Page 3 Page 1 Monday, 27 May 2019 1 25 February this year, on 19 February the Chief 1 (10.04 am) 2 2 Executive expanded the original terms of reference of 3 MR PENNICOTT: Good morning, sir. 3 this Commission, by adding paragraph A.2 to the terms of 4 4 reference. That can be found at bundle AA1/1. CHAIRMAN: Good morning. 5 5 MR PENNICOTT: And good morning, Prof Hansford. In practical terms, what has happened is that the 6 COMMISSIONER HANSFORD: Good morning. 6 geographical areas with which this Commission is 7 7 MR PENNICOTT: Welcome back to Hong Kong. concerned have grown; they have expanded, they have been COMMISSIONER HANSFORD: Thank you very much. 8 extended. 8 9 9 MR PENNICOTT: Can I first of all introduce everybody. As we say in paragraph 4 of our opening address, it 10 10 There has been, as you know, a change of personnel for may be helpful if some basic geography is taken on board 11 11 first. Sir, it so happens that in the interim report, various parties. 12 12 at page 16, there is diagram 3, and that assists in this Sir, as you know, I appear on behalf of the 13 Commission, together with my learned friends Mr Calvin 13 regard, and I'm told the interim report, should anybody 14 14 wish to refer to it, is available to us on the screen. Cheuk and Mr Solomon Lam, although Mr Lam will not be 15 15 here this week due to another, prior engagement. So, sir, as you are aware, in the Original Inquiry, 16 Wing & Kwong are represented by my learned friends 16 we were dealing specifically with the existing Hung Hom 17 17 Mr Benson Tsoi and Ms Alice Lau; they are here Station. We are now dealing with, in addition, the 18 18 North Approach Tunnels, NAT, the South Approach Tunnels, (indicating). Leighton are represented by my learned 19 friends Mr Paul Shieh SC and Mr Jonathan Chang; they are 19 SAT, and the Hung Hom Sidings. We are also dealing, so 20 right behind me. The government are represented by my 20 far as the North Approach Tunnels are concerned -- and 21 21 learned friends Mr Richard Khaw SC, Mr Anthony Chow, we will pick this up shortly -- with the shunt neck 22. 22 area, which is also part of the NAT. Mr Martin Ho and Ms Ellen Pang. 23 So far as the MTRC are concerned, a slight change of 23 Sir, I am aware that last Friday you went on a site 24 24 personnel for them, but they are represented still by visit, and I imagine, therefore, you have a reasonably 25 my learned friend Mr Boulding QC, Mr Jonathan Wong, 25 good grasp of the geography of the situation, but there Page 2 Page 4 1 Mr Kaiser Leung and Mr Jonathan Chan. Finally, Pypun 1 it is in that diagram, which is very helpful. 2 are now represented by my learned friend Mr Peter 2 Could we, however, look in a little more detail at 3 Clayton SC, and as you know that's because Mr Russell 3 one or two points regarding the geography. Sir, so far 4 4 Coleman SC is now a judge of the Court of First Instance as the NAT is concerned, amongst the numerous layout 5 5 in Hong Kong. plans and drawings available in the hearing bundle, we 6 6 Sir, before I move on to the opening address proper, have made reference to an appendix to the witness 7 7 I think you were aware that there may have been statement of Mr Fu, one of the MTR's witnesses. He's 8 8 a construction manager-SCL civil for the project. a procedural issue to have been dealt with this morning 9 in relation to a witness summons that was served upon 9 I wonder if we could look, please, at bundle BB1/85. 10 10 somebody last week. Sir, I'm happy to report that that This is appendix A to Mr Fu's witness statement. It 11 has been satisfactorily dealt with so far as the 11 shows the NSL Tunnel in green, coming from the direction 12 12 of Ho Man Tin Station. It shows the EWL Tunnel in pink, Commission's legal team is concerned. We are grateful 13 13 and -- a point I mentioned just a moment ago -- it shows for the assistance of MTRC's solicitors, Mayer Brown, in 14 14 the shunt neck area in blue, leading down to the HHS, that regard, and so hopefully all will run smoothly in 15 relation to that particular topic from here on in. 15 the sidings. 16 Sir, as you are aware, I hope, all involved parties 16 Importantly, however, on this diagram, on the 17 17 have submitted to the Commission written openings, left-hand side, if the appendix could be moved to the 18 18 left, please, and blown up -- thank you very much -- is variously called written opening addresses, submissions 19 and statements, but it doesn't really matter what they 19 that black dotted line. The black dotted line 20 are called, and the Commission is very grateful for the 20 delineates the contract 1112 works with which the 21 21 efforts of counsel and solicitors for the production of Commission is concerned, and the contract 1111 works 22 22 with which the Commission is not directly concerned. those written openings. 23 23 Work to the right of the black dotted line was Opening address by MR PENNICOTT 24 24 Sir, as you are aware as well, shortly before the carried out by the Gammon-Kaden SCL1111 joint venture --25 25 "GKJV" from now on -- and the work to the left of the Commission submitted its interim report (indicating) on

Page 7 Page 5 black dotted line was carried out by Leighton. concerned, it was at the interface of bay 3, which was 1 1 2 Of course, MTRC was the project manager under both of 2 constructed by Leighton, and the contract 1111 works on 3 3 those contracts. the other side of it. 4 4 Sir, as the Commission is well aware, issue 1 of Sir, what are stitch joints and why are stitch 5 5 this Extended Inquiry is concerned with three stitch joints required? In broad terms, the stitch joints are, 6 joints in the NAT, which I collectively refer to as "the 6 in practical terms, a means of joining two adjacent but 7 7 stitch joints"; and issue 2 is concerned with separate structures, in this case concrete structures, 8 8 a construction joint, originally designed as a stitch together. 9 9 Why are they required? Well, because these two joint, in the shunt neck. 10 If we could go to page 89 of BB1, just a few pages 10 structures may be built on different foundations, or the 11 11 two structures -- an example of that is the internal on, you will see in this diagram two of the stitch 12 joints. The first stitch joint to the right is at the 12 joint, the 1112/1112 NSL stitch joint -- or the two 13 13 interface of contract 1112 and contract 1111, and we structures are constructed at materially different 14 have called it "the 1111/1112 NSL stitch joint". Others 14 times. An example of that is the joint 1 and joint 3 15 15 have tried to shorten that by calling it "the NSL SJ"; stitch joints. More about that in a moment. 16 others have shortened it by saying "joint 1". There are 16 Sir, it is not in dispute that pursuant to 17 various terms used for it, but I'll try to be 17 appendix Z2, which are the interfacing requirements 18 specification with civil contracts, contained within consistent, if I can. So that's the first one. 18 19 The second one, the second stitch joint, is internal 19 contract 1112 between the MTR and Leighton, all of the stitch joints and the construction joint that we 20 to contract 1112, and we've called it "the 1112/1112 NSL 20 21 stitch joint", but perhaps also known as "the internal 21 referred to were required to be constructed by Leighton 22 22 under contract 1112. stitch joint" is perhaps the easiest way of describing 23 it and indeed remembering it. 23 If we could just look at BB1/420, please. If we 24 24 If we could then go to page 90, the next page, could go on, please. Go to page 422, please. You will 25 please. 25 see at Z1.6, where it says: Page 6 Page 8 1 COMMISSIONER HANSFORD: Sorry, Mr Pennicott --1 "This document has been developed on the basis of MR PENNICOTT: Back to 89, please. 2 the following construction sequence". COMMISSIONER HANSFORD: You referred to the first one. You 3 3 Then the second bullet point: said some people have called it "joint 1". 4 "Completion of the tunnel connections will be by 4 5 5 MR PENNICOTT: Yes. contract 1112." 6 COMMISSIONER HANSFORD: Have some people called this one 6 Then if you go over two pages to page 424, please, 7 and scroll down to 1.4 -- if we can see the top; thank "joint 2"? 7 MR PENNICOTT: Yes, they have. 8 you -- under the column, "By 1111 contractor" -- we COMMISSIONER HANSFORD: All right. That's fine. 9 really must call them the GKJV -- you can see at 1.4: 10 10 MR PENNICOTT: If we could go to page 90, you will see there "To complete the tunnel structure to enable [the] 11 11 the third stitch joint with which we are concerned. 1112 contractor to complete the stitching joint." 12 12 Then, under the "1112 contractor" column: This now of course is in the EWL, not the NSL, so we are 13 upper level, as it were, to the EWL track level. Again, 13 "To complete the stitching joint, including Omega 14 it's at the interface of the contract 1112 and the 14 seal, rebar and infill concrete, after tunnel 15 15 contract 1111, and again we've called this "the backfilling and stabilisation of tunnel settlement." 16 1111/1112 EWL stitch joint". Some have shortened it to 16 And the purpose of the interface is described as: 17 "SJ" and, surprise, surprise, some call it "joint 3". 17 "To ensure no additional loading induced in the 18 18 tunnel structure due to differential settlement of Sir, you will also see, on this helpful diagram, on 19 the extreme right-hand side, an arrow going up, where it 19 tunnel." 20 is described as "the 1111/1112 shunt neck joint". So 20 So, sir, that is, as it were, the underlying basis 21 that is, as it were, the fourth joint with which we are 21 upon which Leighton were to construct the stitch joints 22 concerned, but it's not a stitch joint; it's 22 with which we are concerned. 23 23 a construction joint, but this diagram shows the other COMMISSIONER HANSFORD: And the bundle reference for this 24 24 two joints that we are concerned with. schedule, please? 25 And you can see, so far as that shunt neck joint is MR PENNICOTT: It's BB1/420 through to 432. It's referred

	Page 9		Page 11
1	to in paragraph 7 of our opening address.	1	COMMISSIONER HANSFORD: Yes.
2	COMMISSIONER HANSFORD: Thank you very much.	2	MR PENNICOTT: We simply are not clear about it.
3	MR PENNICOTT: Turning to paragraph 7, just picking up the	3	COMMISSIONER HANSFORD: Okay.
4	next point, it is also common ground that the stitch	4	MR PENNICOTT: There must be a relatively simple
5	joints were to be constructed as late as possible in the	5	explanation, I daresay, for it, but we haven't spotted
6	construction sequence. One gets that from BB1/463,	6	it yet.
7	which I have in fact set out in the opening at	7	Sir, so far as the question how are the stitch
8	paragraph 7 but let's just look at it in its original	8	joints constructed, it appears to us from the rebar
9	form. It should be a drawing.	9	fixing and concrete pour dates information that has been
10	What one needs to this is, as you can see,	10	provided by both MTRC and Leighton that the sequence of
11	drawing it may be obscured by the number but it's	11	construction of the stitch joint is the base slab of the
12	drawing 101A, and where one needs to look is the note in	12	joint is done first, followed by the two walls on either
13	the top right-hand corner if that can be blown up as	13	side, and then the roof, although obviously it's
14	quickly as possible and it's note 2 which says:	14	acknowledged that the 1111/1112 EWL stitch joint doesn't
15	"The stitch joint shall be cast as late as possible	15	have a roof, so it would just then be the base slab and
16	in the construction sequence, and" an interesting	16	then the walls.
17	spelling of "preferably" "after groundwater recharge,	17	Sir, a point that I will be touching on in a bit
18	to minimise the amount of differential movement after	18	more detail later: we are bound to say that the
19	casting. Casting of the stitch joint shall not be	19	Commission's legal team is somewhat unclear as to how
20	carried out until after completion of backfilling."	20	many hold points are or are supposed to be involved in
21	So the takeaway point there is that the stitch	21	the construction sequence of the stitch joints, but I'll
22	joints are to be completed as late as possible in the	22	expand upon that point a little bit later on.
23	construction sequence.	23	Sir, we are now at page 5 of our opening address,
24	In paragraph 7 of our opening address we make this	24	where we have a heading, "Factual background to the
25	observation, and it is this, that it remains unclear to	25	Extended Inquiry", and I was going to go through this
	Page 10		Page 12
1	us whether this is relevant or not, I'm not sure	1	and point you in the direction of a number of the
2	but it remains unclear to us, the Commission's legal	2	documents that we refer to and rely upon. It would be
3	team, as to by whom and upon what precise basis or	3	helpful if we could get on the screen, please, for the
4	criteria a decision is taken that the ground conditions	4	purposes of the first few points that we make, BB9/6363.
5	are such that the stitch joints can go ahead and be	5	At least a reference that's relatively easy to remember.
6	constructed.	6	Sir, this is an MTRC document which you can see has
7	We make the assumption, but it is only	7	the pour dates it's got a lot of other information on
8	an assumption, that both of the structures constructed	8	it as well but amongst other things it has the pour
9	by Leighton on the one side and the GKJV on the other	9	dates of the concrete in relation to the NAT. The
10	are monitored in some way, and as a result of that	10	equivalent Leighton document is at CC1/280, but there's
11	monitoring, at some point in time, a decision can be	11	no need to bring that up, and it seems that there is
12	made by somebody that the stitch joints can go ahead.	12	a significant degree of agreement between the two
13	It might be helpful to the Commission if the MTRC or	13	schedules, but for present purposes we have relied upon
14 15	Leighton are perhaps able to give us a little bit of explanation as to how that actually works in practice.	14 15	the MTRC document which is on the screen at the moment. Taking things in chronological order, the shunt neck
16	COMMISSIONER HANSFORD: Going back to your previous point		
17	Mr Pennicott, about the conditions for casting the	16 17	bay 3, at the interface between contract 1111 and 1112, was constructed between 4 January and 22 March 2017. If
18	stitch joint, there seems to be two things: one, that	18	you could scroll down, looking at the numbers on the
19	the groundwater recharge is completed, and the other,	19	left-hand side, please, to number 45. It's right down
20	that differential movement or differential settlement is	20	towards the bottom of the page, I think. You will see
21	finished.	21	on the left-hand side, there's the heading, "NAT shunt
22	MR PENNICOTT: Yes, that's right, and it's a question	22	neck".
23	what we're a little bit unclear about at the moment is	23	The way this works is, in terms of the start date
24	how one arrives at the conclusion that that position has	24	and finish date, we have taken the commencement of the
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25	been reached.	25	rebar date, which is at item 45, as 4 January we can

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Then finally --

are a matter of days.

MR PENNICOTT: Yes.

COMMISSIONER HANSFORD: It's interesting that some of these

COMMISSIONER HANSFORD: And this one is four or five months

MR PENNICOTT: Yes. It may be -- whether it's relevant or

not -- but I suspect we may need to ask, some of

particularly the Leighton witnesses, to explain why

there would be a significant difference in the period of

Page 15 Page 13 1 1 probably see that there; thank you very much -- and then time that some of these stitch joints took. But you are 2 we have taken the completion date as the concrete pour 2 absolutely right, they differ widely, yes. 3 date, which is at item 48 on the extreme right-hand 3 Paragraph 12 of the opening address, and this is 4 4 side, that's 22 March. Sir, that is because it's bay 3. fairly important: the original 1111/1112 NSL stitch 5 5 One recognises that there are later dates for the other joint, so this is the interface on the NSL, was 6 bays, but we are concerned with bay 3, which is the 6 constructed between 5 July 2017 -- we pick that up from 7 7 connection with the 1111 works. So that's where those number 51, so 5 July -- and was completed, or the 8 8 dates come from. concrete pour was, on 2 August, so just under a month to 9 9 As I go through this, picking up other dates, this complete that stitch joint. You pick up the 2 August 10 10 is the way it works: we take the start of the rebar date on the right-hand side. So that's where one picks 11 fixing as the start date, and we take the concrete pour 11 up the original construction dates of the stitch joints. 12 12 date as effectively the last date. Now, moving on to paragraph 13 of the opening 13 13 Now, going to paragraph 10 of the opening, there is address -- and, sir, a lot of what now follows is 14 a little bit of a glitch here. The original -- sorry, 14 taken -- and we don't need to go to it just yet -- a lot 15 15 if we could keep that concrete pour; that's fine, thank of what is coming is taken from the MTRC report that was 16 you very much -- the original 1111/1112 EWL stitch joint 16 prepared and submitted to the government on 26 March 17 commenced construction on 22 January 2017. We can see 17 2018. 18 18 that from item 58a on the schedule, 22 January; that's The first thing to pick up from the MTR's report is 19 the one. That's the start of the rebar. And the 19 mentioned at paragraph 13 of the opening address, where we say that the MTR observed water seepage at the newly 20 concrete pour of the base slab took place on 24 January. 20 21 You get that on the right-hand side, the concrete pour. 21 completed 1111/1112 NSL joint during a routine 2.2. 22 That is at the base slab. inspection in August 2017. The commencement and completion of the walls is 23 23 Now, if one looks at paragraph 12, we know that that 24 24 currently unclear. There are some dates on the schedule stitch joint finished on 2 August, and they had spotted 25 that we can see and pick up, but in Mr Fu's -- who 25 water seepage in August 2017. So it was something that Page 14 Page 16 1 I have referred to already -- witness statement, he says 1 was picked up pretty quickly, on any view, in the same 2 that the subject matter of the exact dates when the 2 month that it had completed, water seepage, because that 3 3 walls were built is subject to further verification and was the first stitch joint where water was observed. 4 that his team will provide further information when it's 4 We've obviously looked at the location of that 5 available. So it's as a consequence of that evidence 5 stitch joint, and we say that there are some photos, but 6 that I'm not clear whether the dates on this schedule 6 I'm not going to them, of the location of the water 7 are accurate or not, but anyway, it probably doesn't 7 seepage, and you can see the water seepage from the 8 matter a huge amount. We know, broadly speaking, that 8 photographs. 9 this stitch joint, the EWL stitch joint, started on 9 As a consequence of that water seepage, in October 10 22 January and probably finished sometime in March. 10 2017, Leighton was required to carry out grouting work 11 Sir, paragraph 11: the original internal stitch 11 to seal up the water seepage. The process was repeated, 12 joint, the NSL internal stitch joint, was constructed 12 it appears a number of times, but the outcome was not 13 between 29 May 2017 -- you pick that up from number 54, 13 effective. A photo again showing the grouting work can 14 wherever that is; yes, there it is, at 54 -- 29 May, we 14 be found at the reference given: BB1/185. 15 can see that. Then the last date for the pour is at 57: 15 On 22 December 2017, MTR issued to Leighton NCR --16 that's 9 September 2017. 16 that is, as you will recall from the Original Inquiry,

Following on from that, minor separation gaps were observed at the water seepage location, and on 9 January 2018, MTR instructed Leighton to install settlement markers and tell-tales to monitor the movement of the tunnel structure and the gap width respectively. That was at the beginning of January.

non-conformance report -- 66 in respect of the water

leakage and cracks, and the reference is given.

Sir, the government, that is the Highways Department

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and the Railway Development Office, was first alerted to the water seepage problem at the 1111/1112 NSL stitch joint by MTR, by way of an SCL project report for the period 1 to 28 January and submitted on 31 January.

Could we please look at that: that's at DD1/38.112. Somebody has helpfully highlighted the relevant passage for us. As I say, you can see the dates, the period that this report covers at the top. I understand it was submitted to the government on 31 January. This is, as we understand it, the first time the government was made aware of the problem.

"Water leakage with 3 millimetre to 5 millimetre cracks were recorded at P-way plain concrete track bed and C&C tunnel sidewall along the stitch joint with Omega seal at contract 1111/1112 interface. [Leighton] is urged to propose and carry out mitigation measures to control water leakage. In the meantime, six settlement points and five tell-tales were installed to monitor the C&C tunnel movement and crack opening. There is no significant settlement recorded so far but the crack width is increasing due to the high water pressure building up below track bed and sidewall."

So that is the way that the MTR were expressing the problem to the government at the end of January 2018. Going to paragraph 18 of the opening address: on

gap width observation. The inspection result revealed that the several exposed rebars were not coupling to the couplers reserved by SCL1111 contractor within the adjacent tunnel structures."

So the phrase that is used is that the rebars "were not coupling to the couplers". Quite what that means, one is not entirely sure, but it's an interesting way of putting it, "not coupling to the couplers".

Anyway:

"Based on this inspection result, it was considered that the tunnel structures at both sides of the interfacing location had not been properly connected by the stitch joint in accordance with the design."

Quite how that conclusion was reached, I'm not sure; that is that both sides of the interfacing location had not been properly connected, perhaps suggests that both had been opened up and the same result had been observed, but I'm not entirely sure.

That was a bit of a watershed moment, when those investigations were carried out, because clearly it was at this point that a serious problem, apparently serious problem, had been observed.

On 9 February -- according to MTR, the day after these investigations were carried out -- MTR issued to Leighton non-conformance report 95, in respect of,

Page 18

Page 20

5 February, by reference to the tell-tale installed, obvious separation of a few millimetres' gap was observed, again, at the 1111/1112 NSL stitch joint. An investigation was carried out between 6 and 8 February 2018 or -- I say this because there's a slight difference in the evidence that seems to have been tendered -- between 7 and 14 February -- the reference there to CC1/75, paragraph 21, is to a witness statement of William Holden, one of the Leighton witnesses. It perhaps doesn't matter the precise dates but one can see there is a slight difference -- by chipping off three locations of concrete surface at the tunnel wall and roof, exposing the rebar at the stitch joint. It revealed that a significant number of rebar were not properly connected, or were not connected at all, into the couplers.

Now could we have a look at the MTR report upon which some of this narrative is based. That's BB1/168, at paragraph 2.4, please.

What the MTR have said -- I won't read the first couple of sentences but they refer to the separation, the chipping off, exposure of the rebars, and then say:

"This investigation was carried out on 6-8 February" -- that's where I've taken the dates from in the opening -- "immediately after the 3 millimetre

again, the 1111/1112 NSL stitch joint, and also the 1111/1112 EWL stitch joint.

Why did they do that? That is because between 9 and 14 February, with the consent of MTR, Leighton broke holes in the concrete and exposed rebar at the 1112/1112 NSL stitch joint -- that's the internal one -- and the EWL stitch joint, to carry out an investigation into the other stitch joints. Apparently, it was observed again that a significant number of rebar were not properly connected, or were not connected at all, into the couplers at both stitch joints.

For that purpose, can we go back to the report that we were looking at earlier, BB1/168, at paragraph 2.5. So here it is:

"Subsequent to this inspection, MTR instructed the contractor to carry out [the] same investigation to the other two stitch joints with similar construction details, ie the stitch joints at EWL Tunnel at [the] interfacing location and [the internal joint]. Investigation was carried out on 9-12 February 2018. The same condition that the several exposed rebars were not coupling to the reserved couplers was also observed."

So, at this point, middle of February 2018, it had been discovered that all three stitch joints suffered

Page 23 Page 21 from the same problem. 1 Then, sir, what happened was a period when the new 1 2 What then happened was -- and one observes, perhaps, 2 stitch joints were constructed. So, at paragraph 30: 3 3 that this happened very quickly -- enabling works for the actual reconstruction works in respect of the EWL 4 4 the 1111/1112 NSL stitch joint and the internal stitch stitch joint took place between about mid-March and 5 5 10 April 2018. So, again, one can pick up these dates joint commenced on 9 February, and demolition works were 6 done between 15 February and 6 March. There was no 6 from the pour summary at BB9/6363, because not only are 7 7 the original stitch joint details on there, so are the hanging about. These stitch joints, the original stitch 8 joints, were taken out, demolished and moved pretty 8 new stitch joint details, and so one can pick up those 9 dates from that pour summary as well, but I don't think 9 swiftly. 10 10 So far as the EWL stitch joint is concerned, we need this time to look at it. 11 11 On 4 April, Leighton submitted to MTR a document enabling works commenced on 27 February 2018, and 12 demolition works were done within five days, between 12 called "Task method statement for NSL stitch joints 13 5 March and 10 March. The references I have there given 13 reconstruction". This document actually had a couple of 14 14 predecessors but appears to be the last version, and is are again from Mr Holden's witness statement. 15 15 obviously concerned with the reconstruction of all the Meanwhile, on 15 February, Leighton presented 16 stitch joints, the NSL stitch joints. 16 a proposal to MTR to demolish and reconstruct the NSL 17 17 The actual reconstruction works, that is the rebar stitch joints, and on 5 March Leighton presented 18 fixing and concreting, in respect of the interface NSL 18 a proposal to the MTR for demolishing and reconstructing 19 stitch joint, was carried out between 12 April and 19 the EWL stitch joint. 20 Sir, I'm now at page 8 of the opening address. We 20 19 May. 21 21 COMMISSIONER HANSFORD: Sorry, in paragraph 31, you refer to are now at the middle of March, 14 March 2018. The MTR 22 issued to Leighton non-conformance report 96 in respect 22 the task method statement for the stitch joints 23 23 of the defects at the internal stitch joint. Then, on reconstruction. 24 MR PENNICOTT: Yes. 24 16 March, MTR submitted to the government and Pypun 25 a draft stitch joint report, and the references are COMMISSIONER HANSFORD: Have you unearthed a task method Page 22 Page 24 1 statement for the original stitch joint construction? 1 there given. Then, on 20 March 2018, MTR issued a press 2 release on the stitch joints incident. Then, on 2 MR PENNICOTT: No, sir. I'm not saying one doesn't exist, 3 22 March, MTR submitted to the Highways Department, 3 but I certainly haven't seen such a document, no. firstly, an updated SSP, that's site supervision plan, 4 COMMISSIONER HANSFORD: I'm just wondering, if there were 4 as you will recall, for the NSL and EWL Tunnels at the 5 5 such a document, whether there were changes from the 6 original document to the document relating to 6 NAT, and, secondly, the design submission for the 7 revised details of the EWL stitch joint which Leighton 7 reconstruction. 8 8 MR PENNICOTT: Yes. Thank you for raising that point. We had submitted to MTR on 21 March 2018. 9 Sir, of some, perhaps, relevance and importance for 9 can obviously look at that, and others have heard the 10 10 later issues: on 26 March 2018, MTR submitted to the question. Certainly, sir, there are, so far as the 11 11 Highways Department, firstly, what is described as the original stitch joints are concerned, a number of 12 12 updated QSP for couplers at NAT, both for BOSA and detailed drawings which show the construction and the 13 13 methodology of construction of the original stitch Lenton couplers. I'm not going to look at the document 14 14 joints. But in terms of the task method statement, ie now, but we may need to look at it a bit later, but 15 15 of course you will recall that "QSP" is quality a written narrative document such as this, I've not seen 16 one in relation to the original stitch joints. 16 supervision plan, in respect of which you have written COMMISSIONER HANSFORD: Okay. Thank you. 17 a number of paragraphs in the interim report and which 17 18 MR PENNICOTT: Sir, paragraph 32: the actual reconstruction 18 we may need to look at again, but of course in the 19 context of the new geographical areas with which we are 19 works, that is the rebar fixing and concreting, in 20 20 respect of the NSL interface stitch joint, was carried concerned. 21 21 out between 12 April and 19 May. Also on 26 March, MTR submitted a design amendment 22 for the revised details of the EWL stitch joint. 22 Now introducing a slightly new but important topic, 23 23 Thereafter, on 27 March, MTR submitted to the paragraph 33: on 16 April, MTR issued to Leighton 24 24 NCRs 97 to 196 in respect of missing R-I-S-C forms; government the formal report dated 26 March which we 25 "RISC forms", as we know them. 25 have been looking at.

Page 27 Page 25 1 The point here is that investigations have been 1 and reconstructed, NCRs 66 and 96 were closed out on 2 going on by MTR, and of course the government after it 2 5 September. 3 was informed in January, about what happened in relation 3 Paragraphs 41 and 42 deal with the shunt neck so 4 4 to the construction of the original stitch joints, and I will skip over those. 5 5 of course one of the things that was called for was, Sir, on 20 December 2018, MTR wrote to Highways, 6 from Leighton and indeed from MTR: where are the RISC 6 informing them -- this is, again, quite an important 7 7 forms in relation to the stitch joints, the original moment, an important letter -- that in addition to RISC 8 8 stitch joints? Because it would have been known that forms, the missing or insufficient construction records 9 there should be at least some hold points in the 9 for NAT included specific information about a change of 10 construction of the original stitch joints, and they 10 design of some connections during construction from 11 would normally, under normal circumstances, have RISC 11 lapping of rebars to coupler connections. There were 12 12 forms associated with those hold points. And of course doubts as to the extent of the change, and there were 13 13 the point was there were not, and there are still not, also concerns about materials testing records. 14 14 any RISC forms, relevant RISC forms, in relation to the So what one has in this letter is an expansion of 15 15 construction of the original stitch joints. There are problems from missing RISC forms to other information 16 plenty of RISC forms in relation to the construction of 16 about changes of design, the extent of the changes and 17 the new stitch joints, but in relation to the original 17 material testing records, so an expansion of potential 18 ones, there are no RISC forms, hence the non-conformance 18 problems. 19 report by MTR to Leighton in relation to those missing 19 In that letter, MTR indicated that it would propose 20 forms. 20 a holistic study to RDO and BD for proving the NAT 21 Then, moving on: the actual reconstruction works, 21 as-constructed conditions and workmanship quality. 22. 22 that is the rebar fixing and the concreting, of the However, and importantly -- you will have appreciated, 23 internal stitch joint, was carried out between 8 May and 23 at the moment, everything that has been referred to is 24 24 18 July. That in effect brought an end to the just NAT-related -- is in this letter on 20 December 25 reconstruction of the three stitch joints with which we 25 2018, where MTRC also expressed the view or the Page 26 Page 28 1 are concerned. 1 expectation that there were similar, but lesser, issues 2 Trying to cut this a little bit shorter, so far as 2 at SAT, although, on 20 December, no mention was made of 3 3 the shunt neck joint is concerned, that was the HHS. 4 4 investigated. Apparently, similar problems were So, on 20 December 2018, the potential problems at 5 discovered. But, as you may recall -- I'm not sure 5 the SAT, not in relation to stitch joints and the 6 whether you would have been told this on the site visit 6 suchlike, but in terms of documentation, missing RISC 7 or not -- in fact, despite a number of remedial 7 forms and the like, is widened from the NAT to the SAT. 8 8 proposals having been passed from Leighton to MTR and On paragraph 44 -- here comes the introduction of 9 MTR to the government, in fact, as we stand here today, 9 the HHS, because apparently, on 23 January 2019 -- we 10 10 no remedial works have in fact been carried out, as are moving on to this year -- a meeting was held between 11 I understand it, to the shunt neck joint. 11 the BD, the RDO and MTR to discuss the preparation for 12 CHAIRMAN: That's as we understood it on our visit, yes. 12 the application for the certificate of completion of 13 MR PENNICOTT: Right. Yes. So that remains outstanding and 13 building works at the NAT. But, at this meeting, it 14 I'm not entirely sure what's going to happen next, but 14 appears that MTR (a) repeated various matters that they 15 we may or may not find out in the course of the next 15 had mentioned in their letter of 20 December, and (b) --16 couple of weeks. 16 CHAIRMAN: That's about the lapping, the coupling and the 17 So, sir, I will miss out all the references I have 17 lapping. 18 made to the toing and froing of the proposals in 18 MR PENNICOTT: Yes, about the change of design, that's 19 relation to the shunt neck, leaving it, as it were, as 19 right. So it mentioned that, and advised, for the first 20 I've just described it. 20 time, that similar issues might arise at the HHS. One 21 Picking up at paragraph 39: on 27 July 2018, MTR 21 gets that from the government's letter, the Highways 22 submitted to the Highways Department a quality assurance 22 Department's letter, of 24 January 2019, which I then 23 scheme in respect of the couplers, both BOSA and Lenton 23 discuss below. 24 types, on which more later. 24 Sir, that meeting of 23 January, attended by 25 As a consequence of the stitch joints being remedied 25 representatives of BD and RDO and MTR -- we have asked

Page 31 Page 29 1 both government and MTR whether there are any minutes of 1 were, new involved party, that is Wing & Kwong Steel 2 that meeting, and we have been told by both that there 2 Engineering Co Ltd. I only want to deal with this 3 3 are no minutes and the only information in writing that briefly. 4 we have, apart from what's in a couple of witness 4 As we say at paragraph 62: pursuant to a sub-contract dated May 2013, Wing & Kwong, as I will 5 5 statements from the government, is what's in the letter 6 of 24 January. 6 call them, was engaged by Leighton as a sub-contractor 7 7 So, on that topic, by the letter of 24 January 2019 responsible for carrying out the reinforcement bar 8 to MTR, Highways Department expressed its disappointment 8 cutting, bending and fixing works for the HHS, and, it 9 about the problems reported in the letter of 9 appears, by way of a variation or amendment to the 10 10 20 December, and required MTR to carry out a number of contract, the NAT, which is obviously perhaps more 11 11 things, which we have set out at (i) to (v) in important in some ways than the HHS. As you know, Wing 12 paragraph 45 and which I will not read out. But if you 12 & Kwong was not an involved party at the Original 13 just scan the words, as it were, of those subparagraphs, 13 Inquiry. 14 14 you will see what is now known as the verification Sir, I don't believe anything turns on this so far 15 15 report or listed report has its roots in what was being as the Commission is concerned, but there appear to be 16 asked for by the government at this stage. 16 at least, to our analysis, three versions of the Wing 17 17 Sir, on 30 January, the government held a press & Kwong sub-contract with Leighton in the bundles. 18 18 conference, announcing that there were problems of An explanation for the difference between two of them is 19 missing RISC forms, unauthorised design changes and 19 given in the Wing & Kwong witness statements. That is, 20 incomplete testing records of materials under 20 that they signed a contract, sent it back to Leighton, 21 21 contract 1112 in relation to construction works at the didn't hear back from Leighton, chased Leighton in 22 NAT, SAT and the HHS. 22 a later stage for a copy of the sub-contract. Leighton 23 Then, sir, going back to the genesis of why we are 23 sent the sub-contract back, Wing & Kwong signed it, 24 24 here today, on 31 January the government announced that perhaps didn't look at it as carefully as they should 25 the Chief Executive would consider expanding the scope 25 have done. When contacted for the purposes of giving Page 30 Page 32 1 witness statements for this Commission, they discovered 1 of this Commission's investigation to cover the various 2 that the original contract that they had signed was 2 construction issues of the NAT, SAT and HHS. 3 3 From paragraph 49, a point I mentioned earlier: on different from the one that Leighton had sent back to 4 4 them, indeed materially different if one compares the 19 February, the terms of reference were duly expanded. 5 5 two. As I say, whether anything turns on that, I am Sir, of course things have not stood still since 6 that expansion. There are, almost on a daily basis, 6 doubtful, but I just mention it because they are two 7 7 events happening that have relevance to this part of the different sub-contracts. So then, lo and behold, a third version turns up 8 8 Inquiry. Some of those are set out from paragraphs 50 9 to 56 of our opening address. They primarily concern 9 when Leighton give us discovery in the context of the 10 10 the verification proposal which, as you know, has now discovery process for the Commission. 11 been agreed as between the MTR and the government, and 11 CHAIRMAN: Signed? MR PENNICOTT: Well, signed, but slightly curiously signed 12 the Commission has been informed about that quite 12 13 recently, and as you know form the subject matter of, we 13 by Mr Speed, who we know didn't join Leighton until 14 hope, adhered-to milestone dates, and in particular the 14 April 2017, and the contract is dated 15 May 2015. But 15 15 milestone date of 30 June 2019, where the verification anyway -- so that's neither here nor there, I hope, but 16 16 just to inform you that there are in the bundles report, based on the verification proposal, will be 17 17 a number, or at least three, different versions of this produced by the MTR and the government. 18 18 I won't go through all of that, but the history of sub-contract. 19 how we get to where we are today is set out there. 19 COMMISSIONER HANSFORD: I have also read of a situation 20 20 I then, at section D of the opening address, have where Wing & Kwong were at one point expected to be 21 21 doing work on SAT but then it was swapped to NAT. a heading, "The involved parties and Fang Sheung". Sir, 22 you are both very well aware of the background to the 22 MR PENNICOTT: Yes, I think that's right. 23 involvement of the government, Pypun, MTR and Leighton, 23 COMMISSIONER HANSFORD: I'm sure that will come up later in 24 24 this. but perhaps I could just pause at paragraph 62 of our 25 opening address just to say a few words about the, as it MR PENNICOTT: It may, yes. There's no --

so if anybody wants to take a bit more time than they

Page 35 Page 33 COMMISSIONER HANSFORD: Again, I don't know if anything 1 1 have indicated, I don't think that is going to be 2 2 a problem to the Commission, if they wish to do so, MR PENNICOTT: I don't think so. I think the position is 3 within reason. 4 this, that so far as the rebar fixing is concerned, Wing 4 Sir, so far as documentation is concerned, the 5 & Kwong's work is confined to the HHS and NAT. 5 Commission's solicitors, those instructing me, 6 COMMISSIONER HANSFORD: Yes. 6 Messrs Lo & Lo, have, in my respectful view sensibly, 7 MR PENNICOTT: Fang Sheung, as you will recall from the 7 decided that there should be an entirely new, fresh 8 Original Inquiry, were responsible for the rebar fixing 8 bundle for this Extended Inquiry, in respect of which 9 in the SAT. 9 there is a consolidated index of documents which is 10 10 COMMISSIONER HANSFORD: Yes. being updated, as usual, on a day-by-day basis. 11 MR PENNICOTT: As well as, obviously, we know, the station 11 The current position I've set out at paragraph 66 in 12 platform and so forth. But as far as we are concerned, 12 terms of the bundles that we have. There is only one 13 the new areas, Fang Sheung was responsible for rebar 13 change to make, and that is at page 18, where we have 14 14 fixing in the SAT, not Wing & Kwong. a reference to bundles GG, and that's the Pypun bundles. 15 COMMISSIONER HANSFORD: Yes. 15 We now have GG3. The reason for that -- and I'll MR PENNICOTT: I just mention in passing, in paragraph 63, 16 16 mention this again in a moment -- is that on Friday 17 that Fang Sheung have not been sent a Salmon letter and 17 afternoon, Pypun served a report that they have been 18 are not an involved party in this extended part of the 18 putting together for the government. It is in excess of 19 Inquiry. However, as I have just mentioned, they were 19 850 pages long and has been given its own dedicated 20 the sub-contractor for the rebar fixing in the SAT. 20 file, GG3. 21 They have given us one witness statement, from Mr Pun 21 Sir, also, just to emphasise this point for any of 22 who we heard from last time, you will recall, and it is 22 those behind me who may be thinking of referring to 23 proposed that he will in fact be the first witness, 23 documents in the Original Inquiry -- I think, pursuant 24 24 simply because it's convenient to take him first. to a suggestion made by my learned friend Mr Boulding at 25 Of course, so far as the SAT is concerned, what we 25 the preliminary hearing, all parties were asked to Page 34 Page 36 1 1 are concerned with, as you have already seen, is missing indicate, on an Excel spreadsheet, those documents from 2 2 RISC forms, change of design, this sort of thing, and we the original bundle that they may wish to make reference 3 could not see any basis upon which Fang Sheung could be 3 to during the course of this hearing. That was done. 4 in any way responsible for any of that as 4 A consolidated list has been created by Lo & Lo. That 5 5 a sub-contractor. But, nonetheless, Mr Pun may have consolidated list, I hope, has been also given to my 6 learned friends for Wing & Kwong, who of course were not 6 some relevant evidence to give us, and we've got a short 7 7 witness statement from him and I anticipate we will call at the Original Inquiry, so they know, at least 8 8 potentially, to which documents from the Original him tomorrow at some point. 9 Sir, in paragraphs 64 and 65, there are a couple of 9 Inquiry reference may be made. 10 10 paragraphs about the oral addresses. Sir, there may be All of that information, as I understand it, is 11 a necessity for a slight change of order, depending on 11 available in electronic form and capable of being called 12 how I get on this morning. The proposal was that Wing 12 up as and when necessary. 13 & Kwong go next, and I'm pretty sure that will happen, 13 Sir, so far as witnesses are concerned, as well as 14 14 and then Leighton, followed by the government, MTR and there being a separate bundle of witness statements 15 Pypun. Depending on how I get on, it may be necessary 15 which have been taken out of the main run of bundles, we 16 to switch the government and Leighton around the other 16 intend to call the witnesses in a slightly different 17 way, because my learned friend Mr Khaw will not be here 17 order than was mentioned at the preliminary hearing. 18 tomorrow, but we'll take a view on that a little bit 18 That is because, having reviewed everybody's witness 19 19 statements, the Commission's legal team has taken the 20 20 Both Mr Khaw and Mr Shieh, I have had a word with view that a more logical order is as set out here, in 21 21 them about that possibility. paragraph 69. That is, Fang Sheung first, Wing & Kwong, 22 22 Each party has, as you know, given a time estimate Leighton, MTR, government and Pypun. 23 23 Now, so far as Wing & Kwong's witnesses are for their opening addresses. All I would say is I don't 24 24 think time today and tomorrow is necessarily critical, concerned, they will not start until Wednesday morning,

and so the business of today and tomorrow is the opening

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- addresses by all parties, and Mr Pun from Fang Sheung, 1 2
- and then, wherever we get to with Mr Pun, that will be
- 3 the close, obviously at some point tomorrow, I daresay, 4 and then we will start afresh on Wednesday morning with
- 5 the Wing & Kwong witnesses.

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Sir, there is a list of witnesses at annex 1 to our opening address. That was amended yesterday to take into account some further witness statements that came in on Friday. Sir, can I just ask you, if you've got that to hand, to look at that, so I can make a couple of

11 observations so nobody is misled. 12

Sir, you will see, at items 10 and 10.1 on that list, reference to -- it says "PS of Audrey Fung", and "PS of Audrey Fung (English translation)". Ms Fung is an MTR employee. She has given a police statement, and it deals exclusively with how the RISC form register that MTRC kept was compiled, produced and updated. That's the extent of her witness statement. It is not

- 18 19 proposed, as currently advised, to call Ms Fung. The
- 20 MTR have indicated to us that they have no problems with
- 21 the description that Ms Fung gives as to the way in
- 2.2. which the register was compiled. So the MTR are happy
- 23 about that, we are happy about that, so, unless anybody
- 24 else has a point, we were not proposing to trouble
- 25 Ms Fung.

when you feel would be most appropriate.

- 2 MR PENNICOTT: I think I would -- I've reached a convenient
- 3 moment and I would quite like a break and I'm sure the
- 4 transcript writers would.
- 5 CHAIRMAN: How long?
- 6 MR PENNICOTT: 15 minutes.
- 7 CHAIRMAN: 15 minutes. Thank you.
- 8 (11.23 am)
- 9 (A short adjournment)
- 10 (11.44 am)
- 11 MR PENNICOTT: Sir, thank you.
- 12 CHAIRMAN: There is a brisk amount of air-conditioning, or
- 13 is it just me?
- 14 MR PENNICOTT: It's just right for those standing on their
- 15 feet.
- CHAIRMAN: We will see what can be done at the lunch hour. 16
- MR PENNICOTT: Sir, I said before the break that I had 17
- 18 reached a convenient moment and I sort of had, but there
- 19 is perhaps one point I should make about the witnesses.
- 20 We have had some notifications about availability
- 21 problems or issues which we are seeking to deal with.
- 22 They relate to Henry Lai from Leighton and Jeff Lii --
- 23 that's L-I-I -- from Leighton, and we will be, as it
- 24 were, reordering the witnesses to try to take into
 - account the issues that they have. I'm also aware that

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- Sir, also, if I can draw your attention to item 21 and item 21.1 -- again, two police statements have been provided to us of a Mr Wong Ho Lam, Ian Wong, a Leighton employee, who also describes from Leighton's perspective the process of RISC form preparation. As with Ms Fung,
- 5 6 we were not proposing to trouble Mr Wong.

Then, at items 22 and 23, you will see reference to the police statements of Mr So, that's Gabriel So -- you

may recall Mr So from the Original Inquiry -- and, secondly, Mr Gary Chow, likewise. They have also

provided police statements, but the only thing that those police statements do is confirm the truth and

13 accuracy of the statements that they gave to the 14

Commission for the purposes of the Original Inquiry. Those have been properly given to us, but again we see

no reason to trouble either Mr So or Mr Chow to give

evidence to this Inquiry.

As presently advised, there is only one other witness that I'm aware of who will need to be put onto this list and that is an additional MTRC witness, that is a Ms Kappa Kang, from whom we do not yet have a witness statement but we are expecting to receive one relatively soon.

24 Sir, I see it's nearly 11.25.

CHAIRMAN: It's your address, Mr Pennicott. You tell us

- Mr Sebastian Kong from the MTR also has availability issues which we will also address to make sure that
- 2 3 everybody is not inconvenienced, and if it means we have
- 4 to give certain witnesses a fixed time to give their
- 5 evidence and thereby interrupt others, well, so be it,
- 6 that's what we will do.

7 Sir, could I then turn to the primary topics of the

- 8 Inquiry, so at page 19 of the opening address. Sir, as
- 9 I have already gone through, issue 1 is the three
- 10 defective stitch joints at the NAT, and I'm bound to
- 11 say, whilst I think the full description in writing that
- 12 I've given to each of those stitch joints looks better
- 13 in writing, it's not so good orally, I have to say, and
- 14 I'm beginning to think that "joint 1", "joint 2" and
- 15 "joint 3" will be a lot easier for those who have to 16 keep on repeating them. So I do wonder whether we
- 17 should call the NSL interface joint "joint 1"; the
- 18 internal joint "joint 2"; and the EWL interface joint
- 19 "joint 3". But let's see how we go.

The second issue obviously relates to the

- 21 non-compliance issues at the NAT shunt neck. Then
- 22 issue 3 is in relation to the lack of inspection and
- 23 supervisory records, including RISC forms, unauthorised
 - design changes and incomplete testing records of
 - materials at the NAT, SAT and HHS areas.

10 (Pages 37 to 40)

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Page 43 Page 41 CHAIRMAN: Just for clarification, the HHS areas, which is 1 1 then have caused the water seepage to appear. There is 2 really the stabling yards --2 no detailed analysis, it seems to us, in any independent 3 MR PENNICOTT: Yes. 3 or indeed internal report, either from the MTR or CHAIRMAN: -- we don't have any issues there about stitch 4 4 Leighton. joints; the issues there are about lack of RISC forms? 5 CHAIRMAN: But there are records -- or, let me rephrase 6 MR PENNICOTT: Lack of RISC forms, and also unauthorised --6 that -- are there records, though, of the photographs of CHAIRMAN: Design changes. 7 the couplers and the failure to connect or the failure MR PENNICOTT: -- design changes, yes. 8 to put in correctly? CHAIRMAN: Absolutely. Good, thank you. Those two issues. 9 MR PENNICOTT: There are a limited number. There are not COMMISSIONER HANSFORD: And on a similar point -- and I car 10 10 many. There are certainly a very limited number of 11 check this outside of this room -- but are there no 11 photographs that we have seen about what is now 12 stitch joints related to the SAT? 12 described as the defect or the failure to couple 13 MR PENNICOTT: No. 13 properly, the non-coupling; very, very few photographs 14 COMMISSIONER HANSFORD: None at all? 14 of that instance. But certainly, as I say, no detailed 15 MR PENNICOTT: No. 15 analytical, investigatory report. COMMISSIONER HANSFORD: Thank you. 16 CHAIRMAN: Yes. 17 MR PENNICOTT: I asked that question and I was given the 17 MR PENNICOTT: Sir, so far as issue 2 is concerned, again we 18 18 answer no but I can't now remember why. But there have touched on this already, the shunt neck joint 19 aren't any. 19 manifested itself in cracks in the concrete, although 20 COMMISSIONER HANSFORD: That's fine. 20 we're not sure about whether any water seepage was 2.1 CHAIRMAN: And as far as the HHS is concerned, the issues 21 observed and, if so, to what extent. The cause of these 22 were couplers there again, but I think there was 22 problems appear to have been similar to the stitch 23 a change because of safety and egress and access. 23 joints, namely a failure to connect the threaded rebar 24 MR PENNICOTT: That's right, sir, and I'm coming to deal 24 to the couplers. 25 with that very shortly. That is correct. 25 So far as the Commission's legal team is concerned, Page 42 Page 44 1 Page 20 of the opening address, paragraph 73. We 1 we have a limited perception from the evidence reviewed 2 2 to date whether, firstly, all or just some of the rebar make a few observations about issues 1 and 2, and we 3 3 pose the question, "What were the was not properly connected, and if the latter what 4 proportion was involved; and we also have difficulty in 4 defects/non-compliances?" 5 5 So far as issue 1 is concerned, that is the stitch fully understanding be the prevalence, predominance, of the reasons for the non-coupling or the non-connection, 6 6 joints, as we have explained, the defects at the stitch 7 joints manifested themselves in cracks in the concrete 7 amongst the various reasons that are put forward, and 8 8 I'm coming to those very shortly. and water seepage. The cause of these problems is 9 inferred to have been the failure to connect the 9 Sir, we know that on the GKJV side of the interface 10 10 longitudinal threaded rebar to the cast-in couplers on stitch joints, and given the non-ordering of tapered 11 either side of the bay either properly or at all. But 11 rebar by Leighton -- as I will explain in a moment -- it 12 12 we are bound to say, from the Commission's legal team's appears to follow that incompatibility or mismatch 13 13 between the Leighton-supplied rebar and the Lenton perspective, that there does not appear to us to have 14 14 been any technical investigation, either by MTR or couplers on the GKJV side must have occurred, it seems 15 Leighton, which reaches that conclusion. This really 15 to us, without exception. If there was no threaded 16 16 harks back to a point that I touched on earlier, which rebar ordered, and we know the Lenton couplers are 17 is that there appears to have been a very quick decision 17 threaded couplers, then it seems to us that on the 18 18 to investigate all these three stitch joints, demolish GKJV's side the parallel threaded rebar was never going 19 them, replace them as rapidly as possible, on the basis 19 to work, properly or at all. 20 that obvious non-compliances had been identified. 20 CHAIRMAN: For any of them? 21 21 MR PENNICOTT: For any of them, it seems to us, but it may But it is, it seems to us, a little bit strange that 22 22 one doesn't find some technical report that looks at the be we have slightly missed the point; I'm not sure. But 23 23 failure to connect or the failure to connect properly, if you accept the proposition that the Lenton couplers 24 24 look at issues of causation, as to how that would have are tapered, you need tapered rebar to connect properly 25 25 caused the cracks in the concrete, as to how that would into them. If no tapered threaded rebar was ordered by

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- Leighton, only parallel threaded rebar, not tapered, it 1
- 2 was never going to work on the GKJV side, it seems to 3 us.

Having said that, on the Leighton side of the stitch joint, where we know the BOSA couplers were used, and certainly in relation to the internal stitch joint, joint 2, or the 1112/1112 joint, we don't understand how in theory that happened, because they had the right

8 9 rebar, they had the parallel rebar, for the BOSA 10 couplers.

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So there seems to us to be quite a lot to be explained as to how all this happened and was allowed to

Now, sir, in the Wing & Kwong witness statements in particular, there appear to be at least four reasons or explanations as to why the rebar was not properly connected or not connected at all. We make reference to the two witness statements primarily concerned with

The first is the incompatibility point which I've already mentioned. As I've indicated already, we know that under the GKJV contract, Lenton couplers were used, whereas under the Leighton contract BOSA couplers were used. Lenton couplers are tapered and require tapered threaded rebar to form a proper connection. BOSA

1 sufficiently exposed, then the lack of a proper

2 connection was an inevitable consequence.

3 So could I just mention this point at this stage,

4 and I'm bound to say it is a point that has really only

5 been brought to my attention in the last couple of days. 6 Not only do we not entirely follow the process that was

7 used to chip away and expose the couplers; we are not

8 actually 100 per cent sure who did that work. Now,

9 whether it was Leighton directly employed labour or

10 whether it was another sub-contractor is a matter again

11 which, at the moment, to our way of thinking at least,

12 lacks clarity.

13 CHAIRMAN: Remind me just a second. I've got a mental block

14 on it. With the Original Inquiry and the cleaning away

15 of the concrete, it was done by ...?

MR PENNICOTT: You mean the method? 16

CHAIRMAN: Yes, the methodology. 17

MR PENNICOTT: They used high-pressure water jets and stuff 18

19 like that, they used.

20 CHAIRMAN: Who did that? That wasn't Fang Sheung that did

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22 MR PENNICOTT: No. I think it was Leighton directly

23 employed labour, from recollection. I may be wrong

24 about that. Someone will correct me if I'm wrong about

that.

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But what has really brought this to my attention is 1

> 2 a closer reading of Mr Karl Speed's witness statement,

3 where he describes the process by which the NAT stitch

4 joints were constructed, and he refers to what he

5 describes as the scabbling of the concrete.

I'm not entirely sure what that means and I'm not

7 sure whether it's equivalent to chipping away the

8 concrete to expose the couplers or whether that is

9 something different.

10 COMMISSIONER HANSFORD: I think you'll find it's the same

11 MR PENNICOTT: If it's the same, then Mr Speed says it was

12 done by another sub-contractor called Hills, who we know

13 were the concreting sub-contractor for NAT.

14 COMMISSIONER HANSFORD: Yes.

15 MR PENNICOTT: So if it's the case that this was not done by

16 Leighton direct employees but was done by employees of

17 Hills, the concrete sub-contractor, then I am concerned,

18 and I've already notified those instructing me, that it

19 is possible that we may have to locate somebody, or some

people, from Hills to come to give evidence to the

21 Commission.

22 That is very much work in progress at the moment.

23 Whether Leightons are able to shed any further light on

24 the topic, I don't know, but it could be quite helpful

if they could, and certainly to clarify what it is

couplers, as the Commission is already aware, are not tapered and require parallel threaded rebar to form a connection. Leighton accepts that its records show that BOSA parallel threaded rebar was ordered for the original NAT stitch joints and the original shunt neck joint. That's a reference to Mr Speed's witness statement there.

As I've just indicated, it would seem to follow that on the GKJV side of the stitch joint or the construction joint, the rebar was never going to be connected, properly or at all. But, as I've said, incompatibility cannot be a reason, of itself, why proper connections could not be formed on Leighton's side of the stitch joints or the internal stitch joint, where BOSA couplers were used and parallel threaded rebar was ordered.

Sir, the second reason that is put forward in the Wing & Kwong statements as to why there was no or no proper connection, at the top of page 22 of the opening, was a failure to chip away and properly expose the cast-in couplers. What we have said here is that it is not entirely clear to us precisely what process Leighton used to expose the couplers, and why, according to Wing & Kwong, there was a failure to properly or fully expose them. Again, it would seem to follow that if the cast-in couplers, either Lenton or BOSA, were not

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Page 51 Page 49 should be, minutes of the 8th meeting -- you will see 1 precisely that Mr Speed says in his witness statement, 1 2 whether the scabbling is indeed equivalent to the 2 that in the top right-hand corner -- dated 5 December 3 3 2014. Sir, the people present, from whom we hope to be chipping away of the concrete to expose the couplers. 4 4 I mention that in passing and to set that particular hearing from in the evidence that's coming up, is 5 5 hare running. Mr Chris Chan, you will see there, from MTR; Mr Johnny 6 Sir, the third reason that Wing & Kwong put forward 6 Leung, the site agent from Leighton, and I'll pick up 7 7 is that there may have been damaged couplers. a few more names in a moment. 8 8 Presumably, this must also be related, we say, to the Sir, the relevant note is at paragraph 8.4.2 on the 9 9 process used to expose the couplers, unless they were next page, 757, where it says: 10 already damaged in situ. How, why, by whom, to what 10 "GKJV tabled three proposed material submissions 11 11 which would be used in the structure at the interfaced extent the damage was caused and the nature of the 12 12 location for 1112 reference during meeting no. 7." damage is certainly unclear to us at the moment. Then it's the second bullet point that's relevant: 13 13 Fourthly, it is suggested that GKJV did not install 14 14 the couplers at the locations where the couplers should "Mechanical splicing system of rebar", and 15 have been installed, and again we say, with respect, the 15 a reference is given, "resubmission." 16 details in relation to this explanation are currently 16 Then, in relation to all of those items, it's noted: 17 singularly lacking. We simply do not understand. 17 "LCAL [Leighton] stated that they have no comment on 18 18 As I said earlier, in relation to those four reasons those submissions and will check with their supplier 19 that I've just tried to summarise, leaving aside the 19 regarding compatibility in later stage. 20 20 Cover page of those submissions are enclosed for point about the mismatch and the incompatibility on the 21 GKJV side, our perception of, as I say, the importance, 21 reference." 22 22 the prevalence, the predominance of these reasons, at Then, if one goes to page CC763, just a few pages 23 the moment we simply don't have any feel for it at all. 23 on, you will see the heading, "Contractor's materials 24 24 Sir, we will see during the course of the evidence related submission form" towards the top, under the 1111 25 that the backdrop to the incompatibility reason that 25 contract, and Gammon appear to be sending the -- GKJV Page 50 Page 52 1 I've just tried to describe is a series of meetings 1 seem to be sending this to the MTR, that is to Mr Fu, 2 called interface meetings which were attended by 2 but obviously it's attached to the minutes of the 3 representatives of MTRC, Leighton and GKJV. As their 3 meeting that we've just looked at. 4 4 name suggests, "interface meetings", the purpose of Then you will see, "Required information", 5 5 "Supplier's name: Erico Ltd", then, more importantly, those meetings appears to have been to address issues at "Name of product or service: Lenton type A2 standard 6 6 the interface between the two contracts, and in 7 particular one sees reference to the fact that GKJV were 7 coupler for non-ductility coupler requirement", and so 8 8 forth, then references are given to the M&W using Lenton couplers on their side of the stitch 9 9 Specification, and so forth. 10 10 Could I just show you a sample of those meeting So that's that meeting at that stage. 11 minutes. We will look at them with a number of 11 Then if we go to the next meeting, meeting no. 9 12 witnesses in due course. But can we look, first of 12 which is at 772 -- so this is now 9 January 2015. We 13 all -- sorry, I should say that they are -- let me just 13 will be hearing from, looking at the list of people 14 14 present, Mr Chan, Chris Chan, again. Also Kappa Kang remind myself. The first meeting we have is actually 15 meeting no. 2, which was on 7 February 2014, and we have 15 was there, as was Jacky Lee, and I think all those three 16 the minutes of meetings. If you put the ones disclosed 16 people are MTR witnesses in the Inquiry. Also, you will 17 17 to us by Leighton and the MTR together, we have the see the names -- the first two names under Leighton, 18 18 Jim Wong and Regina Wong, and we have received recently, minutes up to the 22nd meeting on 6 January 2017. So 19 they stretch from 7 February 2014 to 6 January 2017. 19 at our request, witness statements from Mr Wong and 20 We have asked Leighton and MTR to confirm whether 20 Ms Wong respectively, as you can see there. 21 21 there were any further meetings after 6 January 2017, If you go over to page 774, at paragraph 9.4.1, you 22 but I don't think we've yet had a response to that, but 22 will see the previous minutes essentially repeated, and 23 23 I think, to be fair, we only asked the question indeed, in particular: 24 24 yesterday. "[Leighton] will check with their supplier regarding 25 25 compatibility in later stage." So could we go, please, to CC2/756. This is, or

Page 55 Page 53 Could I just lastly, on this topic, take you to the 1 Wong were there on behalf of Leighton and presumably 1 2 minutes of the 19th meeting, which happened sometime 2 they will be able to assist. 3 3 It does, without putting the matter too highly, later. That's CC2/847. 4 4 appear to follow -- and this to some extent seems to be So we are now at 6 January 2016, and again you will 5 5 accepted by Mr Speed from Leighton -- that there must see Mr Chan and Ms Kappa Kang were at the meeting, 6 together with Mr Wong and Ms Wong. In fact, this time, 6 have been a breakdown in communication somewhere along 7 7 albeit it all seems to have been done in tracked the line, if all that Leighton ordered was parallel 8 8 threaded rebar and no tapered threaded rebar, because if changes, the minutes have been altered, and I can tell you from minute no. 9, up to this, they have just 9 9 the compatibility had been checked, one would have 10 10 repeated them as we've seen them. But at paragraph -assumed that the conclusion reached was that they needed 11 11 go to page 849 and we will see if we can work out what some tapered threaded rebar. 12 12 CHAIRMAN: Is there any evidence, or will there be any paragraph number it is -- 19.3.3, I think, if one 13 13 evidence, as to how easy it would be to convert ignores the tracked changes -- it now says: 14 14 a tapered into an ordinary threaded rebar, if I can use "The following material submissions ... would be 15 used ..." 15 that term, and vice versa? MR PENNICOTT: I don't think there's any evidence or will be 16 Then: 16 17 17 "Mechanical splicing system of rebar [reference any evidence --18 CHAIRMAN: You would have to chop it off, wouldn't you, 18 given] -- T40 coupler is BOSA; others are Lenton --19 approved." 19 presumably, the threads? 20 20 MR PENNICOTT: I think you'd have to start again, I would Again: 21 21 "LCAL will check with their supplier regarding have thought. 22 22 CHAIRMAN: And you couldn't have some lapping, for example compatibility in later stage." 23 That minute was again repeated in the two or three 23 being --24 MR PENNICOTT: No. 24 subsequent meetings that took place. 25 So, sir, it seems to us, although obviously one will 25 CHAIRMAN: So you would need new bars. Page 54 Page 56 need to listen carefully to the evidence of the 1 MR PENNICOTT: Again, sir, how it precisely works, I'm 1 2 2 witnesses who were present at these meetings, that looking forward to hearing the Wing & Kwong evidence. 3 3 Leighton personnel were aware that the GKJV were using The MTR, in their opening statement, suggesting that 4 4 Lenton couplers; and, secondly, on the face of it, its what happened was you've got Lenton couplers on the one 5 representatives at the meeting at least appreciated that 5 side, you've got the BOSA couplers on the other side. 6 there was a compatibility issue which needed to be 6 What should have happened is there should have been 7 7 checked. starter bars going into each side, obviously with 8 COMMISSIONER HANSFORD: But this last minute that you've 8 a tapered thread going one way and a parallel thread 9 just shown us -- sorry, it's just left the screen; that 9 going the other, and then presumably lapped. 10 one -- tells us the T40s would be BOSA. 10 CHAIRMAN: The lapping in the middle. 11 MR PENNICOTT: Yes. MR PENNICOTT: With lapping in the middle. I think that's 11 COMMISSIONER HANSFORD: So we are hearing that most of them 12 12. what's suggested. I have no reason to suppose that's 13 are Lenton but some are BOSA? 13 wrong but --14 MR PENNICOTT: Yes. 14 COMMISSIONER HANSFORD: My only query is on this T40 poin 15 COMMISSIONER HANSFORD: Is that what we're being told? 15 that we've just seen, because I haven't yet understood 16 MR PENNICOTT: I'm not sure, sir, and I don't want to --16 what diameters of rebar we're looking at within the 17 I've taken you to that because I recognise that it's 17 stitch joints, and that's one of the areas we need to 18 different from all the minutes up until that point in 18 examine. 19 time. So we are going to need somebody to explain what 19 MR PENNICOTT: It is an area we need to examine, sir, and 20 20 that actually means, it seems to me. I'm a little unsure, but my understanding is we are 21 COMMISSIONER HANSFORD: We are. Okay. 21 talking about 40 millimetres with regard to the BOSA 22 22. MR PENNICOTT: But I have taken you to it because it couplers. 23 23 changed -- it seems to be a material change, from the COMMISSIONER HANSFORD: Correct. 24 24 previous minutes. MR PENNICOTT: And I think the Lenton threaded couplers are 25 But again, as we've seen, both Jim Wong and Regina 25 32 millimetres. That's my understanding.

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COMMISSIONER HANSFORD: Right. 1

2 MR PENNICOTT: So not only would they need to be tapered 3 threaded, they would also need to be 32 millimetres and

4 not 40, if that's right.

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Sir, the thrust of the witness statements and other documents from Wing & Kwong appear to suggest that whatever the nature of the problem that was encountered with the cast-in couplers, Wing & Kwong were simply instructed by Leighton to get on with it, to put it colloquially, by reason, they say, of time pressures on the project.

As you may have seen, some colourful language is used in the Wing & Kwong statements.

So far as Leighton is concerned, they don't appear to agree with Wing & Kwong's evidence. Recent evidence from the project director, Mr Kitching, appears to dispute Wing & Kwong's evidence. But the real key witness on this point, so far as Leighton is concerned, appears to be Mr Henry Lai, who also does not agree with the Wing & Kwong evidence, and we've got three statements from Mr Lai now, the last of which deals with the Wing & Kwong evidence. So we will need to hear from not only the Wing & Kwong witnesses, obviously, but Mr Lai and other relevant Leighton witnesses.

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1 there were not proper connections or things like that. 2 MR PENNICOTT: Indeed, sir. Again I may be able to sort of 3 expand on that point in a moment, but yes, that's 4 entirely right. 5

Sir, we have a subheading at page 23 of the opening

address which says, "Whether steps for rectification have been taken for such defects/non-compliances?" Of course the answer to that is yes, they have. The stitch joints in the NAT were completed on around about 18 July 2018, and we say there is extensive documentation disclosed in relation to the rectification works, some of which we have referenced already. There is, in particular, a series of RISC forms referable to those rectification works, and I've identified the references in the disclosed documents of MTR and Leighton. If you want to get them all, you need to put them together, I've discovered.

And, as we've mentioned earlier, the shunt neck joint has not yet been remedied.

Can I just pick up the footnote. I have looked at the RISC forms that have been disclosed by MTR and Leighton in respect of the rectified, the new, stitch joints, and I've tried to make some sense of them, but I am still unable to locate a full set, in the sense that, for example -- and I've put an example at the

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that is the lack of any or any proper connections, is 2 the competence and diligence of both MTR's and 3 Leighton's inspectors and engineers, both in respect of 4 routine inspections and formal or hold-point

Sir, of course, the other aspect to all of this,

5 inspections. We say that if there was a complete

mismatch, if there was a failure to expose the embedded

couplers, if the couplers were either damaged or in the wrong place such that the rebar was not screwed into the

couplers properly or at all, how was all this missed by

10 the inspectors and the engineers? It is Wing & Kwong's

11 evidence that any lack of connection would have been 12

obvious on a visual inspection.

13 CHAIRMAN: As I understand it, using layman's terms, the 14 stitch joints were put together after work was done on

15 either side. So you had the work on either side and

16 then where the two meet is where you have the stitch

17 joints, and you leave that for a time.

18 MR PENNICOTT: Yes.

19 CHAIRMAN: The point I'm making, or coming to, is that it is not as if the stitch joints are huge or are connected

20 21 with everything else. So, when the inspection comes

22 along, you are looking at a relatively confined area.

23 MR PENNICOTT: You are, yes, sir, 3 to 4 metres wide,

24 something of that order.

CHAIRMAN: Yes, so it would be odd not to be able to see if

bottom here -- we can't yet locate a RISC form in respect of the inspection of the rebar to the top or the roof of the 1111/1112 NSL stitch joint. Now, I'm not saying that it doesn't exist, but we've not yet found that one. No doubt, if it's there, somebody will tell us where it is.

Sir, so far as issue 3 is concerned, as you know, it breaks down into lack of inspection and supervisory records, including RISC forms, and in particular the lack of RISC forms so far as the original stitch joints are concerned; unauthorised design changes; incomplete testing records of material.

Sir, in terms of lack of inspection and supervisory records, including the RISC forms, it appears that pursuant to the ITP -- I think we had a reference to that in the Original Inquiry -- submitted by Leighton to MTR, for each pour of concrete for the construction works at the NAT, SAT and HHS areas, there were, for present purposes and in general terms, two relevant hold points. That is, after the fixing of the rebar, and after the erection of formwork and falsework, but before the concrete was poured, known as the pre-pour inspection. So after rebar and pre-pour inspection.

As we understand it, each hold point would require a formal inspection by MTR and Leighton, and would or

	Page 61		Page 63
1	ought to have generated a RISC form.	1	yes, we all accept that that's what should have been
2	One problem that we've had and I touched on this	2	done for the original, and therefore there should have
3	earlier; just to add a little bit to it now is that	3	been four RISC forms, six RISC forms, whatever the
4	we remain unclear how the general requirement that I've	4	calculation may be, in relation to the original
5	mentioned here, that's after fixing of rebar and then	5	construction.
6	the pre-pour inspection, actually applies or is	6	Sir, we respectfully submit that all of this needs
7	transposed to the construction of the stitch joint;	7	to be explained.
8	therefore, as to precisely how many hold points and	8	Sir, so far as the RISC forms are concerned, could
9	therefore RISC forms there were, or ought to have been,	9	I ask you, please, to look at paragraph 85 of the
10	when the original stitch joints were constructed.	10	opening address. As we mentioned earlier, I think
11	COMMISSIONER HANSFORD: Why do you say "when the original	11	yes, in paragraph 82 the MTR gave a briefing to the
12	were constructed"? Why would it be different when they	12	government on 30 January at which they indicated the
13	were reconstructed?	13	number of rebar RISC forms that existed, and then
14	MR PENNICOTT: That is the point we make next. That is, the	14	expressed as a percentage, essentially, the missing RISC
15	number of RISC forms generated when the remedial works	15	forms.
16	to the stitch joints were done may shed some light on	16	Sir, the figures that I've got at paragraph 85, (i),
17	how many there ought to have been when the original	17	(ii) and (iii), reflect what government was told on
18	works were done.	18	30 January. I have discovered over the weekend that in
19	But, sir, just to flesh that out a bit, I'm sure	19	fact those numbers and percentages have been updated.
20	that you can visualise the construction of these stitch	20	At a recent briefing of government by MTR on 16 May, so
21	joints. They have a base, they have two walls, they	21	just a couple of weeks ago, and the results of that
22	have a roof, although the EWL one doesn't. And so you	22	briefing or the slides of that briefing, rather, are at
23	ask yourself: let's just take the base slab of the	23	DD9/12034, but there's no need to get it up on the
24	stitch joint. As we understand it, it has bottom rebar	24	screen. I think, without going into the detail, the
25	and it has top rebar, as is explained in some of the	25	figures have moved but only very slightly. There's not
	Page 62		Page 64
1	Page 62 witness statements. Is that one hold point? Is it two	1	Page 64 a significant movement in those figures.
1 2	witness statements. Is that one hold point? Is it two hold points? Does it generate one RISC form or two RISC	1 2	a significant movement in those figures. COMMISSIONER HANSFORD: Presumably because more forms have
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- this earlier, Pypun have been doing a not dissimilar
- 2 exercise on behalf of the government, and they
- 3 submitted, as I mentioned earlier, their report on
- 4 Friday, which has gone into bundle GG3, an extensive
- 5 report, although there is not a huge amount of
 - narrative, there's a lot of supporting material, and it
- 7 looks to me, on a quick read -- although, as I've put in
- 8 the footnote, we've not had an opportunity to fully
- 9 analyse the report, it only having been served on
- 10 Friday -- it looks to me as though the percentages Pypun

11 have come up with are pretty similar to those that were

12 put forward by the MTR to the government in the recent

presentation. So there seems to be some correlation

between the Pypun investigation and the MTR's own

figures.

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Sir, Leighton's evidence in relation to the missing RISC forms, as I've just hinted at, is that the relevant site staff did carry out the necessary hold-point inspections, but it appears were too busy, too stretched, and therefore did not submit all the RISC forms that should have been submitted. So I infer that what is being said is that the non-submission of the

23 RISC forms is a matter of form rather than substance.

24 And there is, it seems to us, to some extent at least,

a similar approach by the MTR. Although it was

1 couplers were in fact used in the HHS -- a point that

- 2 I think the Chairman touched upon earlier -- because
 - they were introduced for construction convenience, to
- 4 allow easier vehicular access and the like. Our
- 5 understanding is that this change from lapped bars to
- 6 couplers was not advised to the government at the time
- 7 the change was made. It's not clear to us precisely
- 8
- 9 the government's position is, now it knows that the

couplers were used in the HHS.

It might say, I suppose -- obviously it's a matter for the government ultimately -- that if these couplers were non-ductile, which I suspect they were, then the government might say, "Had we known that these couplers were going to be used in the first place, whilst we may not have required a QSP, we might have required what is known as the sort of lower requirements", and we will come to those in a moment, "as were required on the NAT", but obviously that's a matter for the government to advise us in due course.

when that change was made, and it's not clear to us what

Sir, so far as the NAT is concerned -- and I'm going to go away from what we've written there to say this -the approved or accepted drawings, so far as the NAT is concerned, did not specify any ductility requirement for couplers. That appears to be common ground. Although

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dissatisfied with Leighton's late or non-submission of

the RISC forms, nonetheless it is viewed more as

a matter of form rather than substance. Of course, one

would need to investigate that to see whether it is

5 sustainable.

> Sir, could I then turn to a separate topic, which I touched on earlier, which is this. It seems to us, the Commission's legal team, that there is potentially an issue of compliance with the procedure of the QSP, the quality supervision plan, in relation to the three new areas with which we are concerned.

Sir, the government, MTR and Leighton were asked to deal with the applicability or otherwise of the QSP to the NAT, SAT and HHS in their written opening addresses. Each has duly done so, although the MTR says that it's in the process of clarifying the position.

Sir, taking each area briefly in turn, it appears to be common ground that the relevant acceptance letters from the government in respect of the HHS did not contain any specific requirements in relation to couplers, largely, or perhaps exclusively, because the original approved drawings in relation to the HHS did not show any couplers, and consequently there was no requirement for a QSP. However, we now know that a significant quantity of Page 68

we note that there is a drawing, 07A, at BB1/460 -there's no need to get it up on the screen -- but

3 there's a note, R12, which requires the couplers in the

4 NAT, it appears, to be tested to type 2 under AC133, and

5 we know that type 2 are in fact ductility couplers, if

they are BOSA couplers, which they were.

So, with that slight caveat, it appears to us it's right to say that there was no ductility requirement for

the couplers in the NAT.

However, the acceptance letter -- and could we please get the acceptance letter up. It's at DD7/10327. If we could go to appendix V -- that's it, thanks -this is appendix V to the government's acceptance letter in relation to NAT, and you will see there's a heading, "Mechanical couplers for steel reinforcing bars without ductility requirement", and I think it's common ground that under this appendix or under this requirement, there was no necessity for a quality supervision plan, no QSP.

But if one reads through this, if you can scroll down, please, one sees at letter (c), the registered -that's Leighton, "should assign a quality control coordinator to provide full-time on-site supervision of the works and devise inspection checklists." The minimum qualifications are given, so it's grade T1, and

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more importantly at (d):

"The names and qualifications of the supervisory personnel representing the competent person and [Leighton] respectively should be recorded in an inspection log book. The date, time, items inspected and inspection results should be clearly recorded in the log book. The log book should be kept at the site office and, when required, produced to the Director of Highways for inspection."

So whilst there is no necessity in this appendix for a QSP, nonetheless there are specific requirements to be complied with, namely the keeping of the log book and all this information that's required there to be recorded in it, and we have seen no sign of any of that produced to date.

The way I look at it is that, as we saw in the Original Inquiry, one gets, if you like, the enhanced supervision required by a QSP, if it's required in relation to ductile couplers, and you get something slightly different and, if you like, a lower requirement -- I'll call it the lower requirement -- but still, nonetheless, one can see what is expected of MTRC and Leighton from this appendix.

Just one final point on the NAT, on this point about the QSP. You will recall, and I mentioned this earlier, Page 71

is that the drawings don't show any ductility zones and therefore a requirement to use ductility couplers, even though ductility couplers were in fact used; and therefore, they say, QSP not required.

The government don't agree with that and say -indeed, the government say the accepted drawings show that ductility couplers were used in the diaphragm walls and slabs. You will appreciate my reference to diaphragm walls is that the SAT contains a number of diaphragm walls, built by Intrafor, and the government says that those were ductility couplers. Or -- and this is a point we may have to discuss further -- we know that the QSP was submitted in relation to the station, the platform slabs that we looked at last time and to which the interim report makes a number of references. It seems to me that that very same QSP is likely to be applicable to these diaphragm walls in the SAT, because if it was applicable to the diaphragm walls, it was applicable to the diaphragm walls on all of them, not just those that happened to be in the station extension. But, sir, we may be able to flesh that out in more detail as we go along.

Very quickly, we deal with the unauthorised design changes at paragraph 91, touched on already, that is the change from lapped bars to couplers in certain

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that on 26 March 2018, MTR did in fact submit to government what it described as an updated QSP for the couplers in the NAT, both for the Lenton and BOSA couplers, when they came to do the remedial works.

So there was, it appears, a QSP in place, and the references we've given, when those remedial works were carried out. Now, quite how that came about, I'm not entirely sure, but just reading the material that I've had access to, it appears that when this problem arose on the stitch joints and they had to be rebuilt and reconstructed, obviously Leighton and MTRC had to make a proposal to government, which government had to be satisfied with, and I suspect, but I don't know, that as part of that proposal, it was thought it might be a good idea to say to government, "And, by the way, we will have a QSP in place in relation to these remedial works."

I don't know whether that's the case but I'm just surmising from various things that I've looked at, but in any event, for the remedial works, it appears that a QSP was or should have been in place.

So far as the SAT is concerned, what Leightons say is that the QSP did not apply to SAT and, as I understand it, they use a similar argument to one they used before the Commission in the Original Inquiry: that

construction joints; the use of standard drill-in bars to replace damaged or misaligned couplers at the diaphragm walls of the NSL at the SAT area; and no coupler was used for certain stand-alone rooms at the HHS area.

The extent of all of this still seems to be somewhat unclear, and we'll need to investigate it further throughout the course of the evidence. But I do note the point that this unauthorised design change issue is supposed to be part and parcel of the verification proposal or verification report to be submitted to the Commission in due course.

Sir, at paragraph 93, I just summarise a point we have touched on already, that is the reasons for those changes, as put forward by MTR and Leighton.

Sir, so far as incomplete testing records of material is concerned, this is a bit of a moving target, and I confess I am not entirely sure where we had reached. So far as the government is concerned -- let's start with them; that's at paragraph 97 -- the Commission invited the government to indicate to us which material reports and test reports it had not seen and had not received, and what it had unearthed in this context. The answer that we got was that it had received all the necessary test reports and materials

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originally used at the stitch joints and the shunt neck, but it had not seen the test reports and so forth for the remedial works. So we thought, okay, that's a fairly self-contained body of reports, that is those in respect of the remedial works.

We have asked MTR and Leighton to provide details of those works, and Leighton have kindly done so. At bundle CC10/6495 -- perhaps we can just have a quick look at that. That's it, thank you. Can you just scroll up slightly? That's fine.

So what Leighton have told us recently, on Friday, is that:

"We are instructed that all test reports for materials (rebars, couplers and concrete) used in the remedial works at the three NAT stitch joints have been disclosed to the Commission."

Then they give us the bundle references: rebar test results, coupler test results, RISC forms for coupler and rebar tests and the concrete test results. I should say that both I and those instructing me have checked those references, and they seem to be correct to us. I don't know whether government have yet had an opportunity to check them, but if that is the material which has not been submitted to government, even though it has been submitted to the Commission, no Page 75

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Sir, that really concludes what I wanted to say, subject to this point, that both MTR and Leighton, albeit to a more limited extent, have, during the course of their opening submissions or opening statements, made reference to the reservation of a right to call expert evidence in relation to certain issues. As I understand it, so far as the MTRC are concerned, that reservation of right relates to the cause of the water seepage and questions of structural integrity of the stitch joints, that's paragraph 39 of the opening; the structural integrity of the shunt neck construction joint, that's paragraph 43; and then paragraph 48 of the opening reiterates both of those points. So that's water seepage, structural integrity of the stitch joints and the shunt neck. That's one topic.

Secondly, project management issues, arising out of the evidence we are going to hear; that's at paragraph 58 of the opening. Also the applicability and scope of the Code of Practice for Structural Use of Concrete, 2004, second edition, in the context of the change of lapped rebar to couplers in the NAT, SAT and HHS.

So there are really three topics upon which the MTR have reserved its position to call expert evidence, if presumably it's deemed appropriate, and presumably if

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1 the Commission allows it. 2 Sir, Leighton -- I have dealt with this specifically

at paragraph 96 of the opening -- has indicated that it intends to adduce expert evidence to demonstrate that the extent of the tests performed by the manufacturers and the HOKLAS certified laboratory in the present case is nevertheless sufficient and there is no safety concern regarding the rebar used at the NAT, SAT and HHS

Sir, I just mention that, that at least two of the parties have obviously turned their minds to the possibility that expert evidence may be required in relation to certain issues, and obviously, if that is right, then we need to make sure we explore the factual aspects of those issues to ensure that that expert evidence is properly formulated.

Sir, the last two pages of our opening are largely matters of formality, trying to identify the key questions involved, paragraph 98, and then obviously making the point, as everybody is well aware of, that we are about to embark on hearing the evidence, the factual evidence anyway, in relation to the extended aspects of the Inquiry, and that all expert evidence will be left over till a later date. Sir. it's three or four minutes to 1.00. That's all

doubt government will tell us whether they are satisfied that those are, first of all, what's been missing, and secondly whether they are content with those records.

So that's the government.

So far as Leighton are concerned, according to Leighton, and in particular Mr Speed, he says that approximately 7 per cent of the rebar delivered to the site -- and I think he means everything, not just the NAT, SAT and the HHS but everything, I think -- about 7 per cent were not tested by the HOKLAS certified laboratory system, as is required under the contract. Yes, there are mill certificates and testing certificates from manufacturers, but the on-site testing effectively wasn't done for 7 per cent of the rebar delivered to the site.

However, according to Mr Lai, Henry Lai, in relation to the rebar that he ordered specifically for the NAT -so we're not talking about everything now, we are just talking about the NAT -- 56 batches of rebar out of a total of 159 batches were not HOKLAS tested. Sir. I say it is not clear to us how Mr Speed has arrived at his percentage yet, nor are Mr Lai's numbers clear, as to how he has calculated them, and/or whether there is any correlation between the 56 batches and the 7 per cent.

	Page 77		Page 79
1	I have to say, and I will pass over to others.	1	the NAT at the three stitch joints and the shunt neck
2	Sir, the order for the following openings I think	2	joint, I will take the Commission, as I say, through
3	will have to be this: that we will ask Mr Tsoi to go	3	three main topics.
4	next for Wing & Kwong, because he is unable to be here	4	The first is this, and it relates to the relative
5	tomorrow. It was then going to be Leighton, but	5	roles and positions of the parties, and this is MTRCL,
6	I understand from Mr Khaw that he will not be here	6	Leighton and Wing & Kwong.
7	tomorrow, so it might be safer to take the government	7	For this purpose, I will refer the Commission to the
8	before Leighton, and so have Mr Tsoi and then Mr Khaw,	8	sub-contract between Leighton and Wing & Kwong.
9	and if there's time, obviously we can have Mr Shieh for	9	Topic 2 is the defects, and two types of defects in
10	Leighton later this afternoon. If there's not, then	10	particular. The first is where Leighton instructed Wing
11	obviously we can spill over to tomorrow morning.	11	& Kwong to try to squeeze or fit a square peg into
12	Sir, unless there's anything I can assist you with	12	a round hole, and by that of course I mean trying to
13	further at this stage, that's all I wish to say.	13	screw in a parallel threaded rebar into a tapered
14	CHAIRMAN: Thank you. If we adjourn now for lunch.	14	threaded coupler, which we know is not possible.
15	MR PENNICOTT: Yes, sir.	15	The second defect which I will take the Commission
16	CHAIRMAN: Was there a mention made of finishing a little	16	to is perhaps even worse because this time not even the
17	early this afternoon?	17	holes are provided by Leighton for the pegs, and by that
18	MR PENNICOTT: Yes. That's been raised with everybody,	18	I mean the couplers were still in fact embedded in the
19	apart from I didn't mention it to Mr Clayton. I have	19	concrete and it's not exposed for the rebars to be
20	managed to see everybody else. I understand	20	connected to the coupler.
21	CHAIRMAN: No complaints or	21	But what is important for present purposes is that
22	MR PENNICOTT: No, sir. If we can finish between 4.30 and	22	these defects would have been visually obvious, and
23	4.45, I think everybody is content. I apologise to	23	I will take you to the evidence of that.
24	Mr Clayton.	24	But perhaps most importantly, given that the defects
25	MR CLAYTON: I am content with that as well.	25	were visually obvious, what happened to inspection?
	Page 78		D 00
			Page 80
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1 2	CHAIRMAN: Thank you. So what we will do is return at 2.15 this afternoon, so we will start a quarter of an hour	1 2	That is my last topic. These so-called hold-point inspections where there were two checks, apparently, one
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	Page 81		Page 83
1	"The Sub-Contractor shall not directly communicate	1	"[Rebars] will be provided by the Contractor free of
2	with the Employer, the Employer's Representative, the	2	charge"
3	Engineer or Architect without the prior written consent	3	Of course.
4	of the Contractor."	4	Point 2:
5	The "Employer" is of course MTRCL, and that's	5	"Couplers will be provided by the Contractor free of
6	defined in the first schedule, at page EE134; I won't	6	charge"
7	ask you to pull that up. But effectively the	7	So we see here that the rebars and the couplers were
8	sub-contractor, Wing & Kwong, cannot talk to MTRCL	8	to be provided by Leighton.
9	without the consent of Leighton.	9	Two points on:
10	The next clause I would like to take you to is at	10	"Testing of materials by the Contractor includes
11	page EE110, which is clause 10.3. It reads:	11	[rebars] and couplers only."
12	"It is expressly agreed that the Contractor shall	12	That's obvious.
13	have the right to omit work from the Sub-Contract Works	13	A few points on, and this is important:
14	and carry out such work itself or employ other	14	"The Sub-Contractor shall complete reinforcement
15	contractors to carry out such omitted work. The	15	fixing works using an approved method and follow the
16	Sub-Contractor shall not be entitled to make any claim	16	instructions of the Contractors site team in respect of
17	for any losses or expenses incurred or loss of	17	speed, extent, timing, sequencing and staging."
18	profit"	18	In due course, we will submit that this is the
19	So what is important to note here is that	19	clause that obligates Wing & Kwong to comply with the
20	effectively Leighton can tell Wing & Kwong not to work,	20	instructions of Leighton.
21	omit part of the work from the contract, and Wing	21	Part 3, "Fixing". Point 2 thereunder, "Receive [the
22	& Kwong would have no recourse, they could be replaced	22	rebars] from supplier", that's been repeated.
23 24	for any part of the sub-contract work at any time and Wing & Kwong would have no recourse to be compensated	23 24	And 4, "Conditions", the third point there: "The Sub-Contractor must coordinate with the
25	for the loss of the profit.	25	Contractor for the deliveries of [the rebars] and
		23	
	Page 82	1	Page 84
1	Indeed, if you read on the clause, it says:	1	provide reasonable time to the Contractor for additional
2	"Omitted works shall be valued in accordance with	2	orders of [rebars] (if required)."
3	Clause 11 and the Sub-Contract Price shall be reduced	3 4	So this implicitly tells us that if you order the rebars, it takes time because the rebars need to be
4 5	accordingly." So not only can Wing & Kwong be replaced but for	5	threaded.
6	parts of the works that had been omitted, the contract	6	If we move on to the fourth schedule of the
7	price that Wing & Kwong agreed would be reduced	7	contract, which starts at page EE141, and in particular
8	accordingly.	8	item 12(g) at page EE145 again, the obligation to
9	Then we come to the all-important scope of the	9	provide and the cost is provided for the supply of the
10	sub-contract works. This can be found at page EE139, if		couplers and rebars, and that is the obligation of the
11	I can ask you to pull that up. So that's part of the	11	contractor, Leighton.
12	scope of sub-contract works, and I will take you to the	12	So, to summarise the position in relation to the
13	first two points. One of the sub-contract works is	13	sub-contract, Wing & Kwong has to follow the
14	this:	14	instructions of Leighton. Materials, including the
15	"[To] Receive [rebars] and couplers from suppliers,	15	rebars, the couplers, are to be provided by Leighton and
16	store on site within designed area, and arrange samples	16	Wing & Kwong has to work with whatever they are
17	for testing.	17	provided. Wing & Kwong has no right to choose.
18	(ii) Cut, bend and fix in position [the rebars] in	18	Leighton has a right to omit the works from the
19	accordance with the [specifications] and the working	19	sub-contract, and the sub-contractor will have no
20	drawings."	20	recourse for any omitted works.
21	So that's parts of the scope of the sub-contract	21	So in terms of the rights and the hierarchy, one can
22	works.	22	obviously see that Leighton is way above Wing & Kwong.
23	If we then turn on to page EE140, this is "General	23	So if we bear in mind now that the materials are to
	If we then turn on to page EE140, this is "General notes" and it's quite important to look at this. The first point is this:	23 24 25	So if we bear in mind now that the materials are to be provided by Leighton to Wing & Kwong let's look at the defects, and the first type is of course the square

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Page 87

Page 85 peg and round hole; the parallel threaded rebars, and trying to fit that into a tapered threaded coupler, which is impossible. This occurred, as we know, at the interface between contract 1111 and 1112. For the purposes of the interface -- and this is important -- it is not in dispute that Wing & Kwong, being the mere sub-contractor, did not attend any of these so-called interface meetings where apparently the Lenton couplers or their use on the 1111 side of the interface was using 10 the Lenton coupler.

> In fact, according to the evidence of Chris Chan, the construction engineer of MTR, at these interface meetings, we know that there are at least 22 of them, at least in 14 of them Lenton couplers or the use of them on the 1111 side of the interface was made clear.

So the square peg and round hole. As we know, it's caused by a mismatch of the materials. The 1111 Lenton couplers and the 1112 parallel threaded rebars. This should not have happened, because Leighton should have known what couplers were used on the 1111 side of the interface, and as the construction engineer of MTR, Chris Chan says -- and we can turn that up, at BB109, paragraph 11, and I will just read that out:

"In this statement, I wish to explain what rebars and couplers should have been used in the construction which has been provided by Leighton, which is at

2 page CC526, we can see that under the name of Joe Tam,

3 just slightly on the right, yes -- he is the project

4 manager of Leighton. The site agent is an individual 5 called Chan Hon Sun. Then we see Henry Lai's name.

Henry Lai is the engineer.

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Joe Tam knew that Lenton couplers were used. That is contained in his statement at page CC84, I won't ask you to turn that up, but apparently the matter was reported to him, though he did not know whether this information was passed on to other members of the construction team of Leighton. Then he says this:

"I did not receive the minutes of this meeting by email at the time, or find the finalised minutes in the ePMS system."

We are not sure what is on the ePMS system. Could there be drafts? We don't know. But he says it was reported to him anyway.

The individual who is right above Henry Lai, an individual called Chan Hon Sun, he knew about the Lenton couplers, because he attended two of the interface meetings. One is the 12th meeting, on 17 April 2015. You can find that at BB1710. I won't ask you to turn that up. He also attended the 22nd interface meeting, on 6 January 2017, and the minutes of

Page 86

Page 88

of the 3 stitch joints and the shunt neck joint under contract 1112. In this context, I point out that Leighton should procure rebars and couplers from the

manufacturers/suppliers of rebars/couplers based on the

specifications ... in the working drawings. These

specifications include: (1) the size of the rebars that should be used; and (2) the locations where rebars and

couplers should be installed. In addition, [for the]

NSL stitch joint, the ... EWL stitch joint and the ... shunt neck joint were located at the ... interface, the

materials that had to be used required coordination

between the contractor under contract 1111 (GKJV) and

the contractor under contract 1112 (Leighton). The materials that had to be used at the ... interface had

been discussed during a number of [the] interface meetings, which were regularly held and were attended by

representatives of Leighton, GKJV and MTRCL for the purpose of coordinating the works at [the interface]."

It's not in dispute in this case that Leighton did not get the correct rebars. That's not in dispute. And the person who was supposed to be ordering the rebars, extraordinarily, did not know, or he claims he did not know, that on the 1111 side of the interface, Lenton couplers were used. That person is Henry Lai. If we just look at the Leighton organisation chart

that one can be found at 1791. But the minutes of the 22nd interface meeting are not produced by Leighton, for some reason, but I don't think any issue turns on that.

If we turn to the left of the chart, of course we know Jim Wong of Leighton also knew that Lenton couplers would be used because he also attended numerous of these interface meetings.

So it is quite extraordinary that the two people, the two names above Henry Lai, knew about the Lenton couplers on the 1111 side of the interface, and Henry Lai, who was the person who was meant to be inspecting the connection of the rebars and the couplers, claims he did not know that Lenton couplers would be used.

But what is not in real dispute is this, that the parallel threaded rebar cannot fit into a tapered threaded coupler. As Chris Chan says in his statement at BB113 -- I won't ask you to turn that up:

"Given their specific shapes and threading requirements, a Lenton threaded rebar cannot be screwed into a BOSA coupler, and a BOSA threaded rebar cannot be screwed into a Lenton coupler."

But one doesn't really need an expert to tell you this, because if you just look at the picture of the type of the rebar and the coupler -- and that, perhaps we can just go to my written opening at page 3. You see

	Page 89		Page 91
1	at paragraph 9, we there sought to set out, on the left,	1	happened to inspection? As we know, after Wing & Kwong
2	the parallel threaded rebar and coupler, and on the	2	completes the rebar fixing works, it's not in dispute
3	right the tapered threaded rebar and coupler. Just	3	that these hold-point inspections would take place
4	looking at the shape, one knows this is a "square peg	4	jointly by MTRCL and Leighton. Apparently, there are
5	and round hole" situation.	5	two checks in these hold-point inspections. The first
6	What is worse, as the learned Commissioner has asked	6	is called a rebar fixing check and the other is called
7	counsel for the Commission, what were the sizes of the	7	a pre-pour check. As explained by Leighton's engineer
8	rebars and the couplers? The answer was they were	8	Sean Wong, although he worked at the SAT, the same
9	trying to fit a parallel threaded rebar, which is 40mm,	9	inspection applies. I am only quoting Sean Wong here
10	into a 32mm tapered threaded coupler. It simply doesn't	10	and not Henry Lai, because as you will see in Henry
11	work.	11	Lai's statement, he doesn't even mention the steps of
12	COMMISSIONER HANSFORD: Sorry, I don't think the answer was	12	inspection as detailed as Sean Wong.
13	that they were trying to put a 40 in.	13	But let's look at Sean Wong's statement, and we can
14	MR TSOI: Or was it the other way around?	14	find that at CC3803. In paragraph 15, he says this:
15	COMMISSIONER HANSFORD: No. I think what we heard was that	15	"The practical aspects of the formal rebar fixing
16	for 40, for T40, then it would be BOSA couplers.	16	inspection were [these]:
17	MR TSOI: Yes.	17	(a) There were in fact two formal joint inspections.
18	COMMISSIONER HANSFORD: But we are not	18	The first was undertaken after the rebar fixing
19	MR TSOI: Sure.	19	sub-contractor had installed the bottom layer of rebar
20	COMMISSIONER HANSFORD: I think that's a different point to	20	and, the second inspection was conducted after the
21	the one you just made, Mr Tsoi.	21	installation of the top layer of rebar;
22	MR TSOI: I understand, but I think in due course the	22	(b) Each of the two inspections of rebar fixing
23	Commission will hear evidence that in fact the diameter	23	comprised checking the arrangement of rebar, the spacing
24	of the rebars don't really fit too.	24	of the bars, lap length and the connections The
25	COMMISSIONER HANSFORD: Okay.	25	following steps would be taken:
	Page 90		Page 92
1	MR TSOI: But we will come to that perhaps in the evidence.	1	(i) physically measure the spacing and lap length of
2	COMMISSIONER HANSFORD: Thank you.	2	rebar samples
3	MR TSOI: The second type of defect is this, the fact that	3	(ii) with the reference to the measured samples,
4	the holes aren't even provided for the pegs, and that	4	conduct visual check across the area"
5	of course I mean the couplers were still embedded in the	5	And (c) is important:
6	concrete.	6	"As noted above, for the connections between rebar
7	This perhaps is even more obvious because the rebars	7	and couplers, I would check that the threads of the
8	simply are not connected to the coupler at all.	8	rebar were screwed into the couplers and not exposed (or
9	You will hear evidence from the foreman engaged by	9	that only a few threads were exposed at most)"
10	Wing & Kwong in due course, a man called Ng Man Chun, we		So if the works were properly inspected, at most
11	will call him "Ah Chun", who was the foreman in charge	11	only a few threads should be exposed.
12	of Wing & Kwong rebar fixers, but he says the cause was	12	In due course, you will hear evidence from Ah Chun,
13	because Leighton were rushing through the works and	13	Ng Man Chun, that in fact if you try to screw in
13			
14	therefore Leighton asked Wing & Kwong to do the rebar	14	a parallel threaded rebar into a Lenton coupler, the
14 15	fixing when they have not in fact itself completed the	15	opposite occurs, because only two or three threads would
14 15 16	fixing when they have not in fact itself completed the hacking off of the concrete. So in fact the couplers	15 16	opposite occurs, because only two or three threads would be able to be screwed into the coupler, and all the
14 15 16 17	fixing when they have not in fact itself completed the hacking off of the concrete. So in fact the couplers were not completely exposed to allow the rebars to be	15 16 17	opposite occurs, because only two or three threads would be able to be screwed into the coupler, and all the other threads would be exposed.
14 15 16 17 18	fixing when they have not in fact itself completed the hacking off of the concrete. So in fact the couplers were not completely exposed to allow the rebars to be connected to them.	15 16 17 18	opposite occurs, because only two or three threads would be able to be screwed into the coupler, and all the other threads would be exposed. But perhaps more importantly, as Sean Wong explains,
14 15 16 17 18 19	fixing when they have not in fact itself completed the hacking off of the concrete. So in fact the couplers were not completely exposed to allow the rebars to be connected to them. For present purposes, the point is clear though,	15 16 17 18 19	opposite occurs, because only two or three threads would be able to be screwed into the coupler, and all the other threads would be exposed. But perhaps more importantly, as Sean Wong explains, if we go now to CC3302, paragraph 14 he says this:
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14 15 16 17 18 19 20 21 22 23	fixing when they have not in fact itself completed the hacking off of the concrete. So in fact the couplers were not completely exposed to allow the rebars to be connected to them. For present purposes, the point is clear though, that again this was the type of defect which would have been visually obvious for anyone who properly inspected the works. Which now brings us to the final topic. Given the	15 16 17 18 19 20 21 22 23	opposite occurs, because only two or three threads would be able to be screwed into the coupler, and all the other threads would be exposed. But perhaps more importantly, as Sean Wong explains, if we go now to CC3302, paragraph 14 he says this: "The formalities associated with the formal joint inspections were [these]: (a) There were two key formal joint inspections of the reinforcement."
14 15 16 17 18 19 20 21 22	fixing when they have not in fact itself completed the hacking off of the concrete. So in fact the couplers were not completely exposed to allow the rebars to be connected to them. For present purposes, the point is clear though, that again this was the type of defect which would have been visually obvious for anyone who properly inspected the works.	15 16 17 18 19 20 21 22	opposite occurs, because only two or three threads would be able to be screwed into the coupler, and all the other threads would be exposed. But perhaps more importantly, as Sean Wong explains, if we go now to CC3302, paragraph 14 he says this: "The formalities associated with the formal joint inspections were [these]: (a) There were two key formal joint inspections of

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"(b) The sub-contractors knew that their work would need to be inspected or rectified (if there were any defects) before they could proceed to the next phase."

Now, all Leighton engineers say the same. So the Leighton senior engineer Jeff Lii for HHS says the same; he says that page CC3811. I won't ask you to turn it up but it's there. The Leighton senior engineer Alan Yeung says the same thing; that's at page CC3821. The engineer Raymond Tsoi for SAT says the same thing; that's at CC3793. The assistant engineer, Saky Chan, says the same thing, 3841. The site agent, Ronald Leung, says the same thing, 3830. So they all say the same thing, all but one person, Henry Lai. He doesn't

So given that the sub-contractor knew that their work would be inspected, in my submission no one in their right mind would, on a frolic of their own, just try to screw in two or three threads of a parallel threaded rebar into a Lenton coupler, or choose not to screw or connect the rebar to the coupler at all, and hoping that those inspecting it would simply blindly 22 approve them and allow the concrete to be poured and let them get away with it.

Unless the person responsible for inspecting the works was the person who told them to do it that way, At paragraph 42, and this is important:

"Around 1 day before the official commencement of the first stage of construction works, I first went to the site to inspect and observe the surrounding area in accordance with usual practice. At the time, I saw Leighton's workers chipping off the concrete of the wall under contract 1111 to expose the couplers installed pursuant to contract 1111, in preparation for the assembly of Wing & Kwong's workers to commence rebar fixing works for contract 1112. Although Leighton's workers only chipped off part of the concrete wall, I could clearly see that the couplers installed pursuant to contract 1111 were different from those normally used pursuant to contract 1112. Contract 1112 used flat-headed couplers" -- and that's what we say are the parallel threaded couplers -- "and the socket caps ..."

Apparently, there are some cover caps on the coupler, and I think, from the interim report from part 1 of the Inquiry, we saw that the caps were either blue or red if they were parallel threaded couplers. But this is important because:

"... usually red or blue in colour" -- that's for the flat-headed couplers -- "but the socket caps I saw that were exposed from the concrete at the time were yellow."

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knowing about the defects, and we say that's what happened, and that person was Henry Lai.

This then brings to us what Wing & Kwong say happened. For that, you need to turn to Ah Chun's evidence, and the English will be found at EE371.1, the Chinese is at EE341. Ah Chun, of course, was the foreman engaged by Wing & Kwong for the rebar fixing work. He was formerly under the employ of Loyal Ease, which itself was a sub-contractor engaged by Wing & Kwong to do the rebar fixing works.

At this stage, perhaps one should remember the relative roles and the positions of the parties, how, we have seen from the sub-contract, Wing & Kwong had to comply with the instructions of Leighton.

But in Ng's statement, in Ah Chun's statement, at paragraph 40, he explains what happened with the situation of the square peg and round hole. He says this:

"Before the preparation to commence rebar fixing works in respect of joint 3, I submitted to Leighton the bending schedule to order the requisite rebars and couplers upon [confirmation of the sample papers] ..."

In paragraph 41 he said:

"... shunt neck joint/joint 3 mainly involved 4 walls and the base slab."

The yellow caps signify that they were Lenton couplers.

"At the time I already knew that something was wrong, and suspected that those couplers were pointed, not flat-headed, which did not match with the flat-headed rebars required by the RC details under contract 1112. I therefore immediately went forward to remove the cover of the socket cap, which revealed that the coupler was indeed pointed as I expected."

So this is the Lenton coupler. In the next part, he shows what shapes they are, as we have seen in my opening, and at paragraph 44 he says this:

"In the construction sites I have worked at, I have never encountered this problem, namely a situation where the RC details specified the use of flat-headed rebars, but for some reason, pointed couplers were left behind by the other side ..."

And that of course is the 1111 side of the interface.

"I remember that at the time I immediately called the engineer in charge of the zone, Henry Lai. As it has been a long time, according to my recollection and my usual attitude and tone [towards him] ..."

He then recalls the conversation. We can find the conversation on the next page. I won't read out the

Page 97 Page 99 1 full extent of the conversation, but one can say that 1 industry, this was the first time that I have 2 Ah Chun was not happy with the situation. But the 2 encountered [this] situation ..." 3 important point is this. He asked Henry Lai: 3 And I can explain what he says there: because this 4 4 is the first time he encountered this situation, he has "Do you ... have to thread pointed-head rebars back 5 5 before the assembly of workers to commence works? If to make clear to Henry Lai, which he did, in the 6 not, I can't ... screw them in. Do you have to talk to 6 conversation at the top of the page, that: if this does 7 7 your boss first?" not pass inspection and if Wing & Kwong had to redo the 8 8 work again, then Leighton must pay because we are not Henry Lai says, "It's too late though. Ok, let me 9 9 handle this!" going to be responsible for this because you are asking 10 At paragraph 46: 10 me to screw in the flat-headed rebars into the 11 "When I preferred to 'thread pointed-head rebars 11 pointed-head couplers. 12 back before the assembly of workers to commence works' 12 He explains the same thing at paragraph 51. 13 13 As I say, what Ah Chun said makes perfect sense, at the time, what I meant was to ask Henry Lai whether 14 14 because here is a situation where Wing & Kwong has to Leighton would take back the flat-headed rebars 15 15 delivered to the construction site and arrange to comply with the instructions provided by Leighton, and 16 provide pointed rebars to Wing & Kwong, allowing Wing 16 their instructions were, "Screw them in as much as you 17 & Kwong to carry out rebar fixing works. As far as 17 can." But what if they don't pass inspection? They 18 18 I know, this process required approximately 1 to 2 have to redo the works; who's going to pay for this? So 19 weeks ... (or even longer)." 19 Ah Chun had to make it very, very clear, "If we have to 20 So that is the delay that would have caused. 20 redo it, Leighton must pay." 21 "Based on my understanding, Leighton experienced 21 But what if the couplers were still covered by the concrete so the rebars cannot connect to the couplers at 22. 22 delays in construction works at the time, and was behind 23 in progress. Therefore, they wanted to catch up as soon 23 all? Ah Chun also explains this at paragraph 55, and 24 24 as possible [with the concrete pouring]. Standing from you can find that at page EE371.24. He says this: 25 Wing & Kwong and my perspective, Leighton's own delays 25 "According to my recollection, I also called Henry Page 98 Page 100 1 would not cause any loss to Wing & Kwong." 1 Lai at the time, telling him which locations had pointed 2 That is important, as will be clear in Wing 2 couplers and the situation that the concrete has not 3 & Kwong's Cheung Yick Ming's evidence, that there was 3 been sufficiently chipped off. However, he only told me 4 simply no incentive for them not to do their work 4 again to 'get as many as you can, and screw them in as 5 properly, because as Ah Chun says, when Wing & Kwong 5 best as possible'." 6 6 could enter the site to commence works was completely 7 dependent on when Leighton handed the site over. 7 "Therefore, during the rebar fixing works for the 2 8 8 "Conversely", he says, "if we take matters into our remaining walls in the second stage, I told my workers 9 own hands and carry out rebar fixing works recklessly 9 that if there were pointed couplers within the ... wall 10 10 without Leighton's instructions, and could not pass the then 'screw them in as much as possible', pursuant to 11 inspections and were required to redo the works, Wing 11 the instructions of Leighton's Henry Lai. If the 12 & Kwong would instead incur the costs of redoing the 12 couplers have not been chipped open by Leighton" --13 works ..." 13 I think he means the concrete -- "then 'leave a bar 14 14 there to sustain it'." Of course; he was trying to protect his own side. 15 He then explains on at paragraph 47: 15 At this point perhaps it's important to remind 16 "After around 10 minutes, Henry Lai called [him 16 ourselves from the sub-contract that Leighton was the 17 back]", and asked him, basically, "How far could you 17 party that was responsible for providing the correct 18 18 screw in the parallel threaded rebar into the Lenton materials. They were responsible for providing the 19 couplers?", And Ah Chun said, "Only two or three heads." 19 rebars and the couplers, and obviously they were 20 20 responsible for chipping off the concrete so that the The next page: 21 21 "Then you just screw them in, screw them in as much rebar fixers could in fact put the rebar into the 22 as you could. It's not as if the wall would collapse?" 22 coupler. Wing & Kwong has no say in this. 23 That's what Henry Lai said to Ah Chun. At 23 At this juncture, perhaps we can look at 24 24 paragraph 49, Ah Chun again explains: Michael Fu's evidence of MTR. Michael Fu is the 25 25 construction manager of MTR and we can see his evidence "... in the many years I have worked in this

Page 103 Page 101 on page BB80. He says this in paragraph 30: 1 leaks and cracks be due to defective work undertaken or 1 2 "Even if it were the case that Leighton and/or its 2 the materials supplied by your company, we will seek to 3 sub-contractor were unable to screw the rebars into the 3 recover all costs incurred in accordance with the terms 4 4 couplers given that the wrong materials had been of the sub-contract." 5 5 ordered, one would have expected that Leighton and/or Well, that's strange, because the materials are 6 its sub-contractors would immediately halt the stitch 6 meant to be supplied and provided by Leighton. 7 7 joints/construction joint works, raise the 'mismatch' Wing & Kwong, in reply, and we can find that at 8 8 problem with MTRCL, and seek to resolve it by placing page EE277, says this: 9 9 an order for the right kind of materials. Leighton and "To avoid the possibility of any instability, our 10 its sub-contractor, however, did not adopt what surely 10 site supervisor, Ng Man Chun, had deliberated the 11 11 particulars of the relevant location with your engineer, was the obvious course of action to resolve the 12 'mismatch' problem." 12 Henry Lai, five months before the start of the work. Yes, Leighton should have informed MTRCL, Leighton 13 13 The material was ordered by Leighton and Wing 14 14 should have then obtained the correct rebars for the & Kwong had no right to choose which type of coupler can 15 15 couplers, and then Leighton should have provided them be used for further connected with [the 1111 side of the 16 for Wing & Kwong to do the rebar fixing works. 16 interface]. Also, all the works have been inspected by 17 But what is Wing & Kwong supposed to do in that 17 Leighton and relevant parties before concreting to 18 18 situation? You are faced with that situation where ensure all parties ... comply with standard and 19 there is an express order from Leighton, "Screw them in 19 drawings ..." 20 as much as possible", knowing that Leighton could 20 Then lastly, Wing & Kwong asked for the \$1.1 million 21 replace them at any time, they can omit them from works 21 outstanding contractual payment. This was effectively 2.2. 22 and you can't even have compensation. These workers, ignored by Leighton, because we see at EE286, what 23 these rebar fixers who earn 1,000 or 2,000 a day, what 23 Leighton did next was to send a sub-contractor 24 24 are they supposed to do; are they supposed to protest backcharge notice to Wing & Kwong, and you see in the 25 and refuse to work and go and complain to MTRCL? And 25 tick of the box, it's for the repair of the works, and Page 102 Page 104 1 remember, they can't really communicate with MTRCL, as 1 it claims in handwriting, if you scroll down a bit, "All 2 we have seen from the sub-contract. They should stop 2 costs subject to final invoice", and lastly it noted 3 3 working because Leighton did not provide the right this was sent to the sub-contractor by email on 4 4 materials? We have to be realistic as to the situation 23 February 2018. 5 Wing & Kwong faced. They basically had no choice. They 5 So, having received the backcharge notice, what does 6 6 had to do what they were told to do. Wing & Kwong do? We can find that at page EE290. 7 But one can say: is what Ah Chun says true? That's 7 This letter is very important so I would ask the 8 8 of course for the Commission in the end to assess. But Commission, if it has time, to read in detail what it 9 what he said is supported by the rebar fixer of Wing 9 says, but it says this. Firstly, it strongly disagrees 10 10 & Kwong, Leung Chi Wah. with the backcharge notice. Then, two points on, it 11 But what one cannot say is that Ah Chun made this up 11 12 because of this Inquiry, because ever since February 12 "The first schedule of construction of stitch joint 13 2018, when Wing & Kwong was first accused by Leighton of 13 was [ended in] December 2016 but due to some reason" --14 defective workmanship, Wing & Kwong has maintained the 14 CHAIRMAN: Sorry, bear with me just a second. 15 same version of events. 15 Yes, sorry, please carry on. I was just falling 16 So let's go through now the exchanges between 16 behind on one paragraph. 17 Leighton and Wing & Kwong in 2018. The first one can be 17 MR TSOI: "The first schedule of construction of stitch 18 joint was [at the] end of December 2016 but due to some found at page EE271. That is a letter from Leighton to 18 19 Wing & Kwong, and it says this: 19 reason it was rescheduled to start on early of 2017 but 20 "We write to advise that it has come to our 20 finally it was started in July 2017. Finally, our staff 21 21 attention that there is significant water leaks and was informed to complete the base slab, wall and top 22 22 slab of the tunnel in three weeks in July 2017. structural cracking ... 23 Investigations are currently underway to ascertain 23 To avoid the possibility of any instability, our 24 24 the exact cause ... site supervisor, Ng Man Chun, had deliberated the 25 25 Please be advised that should the cause of the water particulars of the relevant location with your engineer,

Page 107 Page 105 Henry Lai, seven months before the start of the work." 1 1 of the two contracts, your company believe there is no 2 2 Of course, that is a minor inconsistency. The need to tighten rebar in all the coupler left by 3 3 contract 1111. Therefore, your company did not hack off letter before said five months, now it says seven 4 4 all of the concrete which covered the coupler for our months, but I don't think anything turns on that. 5 5 side." Reading on, that's the important part: 6 "The captioned location of the tunnel is connected 6 CHAIRMAN: In other words, contract 1111 left in place more 7 7 couplers than were required to be fitted? to another contract of MTR, ie 1111. As the MR TSOI: Exactly, and Wing & Kwong obviously can't screw in 8 8 sub-contractor of contract 1112, we could only 9 communicate with the main contractor of contract 9 a rebar into a covered coupler. 10 1111 ..." 10 CHAIRMAN: All right. Yes. 11 That is G --11 MR TSOI: "Furthermore, your company did the concrete 12 CHAIRMAN: Gammon. 12 pouring work immediately after all the rebar fixing work 13 MR TSOI: Yes, GKJV. 13 was completed according to the way of your instruction. 14 14 In general, you should instruct me to clarify any "... through your company or there was not any way 15 15 defects of work if you found any defects during daily to get the details of contract no. 1111. To make sure 16 16 the connection is either coupler with parallel threads monitoring before concreting. 17 17 or with taper-cut threads so as to prepare the relevant So, we will submit our quotation for the repairing works if you needed. Also" -- this is important -- "we 18 18 materials to carry out the work at all time, our Chun 19 has inquired your Henry Lai in February 2017. We 19 would like to request the joint inspection together with 20 received a reply from Henry Lai that he did not know the 20 your side after break out of existing stitch joint ..." 21 21 details of contract 1111. He then instructed us to Because of course, if you are accusing Wing & Kwong 22 22. of defective workmanship, you must allow them to see prepare materials of parallel threads, according to his 23 experience and final confirmed order [of the] material 23 what's happening. This never happened. They declined 24 24 by Leighton. The materials of the coupler was supplied our request, they just ignored it, and we will come to 25 by Leighton, Wing & Kwong [had] no right to choose [the] 25 that. Page 106 Page 108 1 brands, [the] type of couplers [to] be used [on] this 1 What does Leighton do? The next page, page EE293: 2 project. We are providing labour only and your 2 all the things said by Wing & Kwong were ignored. The 3 engineers were fully instructing and monitoring [us on] 3 latter part of the page reads this: 4 this section of work. 4 "It has been established that the sub-contractor has 5 5 The captioned work was launched in July 2017. After failed to complete the sub-contract works in accordance 6 the concrete surface had been hacked off (Actually some 6 with the sub-contract by correctly affixing the rebar to 7 of the couplers still not yet [exposed]" -- I think that 7 the couplers." 8 8 word is meant to be "exposed" -- "after Leighton say That's a plain lie. It has not been established, 9 hacked works completed) ..." 9 because a square peg can't fit into a round hole. 10 10 Now, you must forgive the English, because this was The next page, EE294. Leighton spares no time --11 drafted by a layman at Wing & Kwong. As I said at the 11 they say this: 12 12 preliminary hearing, we are not as resourceful as other "We remind you that under ... the sub-contract you 13 13 parties. But that's what he said. are required to 'make good every defect and 14 "... the connection was found to be coupler with 14 imperfection ..." 15 taper-cut threads. Our Chun stated right away that the 15 The next point --16 rebar we prepared according to Leighton's information 16 CHAIRMAN: Sorry, I do apologise. So it would be your 17 which could not tighten into the coupler completely. 17 client's contention that it was required to provide 18 However, according to the verbal instruction given by 18 labour only? 19 Leighton, there was not enough time to rethread the 19 MR TSOI: Yes. 20 rebar and your company urged our side to try our best to 20 CHAIRMAN: And the mere fact that there was a tapered 21 21 tighten the rebar which are parallel threads into those coupler, and a rebar that didn't fit in, had to mean it 22 22 couplers." was not the fault of your client --23 And that is what happened. They asked Wing & Kwong 23 MR TSOI: Of course. 24 to try to fit a square peg into a round hole. 24 CHAIRMAN: -- but was the fault of the other third party. 25 "Moreover, because of the differences in the design MR TSOI: Absolutely.

Page 111 Page 109 CHAIRMAN: Because your client's job was to merely take the 1 problem." Really? 1 2 materials given to it and then fit those materials in. 2 Next, we have Wing & Kwong's protest at page EE301. MR TSOI: Absolutely. If we read on --3 Essentially, Wing & Kwong is now repeating: 4 CHAIRMAN: Sorry, and I take it, when everything was looked 4 "We both agree the defect relates to the failure of 5 5 installation/connection of the rebar and couplers. at, they discovered that the couplers were these Lenton 6 couplers? 6 However, the major reason is Leighton threads the 7 MR TSOI: We never looked at this, because we were declined 7 parallel threads (type 1a) on our rebar which cannot be 8 the joint inspection by Leighton, but Leighton -- well, 8 installed completely in the taper-cut threads couplers 9 9 I think it's not in dispute that the 1111 side of the (type 2)" -- as we see in the picture -- "supplied by 10 10 interface had Lenton couplers, which simply could not contract 1111. 11 11 The captioned work was launched in July 2017. After 12 CHAIRMAN: Thank you. I'm sorry to have --12 the concrete surface had been hacked off, the connection 13 MR TSOI: No, no, absolutely. 13 was found to be coupler with taper-cut threads. Our 14 14 site supervisor, Ng Man Chun stated right away that the So the next point is: 15 15 "The sub-contractor was given the opportunity to rebar we prepared could not tighten into the coupler 16 correct the defects and declined." 16 completely. However, considering the tight schedule, 17 Well, we haven't. We wanted to have a joint 17 there was not enough time to rethread the rebar and your 18 18 inspection to see what happened, because you are company urged our side to try our best to tighten the 19 accusing us of defective workmanship, but we say it was 19 [rebars with the] parallel threads into those couplers." 20 20 the material; it was a mismatch of the materials. As we have seen from the evidence of Ah Chun, to 21 21 "To rectify these defects [on the] stitch joints ... rethread the rebars would have taken one to two weeks at 22 [they were] required to be fully demolished and 22 least, and one must remember the delay in the works 23 rebuilt." 23 would not have affected Wing & Kwong. Who it would have 24 24 And it goes on. So we see there Leighton basically affected was Leighton. 25 ignoring Wing & Kwong's plea. 25 The next page, they say the same thing --Page 110 Page 112 1 CHAIRMAN: Sorry, could I ask -- earlier today, there was 1 Wing & Kwong replied to this at page EE298: 2 2 "After reading your letter ... we wish to re-state mention of an alternative route to installation, which 3 how passive we are during the material ordering 3 was the installation at this end, installation at that 4 4 progress." end --5 5 MR TSOI: And then a lap in the middle. I think that means "the material ordering process". CHAIRMAN: -- and then a lap in the middle, yes. 6 "According to the sub-contract, the threads and 7 couplers are one of the materials which were provided by 7 MR TSOI: But for that, you still need to provide the 8 8 Leighton. Our company needs to provide the information taper-cut or taper-threaded rebar, so that they could be 9 about the diameter and quantity of the threads and 9 connected to the Lenton couplers, because you must have 10 10 prepare the rebar well. We do not have any power to then the parallel threaded coupler connected to 11 decide which type of threads were being used. The type 11 a parallel threaded rebar, lapping it, with 12 of threads are wrongly ordering" -- so effectively the 12 a taper-threaded rebar into a Lenton coupler. 13 wrong rebars are ordered -- "and it is obvious that our 13 CHAIRMAN: I have that. So obviously, if this is the 14 company do not have any power to cause this." 14 tapered end, you screw in the tapered end there with a 15 So Wing & Kwong is repeatedly saying the same thing. 15 tapered rebar. This one you do the ordinary. MR TSOI: Exactly. 16 Let's see Leighton's reply at page EE300. Leighton says 16 CHAIRMAN: And then in the middle, you have a rebar of the 17 17 18 18 same diameter, which laps the two. "The defective workmanship does not relate to the 19 materials. The defect relates to the failure of the 19 MR TSOI: Exactly, yes. But the prerequisite is still 20 20 sub-contractor to install/connect the rebar and couplers Leighton has to provide this. 21 21 COMMISSIONER HANSFORD: I think that was always intended in accordance with the sub-contract requirements." 22 22 I've not heard anywhere of any suggestion of having This bit is about the interface joint. They are 23 23 a bar that's threaded, tapered on one end and parallel saying "It's nothing to do with material; you, Wing 24 on the other. 24 & Kwong, should have been able to fit a square peg in 25 MR TSOI: I'm sure it's possible. a round hole, and if you can't, it's a workmanship

	Page 113		Page 115
1	COMMISSIONER HANSFORD: In fact, I'm not even sure you could	1	CHAIRMAN: No. Fine. Yes. And at the other end, of course
2	fit that in. So there was always intended to have a lap	2	the BOSA one, you had that too.
3	in the middle.	3	MR TSOI: Yes.
4	MR TSOI: I think so, but as I said, the prerequisite is	4	CHAIRMAN: Thank you.
5	still you need those taper-cut rebars.	5	MR TSOI: So if we turn to EE303, that's a Leighton letter
6	CHAIRMAN: All right. So it was either, as Prof Hansford	6	to Wing & Kwong. They are effectively repeating
7	said, always intended, or there was an oversight and	7	themselves:
8	there wasn't the realisation that the one was going to	8	"The defects relate to the failure of the
9	be tapered.	9	sub-contractor to install/connect the designed rebar and
10	MR TSOI: As I confess, I'm not really a construction	10	couplers in accordance with the main contract and
11	lawyer, but I could see from the plans that the learned	11	sub-contract requirements. You have a contractual
12	Commissioner is correct, that it was the intention, from	12	obligation to construct the works in accordance with the
13	the plans, in any event, that there would be a lapping	13	approved for construction drawings."
14	in between two types of bars. But again I confess I am	14	Then if we turn to page EE304, that's where Leighton
15	not really an expert in this.	15	claims rectification costs of 40 million against Wing
16	COMMISSIONER HANSFORD: That makes sense.	16	& Kwong. At this stage, of course, Wing & Kwong has
17	CHAIRMAN: Yes.	17	been asking for a joint inspection, but that's just been
18	MR TSOI: So we move on to	18	ignored.
19	CHAIRMAN: Sorry, just to interrupt for a second, because it	19	If we go to page 305, that's Wing & Kwong's reply in
20	gives us, basically so, somewhere along the line,	20	May. Paragraph 3 says this:
21	somebody came to a rational decision that there would be	21	"For the rectification works refer to [in] your
22	a lapping in the middle.	22	letter Leighton has failed to provide the entire
23	MR TSOI: Yes.	23	further information, [arrange a] joint meeting or site
24	CHAIRMAN: But you are saying that the company which you	24	visit as [we] requested."
25	represent, the bar fixers, were not informed of that,	25	So Wing & Kwong has been asking, "Let us see what is
	Page 114		Daga 116
			Page 116
1	nor given the material to enable them to do the lapping?	1	happening. Why do you say it's defective workmanship?"
1 2		1 2	
	nor given the material to enable them to do the lapping?	2	happening. Why do you say it's defective workmanship?"
2	nor given the material to enable them to do the lapping? MR TSOI: Of course, because one would	2	happening. Why do you say it's defective workmanship?" That's been denied.
2 3	nor given the material to enable them to do the lapping? MR TSOI: Of course, because one would COMMISSIONER HANSFORD: Sorry, I don't think that's what's being said, because the steel fixers created the lap in the middle.	2 3	happening. Why do you say it's defective workmanship?" That's been denied. "The problems and defect costs in the project have nothing to do with our company. Please release all the overdue as soon as possible"
2 3 4	nor given the material to enable them to do the lapping? MR TSOI: Of course, because one would COMMISSIONER HANSFORD: Sorry, I don't think that's what's being said, because the steel fixers created the lap in the middle. MR TSOI: Yes.	2 3 4	happening. Why do you say it's defective workmanship?" That's been denied. "The problems and defect costs in the project have nothing to do with our company. Please release all the overdue as soon as possible" Leighton's reply at page EE306, they are just
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	Page 117		Page 119
1	answer in the August reply from Leighton, I would	1	So we have seen that before.
2	submit I'll take you to it is not an honest	2	Point 4:
3	answer.	3	"We reminded you that our all site works were
4	COMMISSIONER HANSFORD: I'm sure you are going to take us to	4	inspected and approved by the site representatives of
5	it later, Mr Tsoi, but in fact Wing & Kwong didn't do	5	Leighton before pouring concrete, then Wing & Kwong to
6	the remedial works, did they?	6	continue the rebar fixing works"
7	MR TSOI: But that's not an issue.	7	Again, they are trying to explain themselves.
8	COMMISSIONER HANSFORD: That's not an issue?	8	Then we reach point 5:
9	MR TSOI: That's not an issue.	9	"We [requested] the joint inspection"
10	COMMISSIONER HANSFORD: Leighton instructed someone else to	10	So even at this point, they don't really know what's
11	do the remedial works.	11	happening. We are requesting a joint inspection and
12	MR TSOI: I'm not Fang Sheung.	12	nothing happened.
13	MR PENNICOTT: Just to make the point it's very helpful	13	Point 6:
14	that Mr Tsoi is showing you these letters, but of course	14	" your allegation of rectification cost
15	by this time the letters are dated May and then we're	15	\$40 million mentioned in the letter is a totally
16	getting into June 208 the original stitch joints had	16	unreasonable amount for Wing & Kwong, our final contract
17	been long demolished. They were taken out in March. So	17	sum [was] just \$62.5 million how can we bear the
18	in fact requests for a site inspection, whilst it seems	18	\$40 million contra charge?"
19	to me right and proper, once the demolition had taken	19	The next point:
20	place back in February and March 2018, it would have	20	" based on this defective workmanship, you are
21	been a rather pointless exercise to go to visit anyway.	21	holding us all payment in various projects please
22	MR TSOI: I think counsel for the Commission raises a very	22	note that we [are] just a rebar fixing sub-contractor,
23	good point, and that's the issue, because we didn't even	23	\$3.5 million is a very large amount for us"
24	know this, because it was demolished without our	24	Then lastly they say:
25	knowledge, and that's the point for asking for joint	25	" now your action is all unreasonable and not
	Page 118		Page 120
1	inspection, to see what's happening.	1	fair for Wing & Kwong."
2	If you shut off Wing & Kwong and demolish the thing,	2	That was again ignored in the July reply which we
3	we will never see what happened for ourselves, and	3	see at 312. It just mentions the backcharge notice.
4	that's what Leighton did to Wing & Kwong.	4	So there has been all these exchanges between Wing
5	CHAIRMAN: All right. Were you supplied with	5	& Kwong and Leighton. MTR asked about this, and if
6	photographic	6	I take you to the letter; that's at BB5073.
7	MR TSOI: Very limited.	7	This is a letter from MTR to Leighton, asking for
8	CHAIRMAN: So what you are saying is that at the time when	8	
0		"	various information, but if you go to the latter part of
9	the defects were first noticed by way of leakage,	9	page 5073, one of the information is this:
10	et cetera, and in the days that followed, you were not		page 5073, one of the information is this: "Details of actions taken against responsible
10 11	et cetera, and in the days that followed, you were not given an opportunity together with the contractor to	9 10 11	page 5073, one of the information is this: "Details of actions taken against responsible sub-contractor(s) in respect of the NAT issues".
10 11 12	et cetera, and in the days that followed, you were not given an opportunity together with the contractor to conduct an inspection as it was opened up and to see the	9 10 11 12	page 5073, one of the information is this: "Details of actions taken against responsible sub-contractor(s) in respect of the NAT issues". So MTR is asking Leighton, "What did you do to the
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10 11 12 13 14 15 16 17 18 19 20 21 22	et cetera, and in the days that followed, you were not given an opportunity together with the contractor to conduct an inspection as it was opened up and to see the results of the opening up? MR TSOI: We were invited once, Ah Chun was invited on site before the concrete was removed. So he was just there to locate the areas where the concrete needs to be removed so we could see what was happening inside. But Wing & Kwong were never invited back, after the concrete had been removed, to see what happened. CHAIRMAN: All right. Thank you. MR TSOI: We then look at Wing & Kwong's reply at page EE308. Wing & Kwong essentially is repeating its	9 10 11 12 13 14 15 16 17 18 19 20 21 22	page 5073, one of the information is this: "Details of actions taken against responsible sub-contractor(s) in respect of the NAT issues". So MTR is asking Leighton, "What did you do to the sub-contractors?" Let's look at Leighton's reply, at page BB5081. That's the start of the reply. In relation to that question, the answer can be found at page BB5083, at 4, "Details of actions taken against responsible sub-contractor(s)": "Following [our] receipt of [the non-conformance reports] related to the defective stitch joint works, an internal non-conformance was raised on 19 March 2018. A meeting was also held with the senior

Page 123 Page 121 1 carrying out any further work on the project, including 1 statement -- that was the first time Henry Lai tries to 2 the remedial work required to rectify the defective 2 respond to the allegations made against him. And that 3 stitch joints." 3 Henry Lai statement was right after Leighton's project 4 That's not even the question asked. The question 4 director Jon Kitching's statement that was filed last 5 5 asked was, "What action did you take against Wing Thursday. What a coincidence, because what Jon Kitching 6 & Kwong?" 6 says in the statement is, likewise, for the very first 7 All the exchanges between Leighton and Wing & Kwong, 7 time, we are now told that in fact there was a meeting 8 all the explanations from Wing & Kwong, all the actions 8 between John Kitching and Henry Lai about these letters, 9 that Wing & Kwong wants to take, are all concealed from 9 although nothing of the sort was mentioned in any reply 10 10 MTR. This answer is completely dishonest. to Wing & Kwong or in any reply to MTR. 11 11 So there has been all these exchanges, all these Needless to say, there's no meeting notes of this 12 letters to and fro between Leighton and Wing & Kwong, 12 asserted meeting. In fact, Leighton says nothing about these letters until they were urged by the solicitors 13 Wing & Kwong saying expressly, "Hold on a second, it's 13 14 14 Henry Lai who instructed us to do this." for the Commission. That request was made at 15 15 CHAIRMAN: Sorry, just to go back to this paragraph, page CC6486, in an email, if I can ask you to pull that 16 "A meeting was ... held with the senior management of 16 up. 17 Wing & Kwong"? 17 So "Jon Kitching": MR TSOI: That is correct. 18 18 "There was a series of correspondence between Jon 19 CHAIRMAN: And there was a meeting? 19 Kitching on behalf of Leighton and Wing & Kwong ... This 20 MR TSOI: There was a meeting, and that is evident in Cheung 20 correspondence has not been dealt with by Henry Lai in 21 Yick Ming's statement because immediately after the 21 his witness statement." 22 water seepage, the quantity surveyor of Wing & Kwong was 22 So Jon Kitching is therefore asked as the project 23 invited to the site office to basically tell him, "By 23 director of Leighton to explain these letters. This was 24 24 the way, there's water seepage and you're not getting the first time it was asserted by Leighton that there 25 paid", that is the long and the short of it, but he was 25 was a meeting between Jon Kitching and Henry Lai about Page 122 Page 124 1 1 never invited to inspect the actual site and the actual the allegations made against Henry Lai. 2 stitch joint. So he was invited to the site office. 2 To sum up, since February 2018 Henry Lai says 3 CHAIRMAN: And was it said at that meeting that Wing & Kwong 3 nothing about the allegations. He doesn't even mention 4 would not be carrying out further work? 4 the letters in his first two witness statements. He now 5 MR TSOI: No, it was not, because at that time Wing & Kwong 5 claims, in his third statement, filed last Friday, that did not want to escalate the matter, as you would 6 6 he does not recall having such conversation with Ah Chun 7 understand, because the last payment has been held up, 7 at the site. Of course, he denies providing the 8 so they are trying to say to Leighton, "Well, what's 8 instruction to Ah Chun to continue the work knowing 9 happening?" Leighton are saying, "There's water 9 about the defects. 10 10 seepage, it must be your fault, so you are not getting One may think that Henry Lai's conduct is 11 paid." That would be the evidence of Cheung Yick Ming, 11 extraordinary, because these were matters, as he is 12 when we come to that on Wednesday. 12 eager to point out in his third statement, that went to 13 But the meeting between the senior management of 13 his professional integrity. He never said anything 14 Wing & Kwong and Leighton don't really turn on anything 14 until last Friday. And how convenient for him not to 15 in terms of inspection, because that was not 15 recall. 16 an inspection meeting. That was just a meeting at the 16 In my submission, he's simply not telling the truth. 17 office. 17 But it doesn't stop there, because we can recall that 18 CHAIRMAN: Yes. Thank you. 18 amazingly he was the person who was meant to inspect and 19 MR TSOI: So, as I say, there were all these exchanges, and 19 check that the rebars have been connected to a coupler. 20 20 Wing & Kwong expressly telling Leighton that it was But he was the only person that didn't know the 1111 21 Henry Lai who instructed them to continue the work. So 21 side of the interface used Lenton couplers, when Joe Tam 22 one would ask: what does Henry Lai say about them, about 22 knew, when Chan Hon Sun knew. 23 these allegations and letters that happened in February 23 Conveniently, in none of his statements, even the 24 last year? He says nothing. Nothing. Not until last 24 last one, even the one filed last Friday, does he go 25 Friday, not until last Friday, in his third witness 25 into the details of the inspections he did, because the

Page 127 Page 125 only time he tried to do that, he was directly 1 send a letter to Henry Lai saying, "This is a problem, 1 2 contradicted by Chris Chan of MTR. 2 you know, there's simply not a match"? 3 3 MR TSOI: Not after Henry Lai has expressly said, "Just If I could take you to that, and perhaps we can go 4 4 screw them in as much as you can. It's not as if the to my opening for this purpose. I promise you this is 5 5 wall would collapse", because the reality of the the last time I will look at my opening in writing, but 6 that's at part 16: 6 situation was the workers were all there. All Ah Chun 7 7 can do is tell Henry Lai, "Hey, these are the pointed "Leighton's Henry Lai claims in his witness 8 8 couplers, and if you get the order, just screw them in statement: 9 as much as you can", and you get the assurance that if 9 'I was the Leighton engineer responsible for 10 10 conducting the rebar fixing check with the MTRCL's they have to redo the work, Leighton will repay. Then 11 one would think, "What's the problem?", because in the 11 construction engineer for the 3 stitch joints and the 12 12 end one must remember these works would be inspected. shunt neck joint. I confirm that I conducted those 13 13 It's not as if Wing & Kwong could get away with it. checks with MTRCL's construction engineer (Chris Chan) 14 14 CHAIRMAN: Thank you. and no issues [arose] ..." 15 15 COMMISSIONER HANSFORD: Can I just ask a follow-up to that. What does Chris Chan say? Ah Chun was a sub-contractor --16 "I was never asked to inspect the 3 stitch joints or 16 17 MR TSOI: Of Loyal Ease, yes. 17 the ... shunt neck joint." 18 COMMISSIONER HANSFORD: -- to Wing & Kwong. 18 "Never". Only one of them could be telling the 19 truth, or neither are telling the truth. We don't know. 19 COMMISSIONER HANSFORD: Ah Chun, is it the case that Ah Chun 20 20 But in due course I will submit to the Commission that 21 didn't notify his employer, Wing & Kwong, of the 21 Henry Lai's claim that he checked the rebars is just 2.2. 22 instructions that had been given to him by Leighton? false. 23 23 Conspicuously, though, even in his own statements, MR TSOI: He did not. I suspect what happened was this. 24 Once he received the order from Henry Lai, he then did 24 Henry Lai does not claim that he checked the rebar 25 fixing. He does not claim that he went down there to 2.5 as he was told, he screwed them in as much as they can, Page 126 Page 128 1 1 check that the rebars were completely screwed into the and then once it passed the inspection and no one raised 2 2 any issue, then there was no need for him to raise it couplers, because he knows he can't say that, because he 3 3 knows it's impossible. Square peg, round hole, or no with Wing & Kwong. 4 4 But it's true, he did not raise it with Wing & Kwong 5 5 at the time, because he didn't know there was going to To conclude, of course, ultimately the Commission 6 6 may think that whether Henry Lai owns up to instructing be a problem. 7 Wing & Kwong to do this, in the end may not assume great 7 COMMISSIONER HANSFORD: Thank you. 8 8 MR TSOI: I'm obliged. importance, because his claim that he inspected the 9 works and the rebars were screwed in cannot be true. 9 MR PENNICOTT: Sir, I think we are going to hear from 10 10 What is inescapable is a fact, and it's the fact that Mr Khaw next, and I know Mr Khaw can't be here tomorrow, 11 who did the inspection, if they did it properly, would 11 so I guess we really need to press on, but if you want 12 12 to just take five minutes now, a very short break, and have seen the defects. 13 13 then come back, to give the transcript writers a rest, So one is really compelled to one of two 14 14 just five minutes. conclusions: one, that those who were supposed to 15 inspect the works did not inspect it at all or did not 15 CHAIRMAN: All right. MR PENNICOTT: I hope that will give Mr Khaw enough time to 16 inspect it properly; or those who were inspecting it 16 17 17 knew of the problem but yet allowed the concrete to be finish by 4.30/4.35. 18 18 CHAIRMAN: Mr Khaw, what do you think? poured. 19 But, either way, Wing & Kwong cannot be Leighton's 19 MR KHAW: When Mr Shieh told me this morning that he was 20 scapegoat for complying with Leighton's instructions. 20 prepared to sell some time to other paries, I thought 21 That's all I wish to say at this stage. 21 I didn't need it because, at the same time, Mr Tsoi told 22 22 me he would only be ten minutes. So I'm really stuck in CHAIRMAN: Can I just ask one final thing. I'm not trying 23 23 the middle, but I will try my best to finish within to put a lawyer's hat onto a bar fixer, but when there 24 24 was a realisation that the rebars wouldn't fit into an hour. 25 MR PENNICOTT: Thank you very much. these particular couplers as they should do, did anybody

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22.

- 1 CHAIRMAN: Thank you very much. Good. Five minutes to
- 2 stretch the legs. Thank you.
- 3 (3.32 pm)
- 4 (A short adjournment)
- 5 (3.40 pm)

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- 6 Opening submissions by MR KHAW
- 7 CHAIRMAN: Yes.
- 8 MR KHAW: Mr Chairman and Professor, I have just been
- 9 reminded that I actually have a team of four members, so
- in case I can't finish, I will exercise some power to
- delegate to my team members.

First of all, if I may, I will try to follow my written opening. There is nothing I need to say much

written opening. There is nothing I need to say much about the overview, because it basically just sets out

about the overview, because it basically just sets out

the three issues that Mr Pennicott has told us. The only remaining point is probably just a beauty contest

between the long form adopted by Mr Pennicott for the

three stitch joints and the short form that we have

19 adopted.

Mr Chairman, you can see from paragraph 1 that in

fact our "joint 1" is Mr Pennicott's 1111/1112 NSL stitch joint; our "joint 2" is his 1112/1112 NSL stitch

joint; and our "joint 3" is his 1111/1112 EWL stitch

joint, and our joint 3 is ins 1111/1112 LWE stite!

joint. We hope that will avoid any confusion arising

from different expressions.

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what we have stated here is that under the entrustment

The second and third issues have also been set out in Mr Pennicott's submissions.

Paragraph 2: the government is highly concerned about these issues and will do its utmost to alleviate any concern over the issues of public safety and quality of the works. Since the issues came to light, the government has been taking steps to investigate the

government has been taking steps to investigate the matters.

Mr Pennicott has referred Mr Chairman and Professor to a report compiled by Pypun, it's a recent report, it has come out already, and I can give the Commission the reference: GG3/1011. It's still under review by the government. We will issue a short reply in writing regarding the comments that government has on that

report.

Apart from that, the government has also set up a taskforce consisting of members of the EAT, BD, Highways Department and MTR to facilitate the delivery of a verification proposal for the purpose of verifying the as-constructed conditions, including quality, workmanship, et cetera, for NAT, SAT and HHS, trying to ascertain the structural integrity and also ensuring the quality assurance of such structures. That proposal was

submitted to the Commission, and we agree that the

milestone date for the final report would be 30 June.

That is the same as the milestone date in respect of the remaining holistic proposal for part 1 of the Inquiry. I will let Mr Chow deal with the holistic proposal and also the verification proposal in due course.

As always, the government will continue to do its best to assist the Commission and also update the Commission on any new developments and new materials.

The structure of our opening consists of four main parts. I believe section A and section B contain details which have been in fact discussed quite extensively in part 1 of the Inquiry, because section A is an overview of the government's monitoring and control mechanism. Section B is basically a recap of our control mechanism for the SCL project, and also we will identify the quality assurance and control measures in respect of coupler installation and record-keeping. Section C is about certain key events regarding discovery of three issues. Mr Chairman and Professor, I believe that most of the details regarding section C, in relation to discovery of the three events, have already been dealt with in Mr Pennicott's detailed submissions.

If I may then invite the Commission to look at paragraph 6, which deals with the entrustment agreement and also our "check the checker" approach. Basically,

what we have stated here is that under the entrustment agreement, the government undertook the funding of the project, and the MTR was entrusted to procure, coordinate, administer, manage and supervise the design and construction of all necessary works and to bring about the timely completion of the project. In return, MTR would be paid a total project management fee of approximately HK\$8 billion.

Apart from that, pursuant to the entrustment agreements, MTRC is also responsible for devising and implementing its own project management and control processes for the SCL project. On this point, we have been referred to the PIMS, and more importantly we know that the PIMS actually contain some express provisions regarding the RISC forms and also various hold points. I believe those are the important matters arising from the PIMS that we need to know for the purpose of part 2 of the Inquiry.

We all know about our "check the checker" approach. Basically, paragraph 8 summarises that there are two aspects to our "check the checker" approach. (1) is regular and frequent interactions with MTR, and (2) is engagement of an external M&V consultant, Pypun, whose role is to monitor the activities and processes of MTR and verify that they are carried out in accordance with

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MTR's management and control procedures and in compliance with the entrustment agreements.

I don't wish to talk about different levels of meetings that we have discussed in part 1.

Regarding Pypun's role, perhaps it may be helpful if I just highlight a few provisions of the M&V agreement, just for the purpose of refreshing everyone's memory relating to the terms defining the scope of the duties, if I may.

If I could ask Chairman and Professor to turn to G9. Sorry, it's part 1's bundle, G9. Page 7638, that's the M&V contract. If I could just refer everyone to the relevant provisions, which start from clause 3, on page 7653. I'm starting from clause 3.1. It talks about the objectives of the assignment. It says:

"The overall objective of the assignment is to provide monitoring and verification services in relation to the work undertaken by MTR ... during the construction, testing and commissioning phase of the project so as to provide assurance that the MTR's obligations stated in the entrustment agreements for the SCL advance works and construction phases have been properly fulfilled. The monitoring and verification shall focus on cost, programme and public safety of the project."

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the assessment of building submissions for compliance
 with the BO and other relevant ordinances, regulations
 and standards".

Then if I may also take the Commission to 7658, which spells out the details of services to be provided by the consultant. If I can first focus on 6.1.7. It says:

"The main roles of the consultants is to appraise, monitor and audit the activities/processes of the MTR, and verify that these activities ... are carried out in accordance with the MTR's management and control procedures and in compliance with the 3 EAs for the SCL design and site investigation ..."

So when it comes to MTR's management and control procedure, one of course has to look at the PIMS, the relevant provisions under that particular document.

"... and site investigation, advance works or construction phases, and that value for money is achieved through procedures that are complied with and to recommend improvement measures whenever appropriate Hence, the consultants shall be proactive working closely with the director's representative and the MTR."

Then 6.1.8, I believe that has been referred to in Pypun's opening:

"The SCL project team of the MTR will be residing in

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Then if we could turn to clause 4, it provides a description of the assignment, which says:

"The assignment shall include but not be limited to the following:

(a) a review of the documents ..."

And those documents would include construction programmes, method statements, proposals, project finance, submissions to project control group, public safety plans, other key documents relating to SCL works.

Then (b) and (c) actually provide us with the definition including the monitoring work and the verification work. (b) is about:

"carrying out monitoring on MTR's works through a review of the concerned project documents and necessary site inspection and identification of and providing advice on key issues, which bear significant implications in respect of cost, programme and public safety ..."

(c) is about verification:

"carrying out verification by conducting audits (including process and/or technical audits) to the activities/processes undertaken by the MTR, reporting and the necessary follow-up work."

And (d) is about the BSRC team's work. It says: "provision of professional services in respect of

the MTR's Hung Hom Station and the Citylink Plaza ...

The consultants' right of access to the project areas and construction sites shall be subjected to the giving of reasonable ... notice ... The consultants shall not unduly interfere with the works of the MTR ..."

Then 6.1.9:

"For the avoidance of doubt ... monitoring and verification shall cover all the work carried out by the MTR during the construction, testing and commissioning phase, including the E&M systems ... monitoring and verification should be undertaken in parallel with the MTR's construction, testing and commissioning programme and in a manner which will minimise any delay or interruption to the project activities."

Then perhaps the final bit can be found at the next page, 7660, 6.2.4:

"The consultants shall be proactive throughout the course of the assignment. For example, the consultants shall identify, where necessary, any additional information/documents from the MTR or other related parties through the director's representative to facilitate their work in this assignment; shall liaise, where necessary, with MTR direct[ly] to get the necessary information for the review of submissions to the PCG meetings to meet the schedule of PCG meetings,

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et cetera."

Then we have 6.3 which deals with monitoring, and basically the monitoring plan shall be developed by the consultant, and that monitoring plan shall include the document review, site inspection, et cetera.

Then 6.3.4 talks about a risk-based approach with focus on cost, programme and public safety, and shall carry out the following duties.

Then if we can look at 7662. That deals with verification, and again the consultant, according to 6.4.1, "may use risk-based approach to [verify] high-risk areas for forward planning of audits", et cetera.

Then finally, if I may refer the Commission to 7665, clause 6.6.4 -- and I believe we have seen that a number of times; that is the scope of the BSRC team. It deals with compliance with building safety standards, and in particular (f) says:

"conduct audit and surprise checks to construction sites on aspects of the structural safety and integrity of foundation, tunnel, superstructure ... for safety assurance and for compliance with the building safety standards, and examine the remedial proposals submitted by MTR if contravention is detected".

So I do not wish to enter into any debate regarding

1 whether it covers leased land or unleased land.

What is important is perhaps paragraph 16, which

sets out certain requirements under both IoE and IoC.

4 That is MTR is required to appoint a CP and also

5 a registered geotechnical engineer, RC, et cetera.

6 I think we have all gone through this in part 1.

If I may then go to B3, "Quality assurance and

control measures on site". This also has been covered

in paragraph 83 of Mr Pennicott's team's opening. They

10 have talked about the ITP, the inspection and test

plans, agreed between MTR and also Leighton, which also

sets out the requirements for the RISC forms, the hold

points, et cetera. I don't wish to go into the details

anymore.

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But in relation to paragraph 21, the two hold points which are particularly relevant to the present Inquiry

will be subparagraphs (2) and (3), fixing of

reinforcement and also the concrete pre-pour check.

19 COMMISSIONER HANSFORD: Just on that, Mr Khaw, I note also

20 subparagraph (4), "Post-pour check". Does anything turn

21 on that

22 MR KHAW: For the time being, I cannot see anything which

turns on this.

24 COMMISSIONER HANSFORD: Okay.

MR KHAW: Most of the issues relate to (2) and (3) only,

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1 yes.

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2 COMMISSIONER HANSFORD: Thank you.

3 MR KHAW: 22 and 23 actually deal with the importance of the

hold points and also the RISC forms. The RISC forms

5 have to be submitted by Leighton in respect of each hold

6 point and MTR is required to inspect and sign off the

works carried out, et cetera.

8 Then 23: had MTR and Leighton complied with the

9 aforesaid requirements under PIMS and ITPs, records of

RISC forms for all the works carried out at NAT, SAT and

11 HHS should have been retained as part of the

construction records.

Now, 24 -- I wish to just perhaps deal with one

point mentioned by Mr Pennicott earlier. 24 is this:

according to the accepted drawings, ductility couplers
 were used at the diaphragm walls and slabs in the NSL

area of SAT. The relevant quality assurance and control

requirements for installation of ductility couplers are

contained in the SSP, quality supervision plan and

20 quality assurance scheme.

So according to the BD's case, when ductility couplers were required, according to the accepted

drawings, then obviously the QSP would apply, but if

ductility couplers were not required in the accepted

drawings, then there is another set of supervision

the scope of duties of Pypun today, but I hope that the relevant provisions will set the scene when a necessary

discussion is required in due course.

Then if I can turn to our paragraph 11. It talks about Pypun's risk register, which was created and updated by reference to be MTR's risk register, et cetera.

Then B2, regarding building safety control mechanism. We all know that so far as this project is concerned, there are two kinds of instruments that govern the building works. One is an IoE, the other is an IoC. Chairman and Professor may recall that in part 1, where we introduced IoC and IoE, we talked about the fact that the project actually covers building works on both leased land and also government land, unleased land. So this is our paragraph 13(1).

Insofar as the project covers building works on leased land, that is governed by the BO, whereas if the building works are on government/unleased land, then it will be exempted from section 41(1) of the Buildings Ordinance. But in any event, whether one applies the IoE or IoC doesn't really matter, because the building safety standards are essentially the same. That is our paragraph 14, so we don't need to get bogged down with the niceties about the two kinds of instrument, and also

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coupler assembly on 30 November which covered the

couplers to be used on the contract 1111 side of the

stitch joints and shunt neck joint at the interface with

Page 143 Page 141 requirements which are applicable. But, as Mr Pennicott 1 contract 1112. 1 COMMISSIONER HANSFORD: Sorry, Mr Khaw. Can you remind me 2 has pointed out, the level of supervision required under 3 3 "OAS"? that set of regulations in fact is lower than the one 4 4 MR KHAW: Quality assurance scheme. required under the QSP. 5 COMMISSIONER HANSFORD: Thank you. Sorry, I interrupted. We have talked about the QSP probably ad nauseam, 6 but we certainly will not forget full-time continuous MR KHAW: Then paragraph (2): the Lenton brand couplers 7 require tapered threaded rebars to connect, whereas the 7 supervision and things like that. 8 8 BOSA brand couplers require parallel threaded rebars to Perhaps just one point I should pick up here, in 9 9 relation to paragraph 24. Regarding SAT, we understand connect thereto. 10 10 from Leighton that their position is that no ductility We have heard this from both Mr Pennicott and 11 I think perhaps Mr Tsoi as well. 11 zones in the original design or the working drawings at 12 the time of the construction of the SAT existed. In 12 Leighton, being the RC for contract 1112, is 13 13 responsible for connecting threaded end of rebars to the fact, no couplers were used for the vertical 14 14 Lenton couplers cast in place under contract 1111. In reinforcement connection within the D-walls at the SAT. 15 15 doing so Leighton should ensure that appropriately That is their position, and in fact that is stated at 16 threaded rebars are being used and the same being 16 paragraph 44 or their opening. In fact the same old 17 installed under proper supervision in compliance with 17 point they were trying to run for part 1 of the Inquiry, 18 the requirements set out in the acceptance letter. 18 that is no ductility requirements whatsoever. 19 19 Again, on this issue, if I can just refer Now, 28 actually deals with an allegation regarding 20 20 mismatch of materials. Mr Chairman and Professor to three accepted drawings 21 CHAIRMAN: Sorry to interrupt. Number (3), "Leighton being 21 regarding the SAT, which may actually give us some the RC [the registered contractor] for contract 1112 is 22 22 concrete information regarding ductility requirements. 23 23 If I can first ask the Secretariat to turn up part 1 responsible" -- that you take from where? What is the origin of that? Just so that ... 24 24 bundle H2/440. Under the right part of this document --25 further down a bit -- under "Notes on diaphragm wall 25 MR KHAW: I believe it's not in dispute that Leighton is the Page 142 Page 144 couplers", we can see "Ductility zones". In fact that 1 registered contractor for contract 1112. 1 2 CHAIRMAN: Yes, and is therefore responsible for -- I'm with 2 is one of the drawings for the SAT. 3 3 If we can scroll down a little bit, we can see you, yes. 4 MR KHAW: Yes. So, basically, it's about the connection 4 "Ductility couplers accepted by BD", et cetera. Then if 5 5 we can go further down, we can see that this is the between --6 drawing for -- it's general notes for Hung Hom Station, 6 CHAIRMAN: Yes, I appreciate that. I just wanted to 7 7 et cetera. understand the source. So it's -- yes, you are simply 8 8 saying, "You are responsible" ... Perhaps another drawing appears at H4/840. The 9 title says, in the box at the bottom, "Coupler schedule 9 COMMISSIONER HANSFORD: I think what it's saying is anything 10 10 on the 1112 side of the interface boundary is Leighton's for NSL SAT area". If we go up a bit, we will see 11 11 "Typical ductility coupler zones for D-wall for SAT". work. 12 CHAIRMAN: Okay. So that actually shows that according to the accepted 13 13 COMMISSIONER HANSFORD: And anything on the 1111 side is drawings, ductility coupler zones were specifically 14 14 Gammon's. provided in the drawings. 15 Perhaps I should then focus on paragraph 28. Sorry, 15 CHAIRMAN: Gammon's. I've got that. 16 16 Thank you very much. I should start with 27 first. In respect of the 17 MR KHAW: We try to further elaborate this point in 17 interfacing works between contract 1111 and 18 18 contract 1112: paragraph 28 by saying, first of all, according to the 19 (1) CP is required to submit a QAS of the proposed 19 accepted drawings for the works at the interface between 20 contract 1111 and contract 1112, the rebars to be 20 coupler's manufacturer to BO team prior to the 21 21 supplied and installed by Leighton under contract 1112 commencement of coupler works. Under contract 1111, the 22 CP has submitted to BO team a QAS for "Lenton type A2" 22 are to be connected to the couplers cast in place by the

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contractor of contract 1111, ie Gammon.

Then, for the purpose of contract 1111, the

specifications and requirements for Lenton coupler

	Page 145		Page 147
1	assembly were provided in the QAS submitted by MTR and	1	stitch joints at NAT on 12 March 2018. That is
2	accepted by BO team. Insofar as contract 1111 is	2	paragraph 32 of our written opening.
3	concerned only one type of coupler has been accepted by	3	Then Mr Pennicott also has covered the report
4	BO team for the rebar connections at the interface.	4	submitted by MTR regarding the stitch joint, the water
5	Under normal circumstances, Gammon and Leighton	5	seepage problem.
6	would have knowledge of the technical specification of	6	Perhaps I will just add a few letters issued by the
7	the coupler assembly prior to construction of joint 1	7	government. One can be found at it's the part 2
8	and joint 3. MTR would definitely have such knowledge	8	bundle, DD1, page 154. It's a letter from the RDO of
9	as the material submission for Lenton was made by MTR.	9	Highways Department, dated 28 March 2018. Basically RDO
10	In other words, in order to achieve proper	10	wrote to MTR, expressing grave concern on the defective
11	connection to the Lenton couplers installed at the	11	works found at stitch joints, and we stated our position
12	interface by Leighton, all Leighton has to do is to	12	that RDO was not informed of the defects and we were
13	ensure that the appropriate threaded rebars are used	13	only made known of the incident through a media enquiry
14	such that they can be fitted into the Lenton couplers.	14	received on 12 March.
15	So that's all that is required by Leighton.	15	Then we continued to ask MTR to provide further
16	COMMISSIONER HANSFORD: Sorry, Mr Khaw. Does that	16	information and advise on remedial works which would
17	contradict the point we saw in the interface meeting	17	need to be done.
18	minutes about T40 bars, where it said that the T40 bars	18	Another letter appears at DD180. Again, it's about
19	would be BOSA? So what this is saying is that all of	19	the stitch joints. Under (i) we asked MTR to clarify
20	the 1111 couplers are Lenton.	20	how inspection, supervision and monitoring of the
21	MR KHAW: Yes.	21	construction of the defective stitch joints had been
22	COMMISSIONER HANSFORD: But I thought the interface minute		carried out on site to fulfil the corporation's
23	told us that they would all be Lenton, except	23	procedures and requirements.
24	40 millimetre ones. I'm still confused on that point.	24	We also asked MTR to advise the review outcome of
25	MR KHAW: Yes. In fact, according to our understanding, for	25	the project management procedures, et cetera.
	Page 146		Page 148
1	Page 146 the interface, no 40 millimetre diameter couplers were	1	Page 148 In relation to issue 2, issue 2 actually came to
1 2		1 2	
	the interface, no 40 millimetre diameter couplers were	2	In relation to issue 2, issue 2 actually came to
2	the interface, no 40 millimetre diameter couplers were used.	2	In relation to issue 2, issue 2 actually came to light somewhat suddenly, when we were dealing with
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Page 151 Page 149 about the missing RISC forms by way of a letter dated 1 CHAIRMAN: I am with you. So it's the remedial proposals 1 2 20 December 2018, but at that time the letter was 2 you are happy with? 3 confined to the lack of RISC forms relating to NAT, even 3 MR KHAW: Yes. 4 4 CHAIRMAN: Good. And those remedial proposals have been though MTR expected that there would be similar issues 5 5 for SAT, but there was no mention at that time regarding completed, or the works have been completed? 6 6 MR KHAW: Yes. 7 7 46: MTR told us in January that about 40 per cent of CHAIRMAN: So, all being well, that should be safe, but 8 the RISC forms for NAT were missing, but failed to 8 there are -- you've got your verification procedure to 9 provide the data for SAT and HHS. Then we continued to 9 go through? 10 ask MTR to provide detailed accounts of the insufficient 10 MR KHAW: Yes. For the time being, all we know is that the 11 records in all three areas. 11 remedial proposal which has been implemented has 12 47 is to address just one, perhaps, minor point. 12 actually caused the water seepage to stop. But 13 That is, in one of the letters by MTR, that is a letter 13 of course, when it comes to structural safety, then we 14 14 dated 26 January, MTR actually referred to certain NCRs will still need investigation in the verification 15 15 which had previously been listed and issued to HyD. But proposal to further verify the structural integrity of 16 in fact, at that time, what the government was provided 16 the stitch joints. 17 17 was only a list of NCRs. And also, according to the CHAIRMAN: Yes. 18 18 MR KHAW: Regarding issue 2, the government is still list, the issue of missing RISC forms were considered 19 low-risk and without any safety impact. 19 considering and commenting on the latest remedial 20 I don't wish to turn up the list but they can be 20 proposal submitted by MTR, and it is observed that there 21 21 found at BB3/1168 onwards. That contains the list of are some photographs showing non-complying coupler 2.2. the NCRs which talked about the missing RISC forms. 22 assemblies at a few locations, the extent of which is 23 But, as I said, they were all considered low-risk, 23 still unknown. 24 24 non-works related, and also with no safety impact at Regarding issue 3, since we were only informed of 25 that time. 25 the substance and extent of the issue of missing RISC Page 150 Page 152 forms and also the lack of material testing records in 1 49 is about a letter issued by the Highways 1 2 2 Department on 1 February, requesting MTR to provide about December 2018 and January 2019, we have been 3 3 an incident report and also a holistic proposal. As asking for information repeatedly from MTR. Up to the 4 4 I said, the verification proposal is finally agreed present moment, the extent of the problem is yet to be 5 5 between the parties. ascertained. 6 6 We have some percentage, some figures showing the In relation to the present status of the three 7 issues, at paragraph 54: insofar as issue 1 is 7 percentage of the missing RISC forms that have been 8 8 concerned, remedial works proposed by MTR have been provided by MTR. However, we still don't know how the 9 approved by the Highways Department, and they have been 9 figures have been arrived at. 10 10 completed in July 2018. As for the recently observed As to the deviations in design, again --11 water seepage at the stitch joints, the Highways 11 CHAIRMAN: Sorry, the Pypun report/audit, does that go to --12 Department noted that immediate action had been taken by 12 MR KHAW: That goes to the missing RISC forms. 13 applying injection grout and would continue to closely 13 CHAIRMAN: That's right. 14 monitor the situation. But in relation to joint 2, we MR KHAW: In fact, there are findings in Pypun's latest 14 15 say we still don't know how extensive and in what way 15 report, but as I said earlier that is still under review 16 the coupler connections at the stitch joints were not in 16 by the government and we will try to produce a short 17 17 compliance with -reply consisting of our comments later. 18 CHAIRMAN: Sorry, just so I understand paragraph 54(1) -- as 18 CHAIRMAN: Thank you very much. 19 far as issue 1 is concerned, government at this stage is 19 MR KHAW: Finally, (3)(b) is about deviations in design. 20 reasonably satisfied as to the issue of safety? 20 What the BD said is that technically the use of couplers 21 MR KHAW: The issue of safety will have to be further 21 as an alternative splicing method to the lapping of 22 explored in the verification proposal. 22 rebars is acceptable, provided that the coupler 23 CHAIRMAN: Yes, I appreciate that. 23 assemblies were properly installed as per the 24 24 MR KHAW: Insofar as the remedial proposals are concerned, requirements specified by the BO team during 25 25 consultation submission and the requirements of the so far we have accepted the remedial proposals.

	Page 153		Page 155
1	material supplier.	1	INDEX
2	Well, again, we are facing a situation where, since	2	PAGE
3	we were not consulted, we were not able to deal with the	2	
4	deviations earlier. However, one part of the	3	Opening address by MR PENNICOTT2
5	verification proposal will aim at dealing with	3	Ononing submissions by MD TSOI
6	deviations.	4	Opening submissions by MR TSOI78
7	So, accordingly, the issues that have to be	5	Opening submissions by MR KHAW129
8	investigated include: (i) how this issue could have gone	6	
9	undetected at the time of construction; (ii) the reason	7	
10	for the lack of clear records for such deviated works;	8	
11	and (iii) whether the coupler assemblies have been	9	
12	properly installed.	10	
13	That takes me to perhaps a discussion on the	11 12	
14	progress of the holistic proposal which started in	13	
15	part 1 of our Inquiry and also the verification proposal	14	
16	for this part of the Inquiry. I will let Mr Chow deal	15	
17	with the final part of our opening.	16	
18	Perhaps, if we don't have enough time today, Mr Chow	17	
19	can deal with it tomorrow morning.	18	
20	CHAIRMAN: All right. Good. Thank you very much, Mr Khaw.	19	
21	We are at 4.30 now. I think you're likely to be	20 21	
22	a little bit more than quarter of an hour, Mr Chow.	21	
23	MR CHOW: Yes. For some reason, I always have the luck of	23	
24	having very little time left for my submission. You	24	
25	will recall that last time	25	
	Page 154		
1	CHAIRMAN: You can start tomorrow with a whole day ahead of		
2	you!		
3	MR CHOW: I'm happy to start tomorrow, sir.		
4	CHAIRMAN: All right. Good. Thank you very much indeed.		
5	So we will adjourn then until tomorrow morning at		
6	10 o'clock.		
7	MR PENNICOTT: Sir, can I just mention, before we finish		
8	we have asked the MTRC to supply the Commission with		
9	some samples of the Lenton couplers, and they've kindly		
10	agreed to do that and we hope to have them with us		
11	tomorrow.		
12	CHAIRMAN: Good. Thank you very much.		
13	(4.29 pm)		
14	(The hearing adjourned until 10.00 am the following day)		
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