for testing, for sonic</p> <p>25 testing, so testing after the panel. So we need to put</p>
<p>Page 150</p> <p>1 you really zoom in, you will see that there is only one</p> <p>2 coupler, except the one completely on the right, but</p> <p>3 starting from the second cage -- sorry, from the second</p> <p>4 bar, you can see a coupler which is engaged, and you can</p> <p>5 see the second coupler where it's not engaged, and then</p> <p>6 all the ones after are engaged, and you can see again</p> <p>7 the tracks of a crawler crane just on the back.</p> <p>8 So, to me, I cannot guarantee, but it seems that</p> <p>9 this is more or less the same picture as the one we just</p> <p>10 saw before, but this one is maybe taken from outside the</p> <p>11 cage, while the one before was taken -- maybe the camera</p> <p>12 is more inside the cage.</p> <p>13 But the scene is the same anyway, so may be actually</p> <p>14 done or taken at the same time. But, as a general</p> <p>15 comment, this is a general scene which is a work in</p> <p>16 progress during the construction of the installation of</p> <p>17 the cages on the first panel.</p> <p>18 Q. And there's a man with an MTR -- or a hat I think that's</p> <p>19 an MTR hat?</p> <p>20 A. This is correct.</p> <p>21 Q. Can you describe what you believe him to be doing?</p> <p>22 A. So this is very likely an MTR inspector or engineer, and</p> <p>23 he's here to supervise, look, inspect, watch what we are</p> <p>24 doing, especially knowing this is the first panel. As</p> <p>25 you can imagine, we are the -- and that's part of their</p>	<p>Page 152</p> <p>1 some instruments inside the panel. So, instead of</p> <p>2 coring and drilling through the concrete, we keep some</p> <p>3 reservation, so we keep some space to be able to do</p> <p>4 other works. So that's the so-called reservation pipes.</p> <p>5 MR COHEN: If we could now go to F1/784, and if we could</p> <p>6 zoom in on that. Can you tell the Commission what that</p> <p>7 document is?</p> <p>8 A. Okay. So this is part of our panel record. This is</p> <p>9 a summary sheet of the key data recording key</p> <p>10 information associated with the construction of the</p> <p>11 panel. So we call it summary sheet as part of our panel</p> <p>12 record, this first page.</p> <p>13 Q. Then if we go to page 789.</p> <p>14 A. Yes.</p> <p>15 Q. Can you describe to the Commission what that document</p> <p>16 is?</p> <p>17 A. Okay. So this document is -- so, actually, this is</p> <p>18 a shop drawing, and actually this document is signed,</p> <p>19 okay, you can see on the top, signature on this</p> <p>20 document. So it was part of --</p> <p>21 Q. Sorry, Mr Gillard, can we just rotate the document.</p> <p>22 I think that would help.</p> <p>23 A. Yes. Okay.</p> <p>24 Q. Thank you.</p> <p>25 A. So this is part of the quality control process.</p>

<p style="text-align: right;">Page 153</p> <p>1 Basically, this document is a record of the inspection 2 performed by us, MTR and Leighton, recording and 3 confirming that inspection were carried out for the 4 connection of the different cages, recording that 5 inspection were done and found satisfactory. So the 6 signature is -- if you zoom, you can see it's written 7 "Coupler connection inspected, cage 4 to 3, cage 6 to 8 5", and so on, and so on. 9 So this is a record that the inspections were 10 performed, inspections of the connection were performed 11 and found satisfactory by the different parties. 12 Q. Were all of these connections for panel EM98 dealt with 13 with paperwork like this, or are there any that are 14 different? 15 A. Sorry, can you repeat your question? 16 Q. Are all of the connections illustrated or recorded like 17 this, or are there any, for EM98, that are not? 18 A. I think they are all connected like that, so there 19 should be -- yes -- no, all the connections are -- as 20 far as I remember, all the connections are recorded like 21 that, yes. 22 CHAIRMAN: I think you misunderstood. I think the question 23 was, Mr Gillard: was this summary sheet that's been 24 signed the only sheet that was signed in respect of all 25 the cages for EM98?</p>	<p style="text-align: right;">Page 155</p> <p>1 afraid, but we can make a start at least. 2 What I want to do is ask you just a few questions on 3 the contract that you had with Leighton, not many. Then 4 I want to look at a couple of points on the sub-contract 5 arrangements that you had with Bachy and Hung Choi. 6 Then I want to look at certain panels, and Mr Cohen has 7 taken you to EM98 in some detail already but there are 8 just a couple of points I want to pick up on that 9 particular panel. Then I want to look at some other 10 panels, because they may be of interest going forward in 11 the Commission. I then want to ask you a few questions 12 about BD requirements and compliance, and so forth, and 13 then hopefully that will be it. 14 Mr Gillard, before I do any of that, can I just 15 understand your precise role; you are a director of 16 Intrafor? 17 A. Yes, I'm the managing director of Intrafor. 18 Q. In relation to this particular contract that you had 19 with Leighton, how often would you personally go to the 20 site? 21 A. Okay. I would say generally twice a month and bare 22 minimum once a month. 23 Q. Right. Would you visit, when you went, both the 24 fabrication yard and the areas where the diaphragm walls 25 were being installed?</p>
<p style="text-align: right;">Page 154</p> <p>1 A. Ah, okay. 2 CHAIRMAN: In other words, this was a standard form? 3 A. Yes. This is a standard form, if this is your question, 4 yes. 5 In addition to that, there are some -- maybe there 6 are some other forms, like the RISC form. I don't know 7 if this is what you are getting to, because besides this 8 document there are some other documents, like, for 9 example, the RISC form, which are very important, which 10 is a document between Leighton and MTR, which basically 11 records the same thing. But this is part of a system 12 which runs in parallel. So there are some other forms 13 recording similar information. 14 MR COHEN: The form in front of you, is there one of these 15 for each cage and connection in EM98? 16 A. Yes. 17 MR COHEN: Sir, I have no further questions. 18 If you stay there, I'm sure my learned friend 19 Mr Pennicott will have some questions for you. 20 Examination by MR PENNICOTT 21 MR PENNICOTT: Mr Gillard, good afternoon. 22 A. Good afternoon, sir. 23 Q. Thank you very much for coming to give evidence to the 24 Commission today. I do have a few questions for you. 25 I'm not confident of finishing before 5 o'clock, I'm</p>	<p style="text-align: right;">Page 156</p> <p>1 A. Yes, I mean, that's part of the inspection, yes, so in 2 general, yes, of course the steel fixing yard would 3 be -- maybe not systematically, but that's a key element 4 of my site visit, yes. 5 Q. You have helpfully provided us with a plan, F34/19755, 6 I think. The next page. Two more pages. One more 7 page. That's it. Thank you very much. 8 A. Yes. 9 Q. Do you have that, Mr Gillard? 10 My understanding of what you've told us here, just 11 to make it quick, is the brown-orangey area that's 12 marked there is the bar cutting and threading area used 13 by BOSA; is that right? 14 A. This is correct, yes. 15 Q. And then you say or indicate that in the early stage of 16 work, the steel cage fabrication set-up that was in the 17 two shaded blue areas to the left of the orange area, is 18 that right -- when you say "early stage", what do you 19 mean by that? 20 A. In the first few months of the project, I don't remember 21 exactly how long we stayed there, but it's more than 22 a few days. It's -- I'm talking about a few months. 23 Q. So that would be where those photographs were taken -- 24 A. Yes, exactly. 25 Q. -- whether it's left or right-handed, it probably</p>

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<p>1 doesn't matter which one, but it would have been taken 2 in one of those yards? 3 A. Exactly, definitely. 4 CHAIRMAN: How far are those two turquoise oblongs from the 5 diaphragm wall outline which is shown in the plan and 6 it's in emerald green? 7 A. Okay. I think you are talking about 50 to 100 metres, 8 so it's definitely -- maybe you can measure it, but at 9 least 50 metres, the D-wall is at least 50 metres away 10 from the fabrication yard. 11 CHAIRMAN: Thank you. 12 A. Probably closer to 100. 13 MR PENNICOTT: Right. Thank you for that, Mr Gillard. 14 So far as a couple of points on the contract are 15 concerned, you mention in a couple of places in your 16 witness statement about tolerances. 17 A. Yes. 18 Q. Just two points I want to pick up with you. First of 19 all -- I don't think there's any dispute about either of 20 these but one of them we have looked at and one we 21 haven't -- could you look, please, first of all, at 22 page F1422. 23 In your witness statement in a couple of places, 24 Mr Gillard, you refer to the water seepage tolerance. 25 A. Yes.</p>	<p>1 If we could go, please, to page F140, you see there 2 a brief description of the sub-contract works, that is 3 the sub-contract between you and Bachy; do you see that? 4 A. Yes. 5 Q. And it's described as "Provision of resources for 6 diaphragm wall, barrette piles and associated 7 construction works". 8 Precisely what was it that you sub-contracted to 9 Bachy? I mean what part of the works? 10 A. The diaphragm wall, yes. 11 Q. I'm sorry? 12 A. The diaphragm wall, yes, the works. 13 Q. What part of -- any particular part of the works? 14 A. No, no, no, it's not a specific location, if this is 15 your question. We didn't split the project 16 specifically, yes. 17 Q. So they were providing you with resources; is that 18 right? 19 A. Yes, that's correct. 20 Q. What resources? 21 A. Specialised equipment and specialised people. 22 Q. And that was all under your control? 23 A. Yes, this is correct. 24 Q. I see. So it wasn't split up in any way; it was just 25 the provision of machines and presumably operatives?</p>
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<p>1 Q. And is this the provision, that is at 19.77, that you 2 are referring to? 3 A. This is correct. 4 Q. Okay. Thank you for that. 5 Then if we could go to F1429, so just on a few 6 pages, this is part of 19.95, and then (5); do you see 7 that? 8 A. Yes. 9 Q. You see there the words, "The tolerances in positioning 10 reinforcement and couplers shall be as follows", and we 11 see the "longitudinal tolerance of cage head at the top 12 of the guide wall and measured along the trench: plus or 13 minus 75 millimetres"; and then similarly for the 14 vertical tolerance. 15 Is this the tolerance that you are referring to in 16 your witness statement? 17 A. Yes. This one is specifically the tolerance for the 18 coupler, yes, for the diaphragm wall cage, yes. 19 Q. Thank you. Then so far as your sub-contracting 20 arrangements are concerned, you sub-contracted a large 21 portion of the works to a company called Bachy; is that 22 right? 23 A. This is correct. 24 Q. And the sub-sub-contract that you had with them is at 25 F131.</p>	<p>1 A. Yes, correct. 2 Q. And under your direction -- yes, I follow. 3 You did that under some partnering arrangement, as 4 I understand it? 5 A. Yes, this is correct. 6 Q. If we go -- we can pick that up from page 149, and the 7 details of the partnering arrangement are there set out. 8 A. Okay. 9 Q. So far as the bar bending and fixing and so forth is 10 concerned, which is more important, you sub-contracted 11 that to Hung Choi? 12 A. This is correct. 13 Q. Page 221, please. 14 Had you worked with Hung Choi previously, 15 Mr Gillard? 16 A. Yes, definitely. We selected Hung Choi and not another 17 sub-contractor actually because we knew them from 18 previous project and actually we believe they are the 19 most qualified, and we thought they were the best for 20 this project, this project being a little bit unusual, 21 especially in terms of steel fixing. Although they were 22 not the cheapest, we elected to take them because we 23 thought they were the right sub-contractor for that job. 24 Q. Right. And they had worked satisfactorily for you in 25 the past?</p>

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1 A. Yes, definitely.
2 Q. They did, as I understand it, all the steel
3 reinforcement cage fabrication?
4 A. Yes.
5 Q. And then, having fabricated, participated no doubt, in
6 installing those cages at the diaphragm wall locations?
7 A. This is correct, yes.
8 Q. And the financial arrangements you had with them we can
9 pick up -- if you go to page 242, which is essentially
10 some quantities and rates for various sizes of the
11 rebar?
12 A. Mm-hmm.
13 Q. And over the page at 243 and 244, a series of labour
14 rates?
15 A. Yes.
16 Q. And, if we go back to 242, towards the top, that was all
17 on the basis that everything, all the quantities, were
18 provisional and were subject to re-measurement?
19 A. Yes.
20 Q. And, Mr Gillard, so far as you can recall, did Hung Choi
21 do a satisfactory job for you on this sub-contract?
22 A. Yes, very much.
23 Q. Could we just go back to EM98. I'm not going to go back
24 to the video and the photographs, and so forth, which
25 Mr Cohen has kindly taken you to, albeit it at my

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1 request and invitation, and I thank him for it.
2 However, could we just go back to the panel record that
3 Mr Cohen took you to. I'm afraid I am going to go to
4 a slightly different place because, as I recall it,
5 Mr Gillard, in your first witness statement or exhibited
6 to your first witness statement were just a selection of
7 the panel records.
8 A. Yes.
9 Q. And then subsequently you provided us with the full
10 panoply of records.
11 A. Yes.
12 Q. Albeit, can you just confirm this, Mr Gillard, my
13 understanding is -- from I think your 2nd or 3rd witness
14 statement -- that you have managed to locate 251 out of
15 256 cage-by-cage inspection forms?
16 A. Yes.
17 Q. An example of which we looked at a short while ago?
18 A. Correct.
19 Q. We will come back to EM98 in a moment. So we are
20 missing five?
21 A. We haven't been able to locate five, yes, so far.
22 Q. And you've obviously been carrying out ongoing searches
23 for those five --
24 A. Yes.
25 Q. -- and they simply haven't turned up?

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1 A. Most likely, yes.
2 Q. It may not be such a big point but can you explain why
3 they might have got lost?
4 A. Okay. So the project was a few years ago. We kept
5 archive. Okay, we have lost some other documents. So
6 you could imagine that these documents could have been
7 lost as well. But I think, importantly, I don't know if
8 you are aware, but there are some other documents which
9 actually record that the inspection took place. Like,
10 for example, yes, we don't have this specific form, but
11 we've got a RISC form for those panels.
12 Q. I understand that. We can go to other locations. All
13 right.
14 Also, just to get this point out of the way as well,
15 there are documents called coupler-by-coupler inspection
16 sheets.
17 A. Yes.
18 Q. And, again, you've managed to locate 225 of those out of
19 256.
20 A. Yes.
21 Q. Is that still the position?
22 A. Yes.
23 Q. Could we go to F13649, please.
24 CHAIRMAN: Sorry, the coupler-by-couplers located 225 out of
25 256?

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1 MR PENNICOTT: Yes. It was 225 have been located out of
2 256.
3 CHAIRMAN: Thank you.
4 MR PENNICOTT: This is the summary sheet for panel 98,
5 EM98 --
6 A. Yes.
7 Q. -- that we were looking at a moment ago with Mr Cohen,
8 albeit in a different place. Could we scroll down to
9 the bottom of the page, please. I just want to pick
10 this up, which I don't think we looked at with Mr Cohen.
11 On this particular form, Mr Gillard, we see that it
12 is signed as a correct record by Intrafor, Leighton and
13 MTR?
14 A. This is correct.
15 Q. And signed relatively proximate to the date upon which
16 the panel was completed? I think the concreting took
17 place on 1 August?
18 A. This is correct.
19 Q. If we could just go back again to 13654 -- I think this
20 is again what we were looking at with Mr Cohen earlier.
21 A. Yes.
22 Q. The process, clearly, is you start at the bottom, in
23 this case with cage 7 --
24 A. Yes.
25 Q. -- and they work their way up --

<p style="text-align: right;">Page 165</p> <p>1 A. Correct. 2 Q. -- until they get to cage 1. 3 And with regard to the photographs that we were 4 looking at a short while ago, where we could see the 5 connections between the bars and the couplers, so far as 6 you're aware was the focus very much on the couplers and 7 whether or not they were properly installed? 8 A. Of course. 9 Q. That was the key thing, presumably? 10 A. I mean, the cage itself is also very important. You 11 need to -- when you do the inspection, you need to make 12 sure that you've got the right number of bars and 13 couplers and everything, you've got the right space. 14 The focus was clearly, on this particular project, on 15 the coupler, on the connection, and using couplers, yes. 16 Q. Right. If we could go to the next page, please, 13665. 17 CHAIRMAN: Mr Pennicott, sorry to bother you, this evening, 18 I trust you will bear with me, I do need to leave at 19 5 minutes to, so I'm going to seek everybody's 20 indulgence and adjourn five minutes early this evening. 21 MR PENNICOTT: Yes, sir. That's fine. 22 CHAIRMAN: Thank you. 23 MR PENNICOTT: Can we just finish off this point -- 13665, 24 I'm sorry. Could we scroll down to the bottom of that 25 one. Sorry, back to the top.</p>	<p style="text-align: right;">Page 167</p> <p>1 So this is not contemporaneous records. The one behind, 2 like for example the cage-to-cage, when we do the 3 verticality check, when we do the concrete plot, you can 4 see it's handwritten as well, and those are 5 contemporaneous records; okay? 6 So I can understand as well, I think you are right, 7 I can understand why other people don't necessarily want 8 to sign those, because first, maybe there will be some 9 discrepancies and actually we find later into the 10 project that by copying or recopying things we add some 11 mistake, minor but we still add, and there is no need. 12 Q. And when this summary sheet is compiled, has been 13 compiled, what happens to it? Who gets a copy of this 14 document? Do you keep it yourself, do you send it to 15 Leighton, do you send it to MTR; who gets this document? 16 A. Okay. So I think -- I'm not 100 per cent, this would 17 have to be double-checked, but normally this panel 18 record will be submitted to the main contractor, 19 Leighton, for submission after to MTR soon after the 20 construction, so maybe one week, two weeks after, 21 maximum. We don't keep them up to the end, that's 22 normally the trend, and they are actually part of the 23 submission to -- part of the exercise at the end of the 24 project, part of the as-built records which are actually 25 submitted to BD. So, yes.</p>
<p style="text-align: right;">Page 166</p> <p>1 This is the sheet -- it just happens to be the next 2 one in the sequence, Mr Gillard. 3 A. Yes. 4 Q. I'm going to it for no other purpose but to ask you this 5 question. We can see it's EH99, so it's next door to 6 98. 7 A. Yes. 8 Q. If we could then scroll down to the bottom, please. 9 This time we see the form is signed by Intrafor and 10 Leighton but not by MTR; do you see that? 11 A. Yes. 12 Q. And I think, not that I have looked at every single one, 13 but the reality is, Mr Gillard, that sometimes we get 14 the form, as we've seen at EM98, signed by all three 15 parties; sometimes, as here, we get it signed by two 16 parties; and sometimes it's just by Intrafor and not by 17 Leighton or MTR. It's any combination. 18 A. For this cover sheet, yes. 19 Q. For this sheet, for the summary sheet? 20 A. Yes. 21 Q. Again, do you know why that should be the case? 22 A. Yes. So, first of all, there is a fundamental 23 difference between this cover sheet and the sheet 24 behind. This one, we name it a summary sheet, because 25 it's actually a summary of quite a lot of information.</p>	<p style="text-align: right;">Page 168</p> <p>1 COMMISSIONER HANSFORD: Sorry, Mr Pennicott, just a very 2 quick question. Are these just single copies or are 3 there copies of these for different parties? That's 4 something that would interest me. Is it just a single 5 sheet or do all the parties have their own copy? 6 A. No, no, this is a single sheet. Yes, yes. So you don't 7 have two or three sheets, triplicate, no. It's only 8 a normal A4 page. 9 MR PENNICOTT: So if you were sending it on to Leightons, 10 for example, you would have to copy it and then keep one 11 for yourself -- 12 A. Correct, yes. 13 MR PENNICOTT: -- and send the other one on. 14 A. Exactly, yes. 15 MR PENNICOTT: Sir, would that be suitable? 16 CHAIRMAN: Yes, ideal. My apologies. Good. Thank you very 17 much. 18 I'm sorry that we have to ask you to come back 19 tomorrow. We are starting tomorrow at 10 am. Thank 20 you. 21 MR PENNICOTT: Thank you, sir. 22 (4.55 pm) 23 (The hearing adjourned until 10.00 am the following day) 24 25</p>

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