

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
APPOINTED PURSUANT TO SECTION 2 OF THE COMMISSION OF INQUIRY
ORDINANCE (CHAPTER 86) ON 10 JULY 2018

**Extract of 3rd Witness Statement of Ho Hon Kit dated 27 November 2018
(Paragraphs 13, 14, 26 – 32)**

A. Process of design amendments under the IoE

13. Notwithstanding the clear requirement for consultation submission for amendment set out in the PMP, there are situations in which prior acceptance by BD through the consultation process would not be required. Typical examples of such situations are cited below (some of which are also cited in the witness statements of Mr. Buckland, Mr. Taylor and Mr. Lumb):

- (a) Minor construction details such as locations of construction joints are usually not shown on plans to be submitted for consultation. As such, changes to such minor details can be carried out without going through the consultation process.
- (b) Minor change to the lapping position of rebars that are within construction tolerance can be carried out without prior acceptance and such change can be incorporated in the subsequent permanent work amendment submission or reflected in the as-built drawings upon completion of the works.
- (c) The depths of diaphragm wall panels shown on the accepted plans are specified by referencing to the tentative founding levels (e.g. H5/896) as it is heavily relying on the actual condition of the founding stratum. In the circumstances, the panel depths are meant to be also tentative. Therefore, subsequent minor changes to the tentative founding levels only and without changes to the founding criteria (e.g. the type of founding stratum remains unchanged) are not required to be incorporated in a diaphragm wall amendment submission for consultation and prior acceptance. Upon completion of the diaphragm wall works, it is sufficient to record the actual founding

levels on the as-built drawings.

14. The above examples show that, whilst the process and procedures for consultation submission for amendment are clearly set out in the PMP, depending on the nature and extent of the changes involved, BD would sometimes exercise its discretion to allow insignificant changes to be incorporated in subsequent amendment submissions or the as-built drawings in the completion stage without going through a consultation submission process prior to the carrying out of the works concerned.

D. The allegation that BD had knowledge about the change of details

26. In paragraphs 13 and 14¹, Mr. Brett Buckland alleged that BD was aware of the change in design and did not object to it. I have already responded to this issue in paragraphs 22 to 31 of my 2nd witness statement.

27. I must stress that the change, according to Leighton's case, was allegedly made to part of the permanent structure (i.e. the diaphragm wall and EWL slab) rather than temporary works. The proper procedure should be for MTRCL to make a permanent works amendment submission to BD for acceptance before such works are carried out. In this case, the fact that possible change to the permanent structure was only briefly mentioned as "construction sequence" set out in the design reports attached to two amendment submissions for temporary works, namely the Excavation and Lateral Support Plan for Area C ("**ELS Plan Submissions**"), cannot be treated as a proper amendment submission. Despite BD's reminders (see paragraphs 26 and 27 of my 2nd witness statement), the required structural details for the intended change to the permanent structure at the junction between the east diaphragm wall and EWL slab was not incorporated into any of the subsequent permanent works amendment submissions.

28. After the ELS Plan Submissions, MTRCL submitted 10 permanent works amendment submissions for HUH Primary Structure for Area C ("**Permanent Works Amendment Submissions**"). A list of the **Permanent Works Amendment Submissions** is set out at Annex 1. However, the structural details for the change in question were not shown in the drawings

¹ See also Justin Taylor's 3rd witness statement §16-17[C26556-C26557].

attached to the said submissions.

29. Notably, the section on “Construction Sequence” in the design report originally attached to ELS Plan Submissions specifically referred to possible structural changes such as the trimming of the top of the diaphragm wall panel and the fixing of the top rebar of EWL slab at the D-wall panel. These structural changes were however not included in the Permanent Works Submissions (e.g. submissions dated 30 July 2015 [C17/12144], 4 November 2015 [B16/13758] and 14 January 2016 [B11/8536]). On the other hand, some other proposed changes in the permanent platform slab mentioned in the ELS Plan Submissions were incorporated into the Permanent Works Amendment Submissions. For example, the justification of reinforced concrete design for the as built reinforcement details at the interface between the diaphragm wall and EWL slab between gridlines 22 to 40 because of the missing U-bars in the diaphragm wall as mentioned in the Executive Summary of the ELS Plan Submissions [B12/8993] had been incorporated into the Permanent Works Amendment Submissions dated 4 November 2015 [B16/13722].

30. In view of the foregoing, there was nothing which showed that MTRCL would proceed with the intended alteration to the top of the east diaphragm wall since it was only mentioned in the ELS Plan Submissions but not in the Permanent Works Amendment Submissions.

31. Further, the works actually carried out on site as presented in the Joint Statement dated 16 November 2018 between MTRC and Leighton (“**Joint Statement**”) were inconsistent with what was stated in section 6.2 of the design report (TWD-004B3):

- (a) As mentioned above, section 6.2 did not mention that the couplers would be replaced by through bars;
- (b) As shown in Annex B to the Joint Statement [B19/25487-25493], there were various types of connections details. These were not included in section 6.2 of the design report. In particular, Types 2, and 4 details show that the extent of trimming of the top of the diaphragm wall were 200mm and 1500mm respectively but not the lowest level of top rebar for the EWL slab as indicated in Section 6.2 of the design report. I note that the said Types, 2 and 4 details were

adopted in panels EH69, EM70, EH71, EM72 and EH74; and EM60, EM64, EM66, EM68, EM72, EH75, EH76, EM86, EM88, EM90, EM92, EH101, EM102, EH111A, EH112, EH113 and EM114 respectively [B19/B25487-25488].

32. Apart from the inconsistencies highlighted in paragraph 31 above, discrepancies were also noted between Annex A2 to the Joint Statement [B19/25486] and the bar bending schedule prepared by Fang Sheung [E3/534] in that top through rebars were used for panels EH44 and EH45 instead of couplers as shown in Annex A2 to the Joint Statement.

Annex-1

List of Permanent Works Amendment Submissions for Area C after the temporary ELS works submission on 29 July 2015			
Submission Date	Submission Title	MTR Reference No.	BD Reply Letter Date
30.07.2015	HUH Primary Structure and ELS for Part 3 of 4: Area C (Amendment for Slabs Due to DW Coupler Issue)	1112-COR-DM(SCL)-STO-000974	17.09.2015
04.11.2015	HUH Primary Structure and ELS for Part 3 of 4: Area C (Amendment for DW & Slabs Due to DW Coupler Issue)	1112-COR-DM(SCL)-STO-001232	31.12.2015
14.01.2016	HUH Primary Structure and ELS for Part 3 of 4: Area C (Amendment)	1112-COR-DM(SCL)-STO-001375	02.03.2016
11.03.2016	HUH Primary Structure and ELS for Part 3 of 4: Area C (Amendment)	1112-COR-DM(SCL)-STO-001475	22.04.2016
12.04.2016	Design Report of Structural Assessment and Remedial Proposal to Cracks on Retained Bored Piles at GL 46/L, 47/L and 48/L in Area C3	1112-COR-DM(SCL)-STO-001528	26.05.2016
18.05.2016	HUH Primary Structure and ELS for Part 3 of 4: Area C (Amendment)	1112-COR-DM(SCL)-STO-001602	21.06.2016
09.08.2016	Hung Hom Station Primary Structure and ELS Part 3 of 4: Area C (Amendment)	1112-COR-DM(SCL)-STO-001714	13.01.2017
09.03.2017	HUH Primary Structure and ELS for Part 3 of 4: Area C (Amendment)	1112-COR-DM(SCL)-STO-001893	31.03.2017
30.06.2017	HUH Primary Structure and ELS for Part 3 of 4: Area C (Consolidated R-t-C and Drawing)	1112-COR-DM(SCL)-STO-001832	28.07.2017
20.12.2017	HUH Primary Structure and ELS Part 3 of 4: Area C (Response to Comment)	1112-COR-DM(SCL)-STO-002015	24.07.2018

H40583