### COMMISSION OF INQUIRY INTO THE CONSTRUCTION WORKS AT AND NEAR THE HUNG HOM STATION EXTENSION UNDER THE SHATIN TO CENTRAL LINK PROJECT

### WITNESS STATEMENT OF TUNG HIU YEUNG FOR MTR CORPORATION LIMITED

I, TUNG HIU YEUNG (aka VICTOR TUNG), c/o MTR Corporation Limited, MTR Headquarters Building, Telford Plaza, 33 Wai Yip Street, Kowloon Bay, Hong Kong, WILL SAY AS FOLLOWS:

- I am providing this witness statement in response to two letters dated 22 March 2019 [BB1/34-44]
   respectively in relation to the Hung Hom Stabling Sidings ("HHS") and the South [BB1/23-33]
   Approach Tunnels ("SAT") from Messrs. Lo & Lo who I understand are the solicitors acting for the Commission of Inquiry into the Construction Works at and near the Hong Hom Station Extension under the Shatin to Central Link ("SCL") Project. I am duly authorised by the MTR Corporation Limited ("MTRCL") to make this statement on its behalf.
- I obtained a Certificate (General Course) from the Hong Kong Institution of Vocational Education ("IVE") in 1991. In 2006, I obtained a Certificate (Civil Engineering) from IVE. I also obtained a Higher National Certificate (Civil Engineering) from the Social Resources Development Institute in 2014.
- 3. I joined MTRCL in 2011 as an assistant inspector of works ("AIOW") and was promoted to an inspector of works ("IOW") in December 2013.
- 4. I became involved in SCL Contract 1112 on or about 15 January 2015 as an IOW. I was initially assigned to the HHS. On or about 1 December 2015, I was promoted to the position of senior inspector of works II ("SIOW II") and was additionally assigned to cover the SAT and the HHS Back of House. On or about 16 January 2016, I was



further assigned to cover the modifications at the Concourse. I remained in the foregoing position until I left MTRCL in early December 2018. I am now employed by the Airport Authority as a Project Inspector.

- 5. I shall deal with my involvement at the HHS in section A of this statement and my involvement at the SAT in section B. I shall deal with the issue of deviations (as defined in the HHS and SAT letters) in Section C.
- 6. I should point out at the outset that although I was also involved in the construction of the North Approach Tunnels ("NAT"), my involvement at that location was limited to monitoring site safety and general progress issues. I understand that Messrs. Lo & Lo [BB1/1-22] have also issued a letter dated 22 March 2019 in relation to NAT. I understand that MTRCL will adduce evidence from other witnesses more closely involved with the issues raised in the NAT letter. I confirm that I did not have any involvement in respect of the construction of the 3 Stitch Joints and the Shunt Neck.

### A My involvement at the HHS<sup>1</sup>

Item 2.7: With reference to the timeline in the construction and completion of HHS, describe and explain the various stages and checkpoints at which RISC form inspections would have to be conducted and RISC forms would have to be generated by Leighton and provided to MTRCL to counter-sign

Item 2.8: Explain the mechanism and procedures in place on the part of MTRCL to ensure that RISC form inspections would actually take place at the relevant checkpoints, that the relevant RISC forms would be properly endorsed by the appropriate parties in a timely manner thereafter and that copies of the RISC form would be maintained as part of MTRCL's records in its database

Item 2.12: Explain why such a vast amount of RISC forms are missing in relation to HHS. Identify and provide a summary of all the check points relating to the missing RISC forms for HHS

<sup>&</sup>lt;sup>1</sup> References to Items are Items in the HHS Letter.

Item 2.13: While RISC forms are not now available in relation to those identified checkpoints:

Item 2.13.1: confirm and explain whether RISC form inspections have actually taken place at the relevant checkpoints;

Item 2.13.2: provide evidence that inspections have actually been carried out;

Item 2.13.4: confirm whether, and on what basis, the inspectors were satisfied that the works for those particular check points have complied with the Requirements, Standards and Practice and the quality required under Contract 1112

- My subordinates were initially Ryan Tam (Works Supervisor ("WS")) and Daniel Cheung (AIOW). I reported to Pedro So (SIOW).
- 8. Wong Wai Chung (WS) was originally assigned to the SAT prior to my promotion in December 2015. After I was promoted to SIOW II and was also assigned to cover the SAT in December 2015, Wong Wai Chung started to report to me and became involved also in the HHS.
- 9. The Construction Engineering Team included Joe Tsang (senior construction engineer ("SConE")), Ben Chan (construction engineer I ("ConE I")), Wing Chen (ConE I), Jason Kwok (construction engineer II ("ConE II")), C K Cheung (ConE II) and Sebastian Kong (Graduate Engineer).
- 10. My normal working hours were between 8:30 am to 6 pm. I spent the better part of my work day (between 9 am to 4 pm) on site carrying out inspections of the site works of the contractor, Leighton Contractors (Asia) Limited ("Leighton"). Thereafter, I would return to the site office to handle various kinds of necessary paperwork, which included familiarising myself with the method statements, checking site staff attendance records which were maintained mainly for the purpose of possible DRM (Delay Remedial Measures) claims, and regular (but not daily) review of record photos which my team and I have taken on site and uploaded to the system.

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- 11. The HHS covered a much larger area than the NAT and the SAT. Before I set out on my daily site walks (which consisted of general site surveillance in respect of the areas I was responsible for), I would check with the Leighton engineers in my Whatsapp group as to which locations were ready for hold-point inspections.
- 12. As will be dealt with further below, I had a practice on SCL Contract 1112 of creating Whatsapp groups for communication between relevant personnel of MTRCL and Leighton on site matters. I had also adopted this practice in previous projects and I found that instantaneous messages were an effective and convenient way of keeping records and promoting the flow of information between relevant personnel.
- 13. Leighton would often list out the locations at which they would carry out works on the day in the Whatsapp groups for inspection purposes. In addition, there were frequent requests by Leighton for hold-point inspections. Apart from carrying out site surveillance and hold-point inspections on the quality of works done by Leighton, I would also conduct general site surveillance on site to monitor the safety and general progress and quality of the works such as rebar spacing.
- 14. When I conducted my site walks, I would take record photos in relation to site safety, progress, site surveillance in respect of quality and hold-point inspections. I would save my record photos on my personal hard disk. Other record photos taken by my subordinates would be uploaded to MTRCL's server with appropriate descriptions added. I understand that a selection of these record photos from my personal hard disk are being disclosed by MTRCL in this Inquiry.
- 15. As my subordinates, Ryan Tam, Daniel Cheung and Wong Wai Chung were relatively new and less experienced than me, I would allocate for their site surveillance and/or hold-point inspections only areas which were of less structural significance and I would look over their work or inspect with them where possible. I would conduct most critical hold-point inspections in respect of the areas with structural significance (such as base slabs, track slabs, walls, back of house, Accommodation Blocks and the West EVA) myself. As far as I can recall and to my best estimate, I carried out 90% of the pre-pour check hold-point inspections of the areas with structural significance.

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- 16. Although the formal hold-point inspections of the rebar fixing were usually carried out by the ConEs, I would at times be requested to provide assistance to the ConE Team (usually by Ben Chan) if they were otherwise occupied by more pressing matters.
- 17. I wish to point out that the construction works at the HHS were relatively simple i.e. the works were not complex structures, and having inspected various works for so many years, the inspection of rebar fixing works at the HHS was a straightforward task which I could carry out with the requisite drawings. As our ConEs had a lot to attend to as part of their daily tasks, as mentioned in the preceding paragraph I would at times help with the hold-point inspections in respect of rebar fixing works. Having said that, I would refer any anomalies detected during such inspections, for example, a departure from the bar bending schedules, back to the ConE team for them to follow up and resolve with Leighton. At times, I was also asked by Leighton's staff to carry out formal hold-point inspections of the rebar fixing works.
- 18. At pre-pour checks, the general condition and cleanliness of the works were the two principal matters to be inspected. Pre-pour checks represented the step immediately before concreting which would permanently conceal the underlying works. As a matter of gatekeeping, I would also pay attention to visually obvious matters such as the diameter of the rebars, lap length, spacing and coupler connection before deciding whether permission should be granted to Leighton to proceed to concreting. I should point out that these matters are not my responsibility as an inspector but if I saw any of those matters which were not right, I would point them out for further action.
- 19. By reason of the matters set out at paragraphs 15 to 18 above, I had signed a number of RISC forms since pre-pour checks and rebar-fixing were two separate hold points under the relevant Inspection and Test Plans signed RISC Forms requiring hold-point inspections.
- 20. At the time when I became involved in SCL Contract 1112 in January 2015, there was a persistent problem with Leighton's late or outstanding submissions of RISC forms.
- 21. For example, shortly before I became involved in SCL 1112, Dick Kung of MTRCL complained to Kevin Harman, the Quality and Environmental Manager of Leighton, in

#### [Item 16 of 3rd List]

early December 2014 [Email dated 3 December 2014]. Leighton admitted that there was a shortcoming in terms of late RISC form submissions, as a result of which it conducted a review and identified avenues for improvement.

22. However, the problem with Leighton's late or outstanding RISC form submissions was never resolved. For example, in another email dated 15 May 2015 copied to various colleagues including myself, C K Cheung (ConE II) complained to Roger Lai of Leighton about late submissions of RISC forms for the location at 1875 MH035-034 and pointed out that a one-month delay in submission of RISC form was unacceptable [Item 12 of 3rd List]
[Email dated 15 May 2015].

#### [Item 21 of 3rd List]

- 23. Indeed, even in July 2018 I was compiling RISC status lists for Michael Fu to monitor Leighton's RISC form submissions which showed that Leighton's performance, whilst showing some improvement, was still far from being satisfactory (the on-time percentage improved from 46.63% to 69.84% during the period under review in 2018).
- 24. As regards the RISC forms signed by myself, I wish to note that many of them were received by MTRCL after I had carried out the relevant inspections.
- 25. The reason I was able to fill out the RISC forms despite Leighton's late submissions was that I was able to retrieve the relevant contemporaneous information from the Whatsapp groups and the record photos.
- 26. I now explain the Whatsapp groups I created for tracking the relevant contemporaneous information.
- 27. When I first became involved, I created individual groups for individual locations, as necessary, which included as participants relevant personnel from MTRCL and Leighton.

[Item 12 of 3rd List]

28. As an example, I had earlier stated that C K Cheung had on 15 May 2015 sent an email to Roger Lai of Leighton complaining about Leighton's RISC form submissions at 1875 MH 035-034. I had created a group specifically titled "HHs1875 MH34-36" in which Roger Lai was a participant. The record shows that I had on 30 June 2015 requested Leighton to "provide hardcopy of inspection form to us for record... [as] the detail is

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*different when inspection*" as "*I did not want to argue with Leighton when I signed the form*". As a further example, I made the exact same complaint in another Whatsapp group titled "*New underpass*" on 30 June 2015.

- 29. However, as the construction works at the HHS proceeded and work activity became busier, it was impossible to maintain separate Whatsapp groups for individual locations. Therefore, in July 2015, I created a Whatsapp group titled "HHS Inspection Group".
- 30. The participants in the HHS Inspection Group included the following personnel from Leighton (their positions as set out below are to the best of my recollection): Alan Yeung (Senior Engineer); Daniel Teoh (Site Agent); Jeff Li (Graduate Engineer who was later promoted to Senior Engineer); Matthew Tse (Senior Engineer); Ricco Ng (Training Apprentice); Roger Lai (Site Engineer); Ronald Leung (Site Agent); Sydney Fung (Senior Engineer); Lam Wai Chung (Engineer); Kevin Cheung (Site Engineer); and, Yvonne Lai (Site Engineer).
- 31. The HHS Inspection Group was later replaced (in March 2016) by another Whatsapp group titled "*Inspection Group*". The participants remained largely the same, with the addition of Ken Wong and Henry Lai of Leighton.
- 32. The records in the HHS Inspection Group and Inspection Group paint the following general picture [Whatsapp screen captures]:
  - (1) I and my colleagues had to chase Leighton to submit RISC forms;
  - (2) There were occasions, for example for drainage pipe air tests, where I had provided all relevant inspection data to Leighton's Lam Wai Chung and reminded him to submit the requisite RISC forms;
  - (3) Leighton would often inform me of the location to be inspected on the day (the ad hoc hold-point inspections referred to earlier) with a promise that the relevant RISC form would follow;
  - (4) In purported compliance with my request to provide a formal written record of a request for inspection (see paragraphs [28] above), Leighton would on

occasions send through a photograph by Whatsapp of a RISC form to be submitted and treat the photograph as a formal request for inspection;

(5) on one occasion in December 2015, Leighton sent over to me four months' worth of RISC forms in one go for me to fill out.

In relation to the last matter, despite the fact that a substantial number of RISC forms were sent by Leighton to me in one lot, I was able to confirm that the requisite hold-point inspections had taken place and that the inspection results were satisfactory based on the whatsapp and photo records that I had personally kept. It was, however, a time-consuming and cumbersome exercise and not satisfactory. That prompted me to send Leighton a Whatsapp message requesting them to make sure RISC forms were present at the time of the inspections.

- 33. I now illustrate how a hold-point inspection would be tracked on Whatsapp and I have selected the inspection of New Northern Underpass Staircases 28, 30 and 32 which took place on 31 July 2015 as an example:
  - At 10:45 am, I enquired at what time Staircases 28, 30 and 32 would be ready for inspection;
  - (2) At 10:55 am, I reminded Leighton to bring along the requisite form and drawings, and requested that the inspection be attended by an engineer;
  - (3) At 2:40 pm, I received from Leighton a photo of the relevant RISC form which was not registered with MTRCL;
  - (4) The inspection took place at around 4:50 pm and I took a number of photographs to record the fact that the conditions were checked and that concreting would take place the following day.
- 34. I must confess that I am surprised at the extent of the missing RISC forms in relation to the HHS. If the extent of the missing RISC forms is accurate, the main cause was Leighton's inability to keep the relevant documentation submissions in step with the progress of the works (despite MTRCL's repeated complaints and requests for Leighton

to submit RISC forms timeously). Secondly, some RISC form inspections cover a few areas i.e. one RISC form covering a number of areas. As far as I am aware and as illustrated by the position adopted by Leighton in its own emails referred to above, Leighton has never denied that such inability was a shortcoming on its part.

- 35. During my hold-point inspections, if any of the works carried out by Leighton were not acceptable or satisfactory then I would reject them until rectification work was carried out. One such example was an incident at the VRV Room. The salient events were as follows.
  - (1) On 30 June 2017, we were asked to carry out a hold-point inspection of re-bar fixing works at the VRV Room. We discovered that there was incomplete fixing of couplers and rejected the works accordingly.
  - (2) However, Leighton decided to proceed to cast concrete despite the rejection of the rebar fixing works and <u>before</u> requesting MTRCL to carry out a pre-pour check. The relevant Whatsapps at the material time recorded the following exchanges:

17/6/30 15:43 - MTR Jason: 清潔都好似冇收□ 17/6/30 15:44 - +852 9455 0665: 清潔都再收 17/6/30 15:44 - +852 9455 0665: 清潔都未收 17/6/30 15:48 - MTR Jason: 哩度都係 rejected 17/6/30 15:59 - MTR Ryan: 就落完 17/6/30 15:59 - MTR Ryan: <省略多媒體> 17/6/30 16:02 - MTR Jason: 就係頭先見佢落緊先要小 17/6/30 16:03 - MTR Jason: 請入 RISC 被 reject, 唔入我都會出 email record 17/6/30 16:44 - Victor Tung: Jeff, 點睇住 d 細嘅□□□ 17/6/30 16:45 - Victor Tung: Rebar 同 general cleaning 都要 rejected

(3) On the same day, Jason Kwok sent an email to Leighton's Ronald Leung (which I was copied in) in the following terms:

"Please note that the rebar inspection was rejected this pm for the remaining footing at VRV Unit, due to incomplete fixing of the coupler, refer to the attached photos. More than half of the coupler at the B1 rebar were not properly fixed. Your engineer did not rectify the defects and decided to cast concrete anyway. It is also note that general cleaning inspection was not arranged with our IOW before pouring concrete. This is unacceptable.

Please follow up and advise your remedial action.

Please also be reminded to submit RISC form for all the required inspection in advance, as RISC forms are outstanding for recent inspections."

- (4) A few days later, on 4 July 2017, we received two RISC forms from Leighton [Item 18 of 3rd List] [Item 19 of 3rd List] numbered 1112-CIV-012444 and 1112-CIV-012445. The former was for rebar fixing and the latter was for the general condition/pre-pour check and we duly [Item 19 of 3rd List] recorded our rejections of the works. In particular, for RISC 1112-CIV-012445 we specifically reminded Leighton to review its ITP system and to properly brief its frontline staff in order to avoid a future recurrence.
- 36. However, despite Leighton's shortcomings at the site level I made a real effort to keep full records and carried out proper hold-point inspections, especially at a time when Leighton's records were falling behind the progress of works on site.
- 37. Had we insisted on proper submission of RISC forms by Leighton strictly before each and every hold-point inspection was allowed to take place, site progress would have been seriously affected. I understand how giving Leighton the indulgence of carrying out an inspection without a proper RISC form being submitted may, in hindsight, be viewed as not the best practice. However, the reality on site at the time was that there was a lot of pressure in ensuring that there were no delays to the progress of the works and delays would have occurred had I insisted that I had a RISC form in every instance where I inspected the works.
- 38. Just after my departure from MTRCL, at the request of Kit Chan (ex-Construction Manager on SCL Contract 1112), I had compiled a set of my own records (including photos and Whatsapp messages) by locations. I have provided the same to Kit Chan and I understand that they would be used for MTRCL's verification exercise. Unfortunately, I have not retained a copy of the files I provided to Kit Chan.

### **B** My involvement at the SAT<sup>2</sup>

## Item 2.12: Explain why such a vast amount of RISC forms are missing in relation to SAT. Identify and provide a summary of all the check points relating to the missing RISC forms for SAT.

Item 2.13: While RISC forms are not now available in relation to those identified checkpoints:

Item 2.13.1: confirm and explain whether RISC form inspections have actually taken place at the relevant checkpoints;

### Item 2.13.2: provide evidence that inspections have actually been carried out;

- 39. As regards the SAT, at the earlier stage (before January 2016) I do not recall any or any substantial problems with Leighton's submission of RISC forms. At that time, Leighton had three personnel on site, namely Shane Wong (Sub Agent), Sean Wong (Senior Engineer) and K S Chan (Graduate Engineer), whom I referred to as 'the 3-S engineers' and they kept up with the requisite inspection documentation.
- 40. As I understand it, towards the end of 2016, Leighton's inspection documentation was principally done by Raymond Tsoi alone. That there were more omissions in the inspection documentation might be due to Leighton's lack of manpower.
- 41. For my part, I had delegated the inspection tasks at the SAT to Thomas Yu from early 2016. The delegation was made for a number of reasons. First, as mentioned earlier, the HHS comprised of a much larger area than the SAT and involved many more locations with rebar fixing and prepour check hold-points than the SAT. Secondly, as mentioned in paragraph 15 above, my 3 subordinates Ryan Tam, Daniel Cheung and Wong Wai Chung were relatively new and had less experience and I had to cover them as well. Thirdly, in comparison the construction works at the SAT were not particularly complicated. Fourthly, I was tasked with monitoring and ensuring proper progress of the L&R Tracks and from 2016 I had to cover the Concourse as well.

[BB1/23-33]

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<sup>&</sup>lt;sup>2</sup> References to Items are Items in the SAT letter.

- 42. However, I still included the SAT in my site walks about 4 times a week, although my focus at the SAT was mainly on site surveillance in respect of site safety and general progress issues.
- 43. I did regularly make enquiries with Thomas Yu and separately keep myself abreast of the developments of SAT in the Whatsapp groups titled "*SAT-EWL Daily Resource*" and "*HHS&SAT*". I should emphasise that whilst the former included participants from Leighton, the latter only involved personnel from MTRCL. Leighton's participants in the SAT-EWL Daily Resource group included Joe Tam, Henry Lai and Raymond Tsoi.
- 44. I do not recall that there were any inspection matters which called specifically for my attention at the SAT. However, as in the case of the HHS, I do recall Leighton's Raymond Tsoi sending photos of RISC forms in the SAT-EWL Daily Resource group for Thomas Yu's approval [Whatsapp screen capture].
- 45. There were occasions when Thomas Yu carried out a hold-point inspection even when Leighton had yet to make a proper submission of the relevant RISC form.
- 46. As I had delegated the inspection tasks at the SAT to Thomas Yu, I am not fully aware of the extent of missing RISC forms at the SAT.

### C Deviations<sup>3</sup>

Item 2.16 Explain when and how such deviations came about and describe MTRCL's role and participation in such deviations. Confirm whether MTRCL was aware of these deviations and approved of them at the time of the construction of NAT.

Item 2.21 Confirm whether MTRCL would inspect, check and test the materials (couplers and rebars) against Requirements Standards and Practice after such materials were delivered to the site and before they were used for the construction of [SAT or HHS as the case may be]

<sup>[</sup>BB1/23-33] [BB1/34-44] <sup>3</sup> Item reference is a reference to the SAT and HHS letters.

47. I was aware that at various locations of the SAT and the HHS there were changes from the use of lapped bars to couplers. Although I had a general idea of the locations involved (for example, near Bay 5 of SAT EWL), I am unable to point to the precise locations. However, as far as I can recall the changes were all made at locations for access purposes. Although I am not an engineer, in my experience the change from lapped bar to couplers is quite a common engineering solution to suit site conditions as lapping and couplers are interchangeable methods of creating a continuous rebar structure. As a result, I did not question the change to the use of couplers from lapped bars at those locations. I have read the statements of Tang Siu Hang Tony dated 2 May [BB1/135-137]
2019 (paragraphs 55 to 64 and Fu Yin Chit dated 3 May 2019 (paragraphs 25 to 27). I agree with what they say on material testing in relation to the NAT and such practice also applied to the SAT and HHS, except that the material testing at the HHS would at times be carried out by the Works Supervisors.

TUNG HIU YEUNG

15 May 2019