Commission of Inquiry into the Diaphragm Wall and Platform Slab Construction Works at the Hung Hom Station Extension under the Shatin to Central Link Project

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FIRST WITNESS STATEMENT OF MAN SZE HO

I, MAN SZE HO, of [redacted] say as follows:

1. I was an assistant engineer with Leighton Contractors (Asia) Limited ("**Leighton**"), the main contractor for the Hung Hom Station Extension contract (Contract SCL 1112) (the "**Project**") under the Shatin-Central rail link project. The project manager for the Project is MTR Corporation Limited ("**MTRCL**").

2. Unless otherwise stated, the facts stated herein are within my personal knowledge and are true. Where the facts and matters stated herein are not within my own knowledge, they are based on the stated sources and are true to the best of my knowledge.

My qualification and experience

3. I joined Leighton in 2013 as Assistant Engineer, and was part of Leighton's engineering construction team. I was promoted to Engineer in or around early 2016. The engineering construction team is responsible for method statement preparation, programming, procurement, management of resources, supervision and inspection of the works, sequencing of the works and worker safety.

4. From around June 2013 until around May 2015, I was responsible for the piling works at the Project. From around June 2013 until around May 2015, I worked on Area C of the East West Corridor platform slab at the Project ("**EWL Slab**") and Area B and Area C of the North South Corridor platform slab at the Project ("**NSL Slab**").

My role and responsibilities

Working hours and daily routine

5. My usual working hours on the Project were from 8am to 6pm. From time to time, I would work overtime (unless another suitable Leighton employee was available to do

the inspection on site) to provide inspection for general cleaning work prior to pouring concrete, and during concreting.

6. I usually started my day in the site office. I would then go to the site around 9 am to conduct a round of my areas. I would have lunch from 12pm to 1pm. I would then go to the site again around 2pm to do another round of my areas. I would spend approximately three to four hours per day on site on an average day.

7. On site, I conducted routine informal inspection of the work being carried out by the subcontractors closely and on a daily basis in order to ensure that it was carried out safely and in accordance with the approved / agreed drawings and workflow process. I also ensured that the subcontractors were aware of the work schedule and made arrangements as necessary to assist them in meeting the target schedule.

Duties and responsibilities for EWL Slab and NSL Slab

8. For around the first two years on the Project, I was in the foundation team and was responsible for the piling works. Thereafter, I worked on the EWL Slab and NSL Slab.

9. As an engineer on the EWL Slab and NSL Slab, I was responsible for the following relevant tasks:

   (a) coordinating Leighton's subcontractors and their workers in the performance of their work;
   (b) checking the work of Leighton's subcontractors to ensure that the works were completed in accordance with drawings;
   (c) ensuring that all hold points were observed up to and including prior to concreting; and
   (d) attending formal inspections with MTRCL at each hold point prior to concreting (unless another Leighton engineer could attend) to ensure that MTRCL was satisfied with the works.

10. For the EWL Slab and NSL Slab, Leighton's subcontractors were Fang Sheung Construction Company ("**Fang Sheung**") and China Technology Corporation Limited ("**CT**"). Fang Sheung was responsible for installation of the reinforcement bars

("**rebars**") in the EWL Slab and NSL Slab, and CT was responsible for erecting the formwork, falsework, cast-in items and concreting works.

11. My supervisors during the time when I was working on the EWL Slab and NSL Slab were Andy Ip (Sub-Agent) and Joe Leung (Site Agent). They closely monitored my work and I sought guidance from them whenever I felt it was necessary. My team also included two other engineers, Edward Mok and Sasa Leung. My team worked well together and communicated with each other frequently.

Supervision and inspection of work

12. I understand the Commission of Inquiry is concerned about the connection between the rebars and couplers.

13. As part of the overall supervision system for the works, Leighton's engineering construction team conducted routine informal inspections, as well as formal inspections with MTRCL's engineer or Inspector of Works ("**IoW**").

14. I set out below my role in both informal (routine inspections) and formal inspections of the works, including the connections between the rebars and the couplers.

Routine inspections

15. During my routine informal inspections when I was doing my rounds of site visit as described above, I would visually inspect the connections between rebars and couplers, the arrangement and alignment of the installed rebars, and the general cleanliness of the area before concreting. During these inspections, I do not recall identifying any defective rebars or any rebars not properly screwed into the couplers.

Formal inspections

16. There were two key formal inspections of the reinforcement. The first was the rebar fixing inspection with MTRCL's engineer. The second was the pre-pour check with MTRCL's IoW. The workflow process for these formal inspections is as follows:

    (a) The subcontractors (in this case, Fang Sheung) knew that their work need to be inspected or rectified (if there are any defects) before they moved on to next work area. This was called a "hold point". The "hold points" were a critical

stage in the construction process and were set out in the Inspection Test Plan as agreed by MTRCL and included in the method statement. Once a "hold point" was reached, subsequent work could only be started after approval was given by MTRCL based on a formal inspection conducted by Leighton and MTRCL.

(b) MTRCL's engineer and I would jointly conduct the formal inspection for rebar fixing (which I discuss further below).

(c) Once MTRCL's engineer had approved the rebar fixing inspection, I would then conduct further checks to satisfy myself that the area was ready for concreting. Generally if time permitted, I might arrange the concreting preparation work and rebar fixing work simultaneously to reduce delay.

(d) Once I was satisfied with the preparation works before concreting, MTRCL's IoW and I would jointly conduct the formal inspection for the pre-pour check.

(e) It was standard practice that MTRCL's engineer/IoW would verbally approve the inspected works and authorise Leighton to proceed after the formal inspections. The only exception would be if MTRCL's engineer/IoW required rectification work. If the defect was minor, I would ensure that such remedial work was completed immediately by the subcontractor during the inspection. Otherwise, if more time was required to complete the rectification work, further inspection would be arranged with MTRCL.

(f) It was standard practice that Leighton would continue working after verbal approval was obtained from MTRCL following a formal inspection. This allowed works to continue without delay. Thereafter, MTRCL's engineer/IoW would complete the inspection forms to record their approval and return it to Leighton later.

17. The practical aspects of the formal inspection for rebar fixing were as follows:

(a) There were in fact two formal inspections. The first was undertaken after Fang Sheung had completed the bottom layers of rebars and the second after the top layers were completed.

(b) Each of the two inspections of rebar fixing comprised checking the arrangement of rebars, the spacing of the rebars, lap length of rebars and the connections between rebars and couplers. I would physically measure the spacing and lap length of rebar samples in the area to be inspected and check whether the as-built complied with the working or agreed drawings. With reference to the measured samples, I would then conduct visual check across the area to ensure that there was consistency of the spacing and lapping of the rebars. I understand that the Commission is mainly interested in the connections between rebars and couplers and will focus on this topic below.

(c) As noted above, for the connections between rebars and couplers, I would check that the threads of the rebars were screwed into the couplers and not exposed (or that only one or two threads were exposed).

(d) Both MTRCL's engineer and I would walk along the bay looking down at rows of rebars to check that the rebars were connected to the couplers with only one or two threads exposed.

18. During formal inspections for pre-pour checks, MTRCL's IoW and I would generally inspect the rebars and connections to couplers. The checks completed at these formal inspections were in addition to my routine informal inspections.

19. Generally the rebar fixing inspections for my areas of the EWL Slab and NSL Slab were conducted by my colleague, Edward Mok. I would perform formal inspections if Edward was not available.

20. For the areas that I was responsible for, all formal inspections for rebar fixing and pre-pour checks were approved by MTRCL. This indicated that the connections between rebars and couplers were formally inspected and approved by both Leighton and MTRCL. No concrete was poured without hold points being inspected, formal inspections having been completed and MTRCL authorising Leighton to proceed.

Defective reinforcement bars identified and rectified

21. I recall that in or around November - December 2015, I was on annual leave and upon my return, I was informed by other members of my team that five rebars with the threaded ends cut off had been installed in one bay of Area C of the EWL Slab. These rebars were identified during an inspection conducted by Edward Mok and MTRCL's engineer. I do not know why Fang Sheung's workers would have installed the small number of defective rebars.

22. I understand that Fang Sheung undertook rectification work immediately and Edward Mok and MTRCL's IoW inspected and approved the rectification work. I also understand that a Non-Conformance Report ("**NCR**") was formally issued to Fang Sheung to remedy the five defective reinforcement bars. I only heard about the details of the NCR from my colleagues.

23. Otherwise, I have no knowledge of any reinforcement bars with the threaded ends cut off or shortened being installed in, or intended to be installed, in the platform slabs and diaphragm walls.

Allegation of threaded ends being cut off reinforcement bars

24. Other than as mentioned above, I confirm that I have not during the course of the Project (other than as alleged in the media):

    (a) seen or heard of the threaded end of any rebars being cut off or shortened; or

    (b) seen any loose threaded ends of rebars that were installed or intended to be installed in the Project.

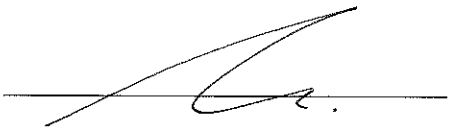
25. I confirm that I did not instruct, or allow, any person to cut off or shorten the threaded ends of any rebars. I am also not aware of any Leighton staff who gave or would have given such instructions or would have allowed the threads ends of rebars to be cut off or shortened.

The works are of acceptable quality

26. In the areas that I was responsible for (which is all that I can comment on), I am satisfied with Leighton's and my supervision of the Project. We implemented a thorough system

of supervision and inspection to ensure that the procedures were followed. In my personal opinion, the EWL Slab and NSL Slab are safe and properly constructed.

Dated the 26 day of September 2018.

Signed: 

Man Sze Ho