

**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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**SECOND WITNESS STATEMENT OF BRETT BUCKLAND**

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I, BRETT BUCKLAND, of 39/F Sun Hung Kai Centre, 30 Harbour Road, Hong Kong, say as follows:

1. I refer to my first witness statement dated 9 October 2018 (“**First Witness Statement**”). Unless otherwise stated or the context otherwise requires, any abbreviations shall bear the same meaning as in my First Witness Statement.
2. I make this second witness statement in reply to the following statements submitted to the Commission of Inquiry and to address any relevant matter raised in these statements:
  - (a) the witness statement of Mr. Aidan Gerald Rooney (“**Mr. Rooney**”) dated 14 September (“**Rooney Statement**”);
  - (b) the witness statement of Mr. James Ho (“**Mr. Ho**”) dated 14 September 2018 (“**Ho Statement**”);
  - (c) the witness statement of Mr Chan Kit Lam (“**Mr. Chan**”) dated 13 September 2018 (“**Chan Statement**”);
  - (d) the witness statement of Mr. Andy Leung (“**Mr. Leung**”) dated 14 September 2018 (“**Leung Statement**”); and
  - (e) the witness statement of Mr Lok Pui Fai (“**Mr. Lok**”) dated 13 September 2018 (“**Lok Statement**”).
3. Any allegations or matters raised in the statements mentioned in paragraph 2 above (or any other statements) which are not addressed in, or are inconsistent

with, my witness statements are denied. If I do not address any allegations or matters raised in other witness statements, it should not be construed as an admission on my part.

4. 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, information and belief.

**Allegations from MTRCL Witnesses in relation to Leighton's failure to update the as-built drawings**

5. Mr. Rooney alleges at paragraph 108 of the Rooney Statement that:

*"Leighton's failure to provide such details [of as-built drawing records] was not helpful at a time when MTRCL was under immense time pressure to provide detailed to the Government, conduct a load test (which meant that we needed to find out the details of the actual state of construction) and submit the updated working drawings to BD."*

6. Mr. Ho echoes Mr. Rooney's allegation at paragraph 55 of the Ho Statement:

*"During the preparation of the coupler checklists, the construction team did not have the opportunity to check the information in those checklists against the final as-built condition of the joint between the east diaphragm wall and the EWL slab, as the final amendments to the as-built drawings for the diaphragm walls had not at that stage been submitted by LCAL (even though LCAL is contractually obliged to do so.)"*

7. Leighton is responsible for providing the final as-built drawings before practical completion of the Project. However, Leighton is not responsible for updating the drawings of the permanent works. MTRCL and Atkins were obliged to provide Leighton with the updated drawings for the permanent works. This had to happen before Leighton could complete the final as-built drawings.

8. Atkins only provided the final updated drawings for the permanent works in September 2018. MTRCL still needs to issue these updated drawings to Leighton. As a result, Leighton was unable to provide the final as-built drawings in relation to the Change (i.e. the use of continuous rebars to connect the EWL slab, diaphragm wall and OTE Slab and to pour the connection concurrently) during the relevant period.

**Allegations from MTRCL Witnesses in relation to the drawings for the Change**

9. Mr. Chan alleges at paragraph 52 of the Chan Statement that:

*“LCAL / Atkins Team B should have submitted proposal for change in permanent works design to the Design Management Team and Atkins Team A for their review and approval, who would then issue working drawings for construction to LCAL. On this occasion, they failed to do so.”*

10. Mr. Chan continues at paragraph 53 of the Chan Statement alleging that:

*“...this kind of failure on the part of LCAL / Atkins Team B was persistent during the construction phase of Contract 1112. The Design Management team frequently had to chase them to submit proposal for changes in construction details. For example, in an email dated 19 October 2015 sent by Andy Leung to Justin Taylor and Rob McCrae... Andy Leung made the following complaint: “Justin, I have not received any proposals from you to incorporate the changes initiated by your team (e.g. those resulting from your TQs to Atkins) since the design coordination meeting last week...”<sup>1</sup>*

11. Mr. Leung alleges at paragraph 51 of the Leung Statement that:

*“I should also mention that I have reviewed the design reports on permanent works amendment submissions prepared by Atkins’ Team A for submission by MTRCL to the BD. Such permanent works design reports included a section on “Construction Sequence”, but none of them contained similar paragraphs as in*

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<sup>1</sup> Contract 1112 refers to the main contract between Leighton and MTRCL on the Shatin to Central Link Project.

*Section 6.2 of TWD 004B3. Moreover, all working drawings issued to LCAL showed that the steel re-bars at the connection between the east diaphragm wall and EWL slab were to be connected with couplers, and no demolition of the diaphragm wall (as suggested in Section 6.2 of TWD-004B3 Report in paragraph 49 above) was shown on those working drawings. In addition, LCAL did not make any formal proposals to MTRCL in relation to any demolition of the diaphragm wall.”*

12. In reply to the various statements made by Mr. Chan, both MTRCL and Atkins' Team A were aware of the Change. As explained at paragraphs 25 to 41 of my First Statement and further below, MTRCL received proposals from Leighton in relation to the Change and submitted them to BD.
13. As explained in my First Witness Statement,<sup>2</sup> the same people at Atkins worked in what Mr. Chan calls Atkins' Team A (which acted as MTRCL's DDC) and Atkins' Team B (which worked for Leighton). In practice, there was no real distinction between these two teams within Atkins. This should have been helpful and made it easier for MTRCL and Atkins to update the drawings for the permanent works and to make submissions to BD. There was no legal requirement that MTRCL's DDC and Leighton's design consultant should be separate.
14. While MTRCL may have initially intended there to be some separation between the two Atkins' teams, MTRCL knew that there was no real separation and accepted this position. Indeed, MTRCL actively encouraged the same people at Atkins to compete the work for MTRCL's DDC and Leighton. It follows that MTRCL's DDC was well aware of the Change because the relevant people at Atkins had advised Leighton on it and prepared the submissions that Leighton sent to MTRCL. This is clear from the following emails sent in 2013 at the early stages of the Project (which are produced and marked **Exhibit “BB-4”**):

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<sup>2</sup> Please see footnote 3 of my First Witness Statement, where I state that it was typical for the same people at Atkins to work in what Mr. Chan refers to as Atkins' Team A and Atkins' B.

- (a) Emails exchanged on 26 March 2013 between Torgeir Rooke and me (copied to David Wilson and George Ramsbottom) which discuss splitting the submissions so that temporary works come through Leighton, whilst permanent works go through MTRCL (but from the same Atkins team);
  - (b) Email from Mr. Leung of MTRCL dated 16 October 2013 to me and Torgeir Rooke of Atkins. This email states that Torgeir Rooke would be coming to site to “discuss the possible synergy effects from both sides”. That is, Mr. Leung was supportive of the same Atkins’ team performing work for MTRCL and Leighton to streamline the design submission process;
  - (c) Email from Mr. Leung dated 25 October 2013 to George Ramsbottom and Torgeir Rooke of Atkins (copied to me). In this email, Mr. Leung refers to an email sent by David Wilson (who acted as MTRCL’s DDC) states “I take David’s reply was made in the capacity of 111 Contractor’s designer [Leighton’s designer]”. Mr. Leung is effectively acknowledging that David Wilson represented both teams; and
  - (d) Emails exchanged on 11 November 2013 between Mr. Leung, Torgeir Rooke and me. In these emails, Mr. Leung requests the dates for MTRCL’s DDC submissions. Torgeir responds to provide dates for both MTRCL’s DDC submissions and the temporary works submissions. Mr. Leung then asks me if I am “ok” with those dates. This indicates that Mr. Leung knew that Torgeir Rooke was performing services for MTRCL and for Leighton and could advise on the submissions dates for both parties.
15. Mr. Leung is wrong to criticise Leighton for the fact that the drawings in the First Submission and the Second Submission did not indicate the Change. It was understood by Leighton, MTRCL and Atkins that the drawings for the permanent works would not be updated to reflect the Change at that time

because MTRCL did not want to confuse BD or complicate the issue. For example, Leighton was informed:

- (a) that design report numbered TWD-00B42 (produced and marked **Exhibit “BB-5”**), as prepared by Atkins on 14 May 2015, should not be submitted to BD.<sup>3</sup> Betty Ng of Leighton recorded a conversation to this effect in an email dated 23 May 2015, which states: *“Further to the discussion with Kevin [Yip of MTRCL] yesterday evening, for the initial excavation down to -0.5mPD, confirmed that we are not going to submit TWD-004B to BD for not to confuse BD and complicate the issue”*;<sup>4</sup> and
  - (b) in a meeting with Atkins on 26 May 2015, that the reinforcement details for the EWL Slab did not need to be submitted to BD at that time. This is recorded in Section 7.3 of the minutes for that meeting.<sup>5</sup>
16. MTRCL was focused on getting BD’s acceptance of submissions for the diaphragm wall at the relevant time. I recall that this is why MTRCL did not want the drawings for the connection of EWL Slab, diaphragm wall and OTE Slab to be submitted in mid 2015.
17. As a result, Atkins prepared the First Submission and Second Submission without showing the Change in the drawings to ensure consistency with MTRCL’s position. As MTRCL was responsible for consulting with BD, Leighton followed this approach and allowed Atkins to prepare the First Submission and the Second Submission without showing the Change in the drawings.
18. MTRCL made no relevant comments on the First Submission and the Second Submission. In particular, MTRCL did not ask Leighton to update the drawings in these submissions. Instead, MTRCL sent the submissions to BD. BD then

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<sup>3</sup> The use of continuous rebars instead of bars connected by couplers is set out in Section 1.3.5 and Figure 1.4 in TWD-00B42.

<sup>4</sup> Please refer to item #004-14 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

<sup>5</sup> Please refer to item #012-02 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

accepted the First Submission on 8 December 2015<sup>6</sup> and the Second Submission on 28 April 2016<sup>7</sup>.

19. Further, in relation to the First Submission, it appears from the correspondence between the Building Department and MTRCL that both were aware of changes to reinforcement details. The Building Department raised a query on the point<sup>8</sup> and sought reassurance from MTRCL that the “*corresponding permanent station structure submission are [sic] fully compatible with this ELS design submission*”. MTRCL gave that reassurance.<sup>9</sup>
20. As explained in paragraphs 28 to 31 of my First Witness Statement, my view is that the Change represents a minor variation in detail (i.e. the use of continuous rebars instead of bars connected by couplers) and does not affect the overall stability of the structure. On that basis, I do not accept that it was necessary for Leighton to depict visually the use of continuous rebars on the drawings in the First Submission and the Second Submission. It would not have changed MTRCL’s level of knowledge or awareness regarding the Change. If MTRCL considered it was necessary to receive such drawings from Leighton, MTRCL could have asked Leighton for them at the time.
21. In reply to the comment by Mr. Chan, by reference to the email of Andy Leung dated 19 October 2015, that Leighton had persistently failed to submit proposals for changes to the permanent works design, I recall that Justin Taylor of Leighton sent a comprehensive reply to Andy Leung’s email dated 19 October 2015 to explain why Andy’s complaint was factually incorrect.<sup>10</sup> Justin forwarded his email to me on or around that date. I agree with the points made in Justin’s email dated 19 October 2018. In particular, Justin’s email noted that:

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<sup>6</sup> Please refer to item #010-11 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

<sup>7</sup> Please refer to item #010-14 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

<sup>8</sup> Please refer to the hearing bundle at C24:18002:15.

<sup>9</sup> Please refer to the hearing bundle at B8:4993:15.

<sup>10</sup> Please refer to item #003 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

- (a) Leighton had submitted proposals to MTRCL (specifically, CSF 1112-CSF-LCA-DEM-000176, which included TQ33 and Design Amendment 294 (“DAmS”), and CSF 1112-CSF-LCA-DEM-002917, CSF 1112-CSF-LCA-DEM-002903 and CSF 111-CSF-LCA-DEM-002908);
- (b) MTRCL knew that certain DAmS were not reflected in the drawings for the permanent works. For example, in an email dated 11<sup>th</sup> August 2015, MTRCL had reminded Leighton that DAmS 292 was not incorporated into the drawings and asked that Leighton’s site staff take note of the DAmS;
- (c) Atkins recognised in an email dated 16<sup>th</sup> September 2015 that it had failed to update the drawings, including those relating to temporary works;
- (d) Leighton had identified that certain TQs and DAmS had not been incorporated into the drawings and should have been incorporated much earlier;
- (e) Leighton had issued all necessary TQs to MTRCL but was still waiting on a response; and
- (f) MTRCL had been sending its changes to the permanent works by email but had not formally issued these changes.

22. Leighton therefore cannot and should not be blamed for the failure to update the permanent works drawings in relation to the Change. Leighton had given MTRCL and Atkins all of the information that they would need in order to update the drawings. The delay in updating these drawings is not Leighton’s fault.

**Allegations from MTRCL Witnesses in relation to Leighton’s failure to submit formal proposals for the diaphragm wall**



23. Mr. Leung further alleges at paragraph 35 of the Leung Statement that:

*“...LCAL did not make any formal proposals to MTRCL in relation to such changes to the permanent works design in accordance with the procedures described in paragraphs 20 to 22 above. Accordingly, these changes were not submitted to BD for acceptance in accordance with the consultation process and were not identified until the preparation of Certificate of Completion of Works (conventionally known as “BAI4 submission”), which was submitted in January 2015 for the first batch of the diaphragm wall as-built drawings.”<sup>11</sup>*

24. I do not agree with Leung’s comments. He does not recognise that the drawings showing the rearrangement of the reinforcement detail in the diaphragm wall were initially submitted under a CSF on 23 August 2013.<sup>12</sup> Subsequently, the rearrangement of the reinforcement in each individual panel of the diaphragm wall was submitted under separate CSFs.<sup>13</sup> The first batch of CSFs was accepted by MTRCL on 29 August 2013.<sup>14</sup> The rest of the CSFs were accepted by MTRCL several months later.<sup>15</sup>

25. Both MTRCL and Atkins were also fully aware of and approved the rearrangement of the reinforcement in the top of diaphragm wall in July 2013.<sup>16</sup> In addition, MTRCL supervised the construction of the reinforcement in the diaphragm wall (as it did for all works on the Project)).

### **Allegations from BD Witnesses in relation to the Change**

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<sup>11</sup> Please refer to paragraphs 20 to 22 of the Leung Statement.

<sup>12</sup> Please refer to item #13-01 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

<sup>13</sup> Please refer to item #13-03 to #13-13 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

<sup>14</sup> Please refer to item #13-02 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

<sup>15</sup> Please refer to item #13-14 to #13-24 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

<sup>16</sup> Please refer to items #004-16, #004-11, #004-09 in the chronology set out in Exhibit “BB-1” of my First Witness Statement.

26. Mr. Lok has made various allegations at paragraphs 68 to 71 of the Lok Statement. At paragraph 68(3), Mr. Lok alleges that:

*“...Such changes to the accepted plans cannot be regarded as minor alternation of the main reinforcement of the platform slab which would affect the structural performance of the platform structure.”*

27. Mr. Lok reiterates this point at paragraph 71, stating that:

*“The partial demolition of as-built diaphragm wall and the alteration of the connection details is not a minor alteration. The alteration works could affect not only the distribution of load at the connection but also the structural integrity and safety of both the diaphragm walls and EWL slab. It is a major design change...”*

28. I do not agree with Mr. Lok’s views. Please refer to paragraphs 28 to 31 of my First Witness Statement.

29. Mr. Lok also states at paragraph 68(3) of the Lok Statement that:

*“...MTRCL should have consulted BD on the design changes prior to site construction.”*

30. At paragraph 69, Mr. Lok states:

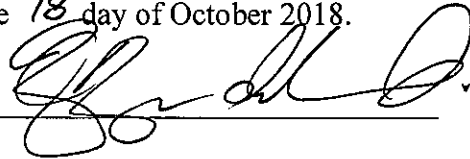
*“... the connection located between diaphragm wall and the EWL slab recently reported in the media is a critical location for load transfer and structural integrity. Any change in connection details without prior acceptance by BO could give rise to concerns about substandard works.”*

31. As explained in paragraphs 13 to 17 and 28 to 30 of my First Witness Statement, I do not believe that MTRCL was obliged to consult with BD in relation to the Change. As explained at paragraph 15 above, BD was also informed of the Change by MTRCL and accepted it. Please refer to paragraphs 35 and 38 of my First Witness Statement and paragraphs 16 and 17 above.

32. In any event, Leighton discharged its responsibilities in relation to the Change by notifying MTRCL by way of various submissions. The burden to consult and notify BD remains with MTRCL. Please refer to paragraphs 18, 27, 34 and 36 of my First Witness Statement.

Dated the 18 day of October 2018.

Signed: \_\_\_\_\_

A handwritten signature in black ink, appearing to read 'Brett Buckland', written over a horizontal line.

Brett Buckland