

**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**

**WITNESS STATEMENT OF WONG KAI WING, ANDY
FOR
MTR CORPORATION LIMITED**

I, **WONG KAI WING, ANDY**, of MTR Corporation Limited, MTR Headquarters Building, Telford Plaza, 33 Wai Yip Street, Kowloon Bay, Hong Kong, **WILL SAY AS FOLLOWS**

1. I am an Assistant Inspector of Works- Civil ("**AIOW**") of MTR Corporation Limited ("**MTRCL**") for the Shatin to Central Link Project ("**SCL Project**").
2. I first joined MTRCL in June 2011 as an AIOW for the South Island Line Project and I remained in that position until August 2015. Since September 2015, I have been the AIOW for the SCL Project.
3. I obtained a Higher Certificate (Civil Engineering) from the Hong Kong Institute of Vocational Education in 2005.
4. I am providing this witness statement in response to various matters raised in a letter dated 27 July 2018 from Messrs Lo & Lo ("**Letter**"), who I understand are the solicitors acting for the 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 ("**Commission of Inquiry**"). In this statement, I shall address the matters listed as items 4, 5, 8 (a)-(c), (e), (f), 11 (j)-(p), 12 (a), (b), (d), (e), and 13 (b)-(c) of the Letter.
5. While I am aware of the matters raised in items 4, 5, 8 (a)-(c), (e), (f), 11 (j)-(p), 12 (a), (b), (d), (e), and 13 (b)-(c) of the Letter based on my first-hand observations and personal involvement in the SCL Project since September 2015 and I confirm that the contents of this statement are true to the best of my knowledge and belief, there are

occasions when I can only speak to matters by reference to MTRCL's documents due to the lapse of time, in which case I believe the contents of those documents are true and correct.

Request No. 4: Identify the type of work and duties under taken by such managers, supervisors and inspectors.

Request No. 5: With reference to the said steps, procedures and timeline, please describe and explain the respective roles and involvement of the Government, Your Company, Leighton, Fang Sheung, Intrafor and China Technology and elaborate on the interaction and relationship between Your Company and these parties on site and on a day-to-day working basis.

6. Between September 2015 and December 2015, I was the AIOW mainly responsible for Areas C2 and C3 of the EWL slab at Hung Hom Station. I was occasionally asked to inspect other areas of the EWL slab at Hung Hom Station. I worked under the supervision of Kobe Wong, who was the Inspector of Works – Civil (“**IOW**”) and, from around November 2015 onwards, the Senior Inspector of Works - Civil II (“**SIOW II**”). Every morning, Kobe Wong would brief me on what to look out for in our site surveillance which we carried out daily and I reported to Kobe Wong on a daily basis.
7. As AIOW, my primary role was to conduct daily site surveillance to monitor the day-to-day site works of the contractor, Leighton Contractors (Asia) Limited (“**Leighton**”), at the locations I was assigned to. Typical areas of activities to be covered by site surveillance are: (i) works being constructed/installed; (ii) general progress of site works; (iii) general site management; and, (iv) safety.
8. When I started working in Areas C2 and C3 of the EWL slab at Hung Hom Station in September 2015, the diaphragm walls at Area C had already been completed. I worked daily between 8:30 am and 6:00 pm. I spent about 4 to 5 hours every day conducting daily site surveillance of steel fixing works for the EWL slab and the connections of the EWL slab with the diaphragm walls.
9. In the performance of my duties as AIOW, I spoke to Leighton's site staff on a regular basis, particularly when I required them to address issues arising from works that had

not been carried out in compliance with the contract requirements or the agreed contractor's submissions.

10. The relevant Leighton staff that I liaised with to address any construction issues were Andy Ip (Sub-Agent), Sasa Leung (Engineer), and Edward Mok (Graduate Engineer). I spoke to Edward Mok on a regular basis. These persons were responsible for directing the relevant personnel to address any construction issue that I raised with them. I had no interaction with the representatives of Fang Sheung, Intrafor, China Technology, or Government.
11. I filled in the site diaries electronically on a daily basis and uploaded them on to the MTRCL server.
12. I also took photographs at site every day (except for the days when I was off duty) to record the construction works being carried out and site safety conditions. For the purpose of the SCL Project, I was part of at least two Whatsapp groups for Area C of the EWL slab: one for construction works generally and one for site safety. As part of my reporting duty, I sent my photographs taken at site concerning construction works and the site safety conditions to these two Whatsapp groups respectively. (I cannot now recall who were included in these Whatsapp groups as these groups have been deleted, but I do remember that Kobe Wong was in them).
13. These photographs were downloaded onto my office computer from my phone and were deleted from my phone afterwards. I also uploaded some (but not all) of these photographs onto the MTRCL server every day.
14. Unfortunately, most of the photographs I took on site cannot now be retrieved. This is because after my transfer to the Hung Hom Station Concourse towards the end of December 2015, I was removed from these Whatsapp groups and I have therefore subsequently deleted these groups. Further, about a year ago my computer was infected with a virus which completely wiped out the data in the hard drive. The only photographs that can be retrieved are those that remain on MTRCL's server.
15. As part of my duty, I was also responsible for signing off some of the Request for Inspection / Survey Check ("RISC") forms for inspections that I performed. I have previously provided to the Interview Panel of the MTRCL (which I understand from

members of the Interview Panel was set up to investigate into the alleged Defective Steel Works) on 9 June 2018 a RISC Forms Register showing the RISC forms that I had signed off. As can be seen from the RISC Forms Register, for the period between September and December 2015 I signed off RISC forms concerning various matters including:-

- (1) Tests for Cathodic Protection;
 - (2) Condition check for capping beam;
 - (3) Reinforcement bar fixing of footing under column; and
 - (4) Diaphragm wall shear key trimming.
16. However, I did not sign any RISC form concerning the reinforcement bar fixing in the EWL slab, which was inspected and signed off by the Construction Engineers of MTRCL.

Request No. 8 (pre): Given the extensive public concern about the safety of the diaphragm walls and platform slabs and allegations that there might have been unlawful shortening, cutting or defective connection of the steel bars in the diaphragm walls and platform slabs ("Defective Steel Works"):

Request No. 8(a): Explain and confirm whether Your Company has any knowledge of the Defective Steel Works (whether undertaken by Leighton and/or its sub-contractors) and if so, identify and describe the relevant events and occasions. Please describe the defects, explain in what ways Requirements, Standards and Practice had been breached and provide particulars of such events and occasions (with reference to plans and drawings, photographs and documents as necessary and appropriate), including but not limited to the dates, time, locations, number of steel bars affected and the equipment used to shorten or cut the steel bars.

Request No. 8(b): Identify the managers, supervisors, inspectors and/or other persons who witnessed such events and occasions.

Request No. 8(e): Following Your Company's knowledge of the relevant events and occasions, please describe and explain what steps and measures were taken by Your

Company to (i) investigate the Defective Steel Works; (ii) alert and report the matter to the Main Parties and the Government or any of them and (iii) rectify the Defective Steel Works.

Request No. 8(f): If a report was made, please identify the persons in Your Company who reported the matter to the Main Parties and the Government and the recipient(s) of such reports. If the matter was not reported to the Main Parties and the Government, please explain why no report was made.

First incident

17. On or around 15 December 2015, I conducted site surveillance of the construction works in Area C as usual at or around 2 or 3 pm after lunch. As I was patrolling the site, I noticed that there were 2 cut ends of threaded steel bars lying on the surface of the fixed steel bars of the EWL slab in Area C3 Bay 2. Next to one of these cut ends of threaded steel bars was a wire cutter.
18. Upon inspecting the steel bar fixing works, I also noticed 5 steel bars at the bottom layers of the EWL slab of the same bay that were not properly installed into the couplers (3 of them were not connected to couplers at all and 2 of them were not fully screwed into the couplers with a portion of the threaded end exposed). These steel bars were located at the slab-to-slab (construction joint) and the slab to diaphragm connections.
19. I took some photographs of the cut ends of the threaded bars and the steel bars that were not properly installed into couplers and immediately sent these photographs to Kobe Wong via Whatsapp to report the situation to him. I also made a follow up phone call to Kobe Wong after sending the Whatsapp message. Kobe Wong instructed me over the phone to follow up with Leighton the necessary checks and to ensure that the problems with the 5 identified steel bars were rectified. Kobe Wong told me that he would also come down to the site to inspect.
20. After my phone call with Kobe Wong, I immediately called a Leighton's site staff (I cannot now remember who that person was) and informed him that I had found cut ends of threaded steel bars and that some of the steel bars were not properly installed into couplers.

21. Within an hour after my call with Leighton's site staff, 4 or 5 of Leighton's site staff (including Sasa Leung) arrived at the location where I had discovered the steel bars that required attention. I requested the Leighton's site staff to direct workers to unscrew the steel bars for my inspection.
22. After the workers had loosened and removed the 5 steel bars I had identified earlier, I inspected the threaded ends of these 5 steel bars and discovered that they had been shortened (about half of the threaded portion of each steel bar was cut off). I told Leighton's site staff that this was unacceptable.
23. I requested Leighton's site staff to immediately rectify the defects in these 5 steel bars. Leighton's site staff arranged for workers to replace these steel bars with new threaded steel bars and screw them back into the couplers. I witnessed the rectification works of 2 steel bars and thereafter I continued to patrol within the site to inspect other construction works. I returned after around 30 minutes to inspect the rectification work of the other 3 steel bars, which were carried out satisfactorily.
24. In this incident, I only liaised with Leighton's site staff to follow up with the construction works and did not speak to any other workers or other Leighton's representatives.
25. I understand that Kobe Wong sent out an email on the same day to Leighton's representatives (including Andy Ip and Edward Mok), and copied me in, putting the incident on record. In this email, Kobe Wong attached 4 photographs that were taken by me and sent to him via Whatsapp:
 - (1) The 1st photograph shows two steel bars not properly screwed into the coupler.
 - (2) The 2nd photograph shows a wire cutter lying on the fixed steel bars in Area C3 Bay 2. This was the location where I found one of the cut ends of the threaded steel bar.
 - (3) The 3rd photograph shows a cut end of a threaded steel bar resting on my hand.
 - (4) The 4th photograph shows three shortened threaded steel bars not properly screwed into the couplers.

26. I also understand upon reading the Non-conformation Report No. 157 during the preparation of this witness statement that on around 18 December 2015, Leighton issued a Non-conformance Report to Fang Sheung regarding this incident. .
27. I have also been shown an email dated 6 January 2017 from Leighton. RISC Form 1112-CIV-011266 is attached to this email along with some photographs. While I have not previously seen this email, I confirm that some of the photographs attached to this email/ RISC Form 1112-CIV-011266 were taken with my phone when the rectification works for the 5 defective steel bars were being carried out.
28. When interviewed by the Interview Panel of the MTRCL, I had previously stated that I believed the date of the first incident to be in or around September or October 2015. That statement was made without the benefit of consulting the relevant documents to refresh my memory of an incident that took place some three years ago. Upon reading the time stamp on the photos attached to the 6 January 2017 email from Leighton, I can now confirm that the first incident should have taken place on or around 15 December 2015.
29. I also previously told the Interview Panel of the MTRCL that I believed the likely location of the first incident was Area C2. However, as the incident had taken place three years ago, I did not have a clear memory regarding the location. My statement was based on the concreting schedule of the EWL slab. After recently consulting the relevant documents, it is likely that the first incident took place on or around 15 December 2015, and hence it could not have been in Area C2. This is because the concreting of the EWL slab in Area C2 was completed in November 2015. I have now been shown a copy of an email from Kobe Wong to Leighton dated 15 December 2015, which was copied to me, concerning this incident. I now believe that the incident should have taken place in Area C3 Bay 2, as recorded in Kobe's email.

Second incident

30. Sometime between 16 December 2015 and 31 December 2015, during regular site surveillance in Area C1 Bay 5 or Area C3 Bay 3, I saw that there were 5 or 6 threaded steel bars that were not screwed into the couplers. These steel bars were located at the slab-to-slab (construction joint) connections.

31. I immediately messaged Kobe Wong via Whatsapp to report the situation. I also made a follow up phone call to Kobe Wong after the message. Kobe Wong instructed me over the phone to follow up with Leighton the necessary checks and to ensure that the problems with the 5 or 6 identified steel bars were rectified.
32. At the time when I noticed that the steel bars were not properly connected, concreting works of that Bay had already commenced.
33. After my phone call with Kobe Wong, I immediately called Leighton's site staff (I cannot now remember exactly who that person was) and informed him/her that I found 5 or 6 steel bars that were not properly screwed into the couplers. I told him/her that this was unacceptable and requested him/her to address the issue quickly.
34. Leighton's site staff directed workers (I am not sure whether they were its own workers or its subcontractor's workers) to address the issue immediately. Those steel bars nearer to the visible surface of the fixed steel bars were rectified satisfactorily by being replaced with new threaded steel bars. However, there were 3 steel bars that could not be rectified as they were located in the lower part of the top reinforcement layer, meaning that it was impossible for workers to reach in and rectify them. Concreting proceeded as scheduled.
35. I cannot recall now whether I reported to Kobe Wong the fact that the 3 steel bars located in the lower part of the top reinforcement layer could not be rectified prior to the concreting works.
36. As with the first incident, it is recorded in my interviews with the Interview Panel of the MTRCL that I believed that the date of the second incident was in or around October or November 2015. However, I made this statement without the benefit of consulting the relevant documents to refresh my memory of an incident that had taken place three years ago. While I cannot remember exactly when the second incident took place, to the best of my memory I believe that the second incident took place after the first incident. As such, I now believe that the second incident should have taken place between 16 December 2015 and 31 December 2015 (after which I was transferred to the Hung Hom Station Concourse).

37. Further, I had also previously told the Interview Panel of the MTRCL that I believed that the likely location of the second incident was Area C2. As the incident took place three years ago, I do not have a clear memory regarding the location. My then belief as to the likely location was based on the concreting schedule of the EWL slab. However, after recently consulting the relevant documents, as the first incident should have taken place on or around 15 December 2015, the second incident, which took place after the first incident, could not have taken place in Area C2. This is because concreting of the EWL slab in Area C2 was completed in November 2015. Based on the summary of the concrete pour dates as contained in the MTRCL Report at p. 31, and coupled with my recollection, I believe the second incident should have taken place in Area C1 Bay 5 (the concrete pour date was 23 December 2015) or Area C3 Bay 3 (the concrete pour date was 28 December 2015).

Request No. 8(c): Identify the workers who shortened, cut or defectively connected the steel bars and the party or entity which employed or engaged those workers and persons.

38. The cutting/ shortening of steel bars on site is a normal construction practice. All steel bars are delivered to the construction site in the length of 12 metres. It is a normal procedure to cut these 12 metres long steel bars to the necessary length to suit the design intent of the drawings. For example, it is a normal phenomenon that the vertical steel bars at the top of the diaphragm walls are of different lengths and therefore, they are not aligned. To suit the design intent, these vertical steel bars must be aligned. It is normal to see workers using wire cutters to trim these steel bars so that they align.
39. I have seen workers using wire cutters to perform this kind of steel bar cutting to suit the design intent. I do not know who employed those workers.
40. However, it is not a normal construction practice to cut the threaded ends of steel bars and I have no idea who shortened, cut or improperly connected the steel bars. I did not investigate into the reasons behind the shortened or defectively connected steel bars in the two incidents mentioned above. It was not my role to do so. I reported the matter to my superior Kobe Wong and it was for him to decide what to do with the information I gave him.

Request No. 11(j): With the help of diagrams and drawings, indicate the exact locations of where the steel bars were shortened, cut or improperly connected within the diaphragm walls and platform slabs.

41. Please refer to the HUH EWL Track Slab Pour Plan attached to this witness statement, on which I have marked the location of the first incident and two possible locations of the second incident based on my best recollection.

Request No. 11(k): Indicate and confirm (either with reference to contemporaneous records or provide your best estimate) how many steel bars had been shortened, cut or improperly connected within the diaphragm walls and platform slabs. Explain the basis of your confirmation or best estimate.

42. Please see my answer to Request 8(a) above.

Request No. 11(l): Confirm whether Leighton, its subcontractors and/or their respective workers had referred such difficulties and issues to Your Company and if so, please identify (with particulars) the entities and/or person(s) who referred the difficulties and issues to Your Company and describe the replies and instructions given by Your Company to resolve the difficulties and issues. Please state whether the replies and instructions were given orally or in writing. If orally, identify by whom and to whom the same were made, when and in what circumstances. If in writing, please produce all relevant documents.

Request No. 11(m): Please provide contemporaneous written documents (if there were any) recording the reports made by Leighton, its subcontractors and/or their respective workers on the said difficulties and issues to Your Company and the replies and instructions given by Your Company (if any).

Request No. 11(n): Confirm whether Your Company was aware that instructions were given by Leighton for the steel bars to be shortened and cut in order to overcome the said difficulties and issues. If so, at which point in time did Your Company become aware of such instructions.

43. None of Leighton, its subcontractors, or their respective workers have ever referred any difficulty with steel bar fixing to me.

Request No. 11(o): After the steel bars were shortened and cut, or in some cases, after the shortened steel bars were screwed into the couplers, please explain and confirm whether Your Company had directed and insisted that rectification measures be taken by Leighton and/or any of its subcontractors to ensure the compliance, quality, safety and integrity of the diaphragm walls and platform slabs. If so, describe and explain the rectification measures taken and rectification work(s) carried out and whether inspections had been carried out thereafter. If not, please explain why not.

44. Please see my answer to Request 8(a) above.

Request No. 11(p): Explain whether it is common in the construction of diaphragm walls and platform slabs for steel bars to be shortened and cut and confirm whether such shortening and cutting of steel bars within the diaphragm walls and platform slabs is acceptable and in compliance with Requirements, Standards and Practice.

45. Please see my answer to Request 8(c) above.

Request No. 12 (pre): On the same page 36 of the MTRCL Report, Fang Sheung "further confirmed that their steel fixing works were regularly checked by Leighton and MTRCL" and Fang Sheung would not proceed to next stage of works unless permission was given. With reference to the steps, procedures and timeline in the construction and completion of the steel fixing works in the diaphragm walls and platform slabs as stated in your answer to paragraph 5 above, please:

Request No. 12(a): describe at which stage the steel fixing works would be inspected by Your Company and Leighton.

Request No. 12(b): state how frequently Your Company and Leighton would carry out the inspections.

46. Please see my answers to Requests 4 and 5 above. In the performance of my duties as AIOW, I carried out daily site surveillance to monitor day-to-day site works at the locations I was assigned to.

Request No. 12(d): describe and explain how the inspections would be carried out, whether they were visual inspections only or equipment was used or both.

47. Inspections were generally carried out by way of visual inspection. During these inspections, I paid particular attention to the following:-

- (1) Whether there was any gap between the threaded steel bars and the couplers; and
- (2) Whether there was any steel bar which was not fully and properly screwed into the couplers with the threaded portion of the steel bar exposed.

Request No. 12(e): confirm whether reports or records were kept following the inspections and if so, please produce such reports and records.

48. Please see my answers to Requests 4 and 5 above.

Request No. 13(b): Confirm whether Your Company was aware that steel bars were being shortened or cut by hydraulic cutters on site, and if so, what were the reasons for using a hydraulic cutter to carry out such work.

Request No. 13(c): Confirm whether workers engaged by Leighton and/or its subcontractors had used hydraulic cutters to shorten and cut the steel bars embedded or to be embedded within the diaphragm walls and platform slabs and if so, please identify the workers and/or entities who carried out such shortening or cutting work by hydraulic cutters, and the persons and/or entities who gave instructions (i) for such work to be carried out and (ii) for hydraulic cutters to be acquired.

49. I have seen several wire cutters and bar bending machine on this site. I have not seen other cutter such as hydraulic cutter on this site. As explained in my answer to Request 8(c) above, it is normal to see workers using wire cutters to trim the vertical steel bars at the top of the diaphragm walls so that they are aligned to suit the design intent.

50. Finally, I would like to mention the following:

- (1) The events in question and which form the subject matter of the Commission of Inquiry took place several years ago and my recollection of every detail is not therefore perfect.

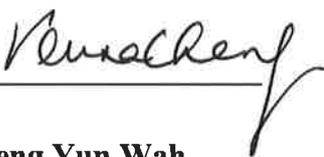
- (2) Accordingly, in preparing this witness statement I have reminded myself of the events in question by reference to various hard copy and electronic documents and materials, including contemporaneous email correspondence, meeting minutes and contractual documents and other records. I understand these materials were retrieved by MTRCL's Legal Department, with the assistance of the MTRCL's external lawyers, Mayer Brown.
- (3) The hard copy documents were: (1) extracted from physical files kept at the Hung Hom site office or the Hung Hom main office of MTRCL; (2) printed from the MTRCL's "Electronic Project Management System" (ePMS); or, (3) printed from other electronic sources in response to the matters specifically raised by the Commission of Inquiry or matters which were discussed in the course of preparing this witness statement.
- (4) I understand that MTRCL's Legal Department and external lawyers have recently established a database using software named *Relativity* which has captured a large amount of data from hard disk drives, including some of those that stored my emails and other electronic documents for the relevant period. I understand that they have commenced the process of identifying specifically relevant documents by use of search terms and date ranges and that this is an ongoing process due to a large volume of data. I have been given some of the documents identified from *Relativity* during the last week or so and commented on these in appropriate sections of this statement.
- (5) I would like to add, therefore, that there may be matters referred to or stated in other documents which have not been recently placed before me. To that extent, I would be happy to comment on any such other materials at a later date if and when identified and placed before the Commission of Inquiry.

Dated 12th September 2018



WONG Kai Wing, Andy

I certify that I, Cheng Yun Wah, of Mayer Brown, 16-19/F, Prince's Building, 10 Chater Road, Central, Hong Kong, have interpreted the contents of this witness statement to the person making this witness statement who appeared to understand the same and approved its content as accurate and made his signature in my presence.



Cheng Yun Wah

Date: 12th September 2018

Corrigendum to the Witness Statement of Andy Wong Kai Wing
Dated 12 September 2018

| Page | Paragraph | Content |
|-------------|------------------|--|
| B449 | 8 | Add to the end of paragraph 8 <i>“I worked extended hours from 8:30am to 11pm once or twice a week. On those days, I patrolled around the site from 6pm until around 10:30 pm. Thereafter, I went back to the office to type up a man power summary setting out the activities, number of workers and plant at different areas of the site.”</i> |