

**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 NGAI YUM KEUNG, CLEMENT
FOR
MTR CORPORATION LIMITED**

I, **NGAI YUM KEUNG, CLEMENT**, of MTR Corporation Limited, MTR Headquarters Building, Telford Plaza, 33 Wai Yip Street, Kowloon Bay, Hong Kong, **WILL SAY AS FOLLOWS**

1. I am the Head of Project Engineering ("**HPE**") in the Projects Division of the MTR Corporation Limited ("**MTRCL**"). I am also the Engineer for major civil contracts for various projects, including SCL and XRL Projects.
2. I first joined MTRCL in 1992 as an Engineer (Civil). Between 1992 and 2008, I was involved in various projects, including the Lantau Airport Railway Project, the North Island Line Project, and the West Island Line Project. From August 2008 to February 2018, I was the Design Manager of the SCL Project responsible for the North South Corridor (NSL). I was promoted to the position of Chief Design Manager in March 2013. In or around June 2016, I also took up the role of Acting HPE and, subsequently in November 2016, the role of HPE and I have remained in that role since then. From 1 August 2018, I was retitled to HPE. I was also appointed to act as the Engineer for the purposes of Contract 1112 on or around 20 June 2016.
3. I obtained a Bachelor's Degree in Science at the University of California in 1981 and a Master's Degree in Engineering at the University of Sydney in 1984. I have been a member of the Hong Kong Institution of Engineers since 1993 and a member of the Institution of Civil Engineers in the United Kingdom since 1994.
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, 8(a), 11(b) and 11(p) of the Letter.

5. While I am aware of the matters raised in items 4, 8(a), 11(b) and 11(p) of the Letter based on my first-hand observations and personal involvement in the SCL Project 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.

Item 4: Identify the type of work and duties undertaken by such managers, supervisors and inspectors.

6. As the CDM, I was responsible for design management and, upon request, give advice to Project Managers (“**PM**”) and the Competent Persons (“**CP**”) on all design related matters during the design and construction phase of the SCL Project. I was responsible for overseeing and managing the designs, statutory, structural and strategy submissions prepared by the design consultants and temporary works designs by contractors in respect of impacts to the permanent structure to ensure compliance with the relevant design standards and statutory requirements and to assist the CP for submission to the Buildings Department (“**BD**”)/ Railway Development Office (“**RDO**”) pursuant to the requirements of EA3. During the construction phase, I would also provide support, upon request, to the PM, CP, and Construction Manager in terms of reviewing design submissions on civil engineering and structural aspects prepared by the contractors.
7. However, I did not have any day-to-day involvement in design management which was delegated to and carried out by three Design Managers (“**DMs**”), Mr. Andy Leung, Mr. Ralph Tam and Mr. Vincent Chu and their predecessors. Issues would only be brought to my attention if they could not be resolved by the DMs or they required my advice.
8. As HPE, I led a team of engineers and architects to provide the technical support to the project team as required.

9. The HPE was also responsible for the nomination of CPs who were responsible for co-ordinating and supervising the works to ensure that the project was executed to the quality, safety, and environmental standards required by MTRCL as well as to fulfil the requirements under the consultation process. All consultation submissions to BD/RDO were certified by the corresponding CP and Registered Geotechnical Engineer (“RGE”) (for the works with significant geotechnical content), including the certification of completion of works. The appointment of CPs was subject to prior agreement with BD and RDO in regard to their qualifications and experience. The CPs nominated by me and my predecessor, Mr. Stephen Chik, for Contract 1112 are:

| Effective Date | End Date | Person Nominated | Letter Reference |
|-----------------------|-----------------|-------------------------|-------------------------|
| 28-Mar-13 | 1-Sep-13 | Julian Saunders | SCL-COR-HPE-STO-000005 |
| 2-Sep-13 | 15-Feb-15 | Aidan Rooney | SCL-COR-HPE-STO-00010 |
| 16-Feb-15 | 7-Aug-18 | Jason Wong | SCL-COR-HPE-STO-000017 |
| 8-Aug-18 | Present | Neil Ng | SCL-COR-HPE-STO-00035 |

10. I am empowered under the Conditions of Contract 1112 to appoint the Engineer’s Representative and delegates to perform on my behalf the Engineer’s day-to-day duties including inspection and supervision of the execution of the works and testing and examining any materials or workmanship to be used or provided by the contractor.
11. I have reviewed the letters issued by my predecessor, Mr. Stephen Chik, and myself in the position of the Engineer to Leighton regarding the appointment of the Engineer’s Representative and other Persons under the Contract. The Engineer’s Representative and Engineer’s delegate appointed by me and Mr. Stephen Chik for the SCL Project were:-

Engineer’s delegates

| Effective Date | End Date | Person Appointed | Letter Reference |
|-----------------------|-----------------|-------------------------|--------------------------|
| 15-Mar-13 | 5-Feb-15 | Philco Wong | 1112-DELG-HPE-CCM-000001 |

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|-----------|-----------|-----------------|--------------------------|
| 15-Mar-13 | 18-Aug-13 | Julian Saunders | 1112-DELG-HPE-CCM-000001 |
| 19-Aug-13 | 30-Aug-13 | Brendan Reilly | 1112-DELG-HPE-CCM-000002 |
| 17-Sep-13 | 23-Dec-15 | | |
| 31-Aug-13 | 16-Sep-13 | Aiden Rooney | 1112-DELG-HPE-CCM-000003 |
| 6-Feb-15 | 7-Aug-18 | | 1112-DELG-HPE-CCM-000005 |
| 10-Aug-18 | Present | Neil Ng | 1112-DELG-HPE-CCM-000009 |

Engineer's Representative

| Effective Date | End Date | Person Appointed | Letter Reference |
|-----------------------|-----------------|-------------------------|--------------------------|
| 15-Mar-13 | 23-Nov-14 | Patrick Cheng | 1112-DELG-HPE-CCM-000001 |
| 24-Nov-14 | 29-May-16 | Kit Chan | 1112-DELG-HPE-CCM-000004 |
| 30-May-16 | Present | Michael Fu | 1112-DELG-HPE-CCM-000006 |

12. Since I oversee more than 10 major civil contracts as the Engineer for the SCL Project as well as many other civil contracts under the XRL and other projects of MTRCL, I heavily rely on the above Engineer's Representatives and delegates in the administration of Contract 1112.

Item 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

13. As I have explained above, I do not have any involvement in the day-to-day management of the SCL Project. My colleagues would only consult me on major issues arising from the design and construction works. I did not hear of the alleged Defective Steel Works until it was first reported in the media.
14. The General Manager chairs the monthly progress meeting for the SCL Project, which covers the reporting of all major contracts including Contract 1112 under the SCL Project. I have attended most of these meetings. The issue of the alleged Defective Steel Works was never raised at these monthly progress meetings.
15. I was added to various Whatsapp Groups in relation to Contract 1112. I have not seen any message regarding any Defective Steel Works.

Item 11(b): Please identify the person or persons responsible for preparing the MTRCL Report.

16. My involvement in the preparation of the June Report was limited to reviewing a few draft paragraphs under the section entitled "Carrying out site supervision and inspection in accordance with Statutory Requirements."

Item 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

17. The standard length of rebars is 12 metres long. It is common in the construction of diaphragm walls and platform slabs to cut the steel bars to suit the design intent in accordance with the drawings and specifications.
18. It is not common for threaded steel bars to be shortened and cut. I do not have knowledge of the alleged shortening and cutting of steel bars within the diaphragm

walls and platform slabs. Therefore, I am not in a position to comment on whether it is acceptable or in compliance with the Requirements, Standards and Practice.

19. 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; (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 14 September 2018



NGAI Yum Keung, Clement

Corrigendum to the Witness Statement of Clement Ngai Yum Keung
Dated 14 September 2018

| Page | Paragraph | Content |
|-------------|------------------|--|
| B236 | 13 | Replace “ <i>I did not hear of the alleged Defective Steel Works until it was first reported in the media</i> ” with “ <i>I did not hear of the alleged Defective Steel Works until 6 January 2017 when TM Lee forwarded to me an email chain in respect of Jason Poon’s email to Anthony Zervaas of Leighton timed at 6 January 2017 9:45 AM. TM Lee asked me to ask Andy Leung to look into the matter raised in the email chain. I accordingly forwarded the email chain to Andy Leung on the same day.</i> ” |
| B236 | 16 | Add at the end “ <i>and commenting on an earlier draft of the June Report</i> ”. |