

**Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways**

**Interim Report on the Commission of Inquiry into the
Construction Works at and Near the Hung Hom Station Extension
under the Shatin to Central Link Project**

(Translation)

INTRODUCTION

The Commission of Inquiry into the Construction Works at and near the Hung Hom Station Extension under the Shatin to Central Link Project (“the Commission”) submitted its interim report (“the Interim Report”)¹ to the Chief Executive on 25 February 2019. This note informs Members of the key findings and recommendations of the Commission, the Government’s responses and the way forward for the Shatin to Central Link (“SCL”) Project.

THE WORK OF THE COMMISSION

2. The Chief Executive in Council appointed the Commission under the Commission of Inquiry Ordinance (Cap. 86) on 10 July 2018 to look into the facts and circumstances surrounding the steel reinforcement fixing works and any other works which raise concerns about public safety in respect of the diaphragm wall and platform slab construction works at the Hung Hom Station Extension under MTR Corporation Limited (“MTRCL”)’s Contract No. 1112 of the SCL Project, following the media reports about alleged cutting of threads from the end of steel reinforcement bars (“rebars”) in late May 2018. The terms of reference and membership of the Commission are at **Annex A**.

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3. By way of an overview, the Commission was given the following mandates —

(a) to determine whether the steel reinforcement fixing works and any other

¹ Hard copies of the Interim Report were delivered to LegCo Secretariat on 26 March 2019 for Members’ reference.

works which had given rise to public concern as to their safety were fit for purpose (i.e. whether they were safe);

(b) to determine whether the works had been executed in accordance with Contract No. 1112 and if not, why not, and whether rectifying steps had been taken; and

(c) insofar as it was necessary, to conduct a review of the relevant supervision, management and control systems of both the Government and MTRCL.

4. The Commission commenced hearing evidence on 22 October 2018 and sat for a total of 46 days, with the closing submissions made on 28 and 29 January 2019. During that time, it heard the evidence of 65 witnesses who testified as to matters of fact and seven witnesses who were accepted as being independent experts². The involved parties include —

(a) the Transport and Housing Bureau (“THB”), Development Bureau (“DEVB”), Highways Department (“HyD”) and Buildings Department (“BD”) (collectively as “the Government”);

(b) MTRCL;

(c) Leighton Contractors (Asia) Limited (“Leighton”);

(d) China Technology Corporation Limited (“China Technology”);

(e) Fang Sheung Construction Company (“Fang Sheung”);

(f) Intrafor Hong Kong Limited;

(g) Atkins China Limited; and

(h) PYPUN-KD & Associates Limited.

² To assist the Inquiry, the Commission appointed its experts on structural engineering issues and project management issues respectively. The Government, MTRCL, Leighton and China Technology each appointed their own independent structural engineering experts. MTRCL also appointed an independent project management expert.

A brief description of the roles of the involved parties in the SCL Project is at **Annex B**.

5. In the inquiry, the Commission reached its determinations generally on the balance of probabilities. Nevertheless, in respect of the primary issue of structural safety, the Commission adopted a higher standard of proof. All findings as to structural safety were made on the basis that, having considered all relevant evidence, the Commission was satisfied so that it was sure.

6. After the submission of the Interim Report by the Commission to the Chief Executive on 25 February 2019, the Interim Report was passed to the Department of Justice for consideration as to the manner of publication and other relevant matters. The Department of Justice advised that the report could be made public after redacting several parts therein to avoid any prejudice (actual or perceived) to any ongoing criminal investigations and any potential prosecutions of any criminal offences in the future (if so decided to be justified after the relevant investigations). The redacted Interim Report was circulated to the relevant bureaux and departments (i.e. THB, DEVB, HyD and BD) on 15 March 2019 for necessary action.

THE INTERIM REPORT

The Commission’s Key Findings and Determinations

7. Based on the factual and expert evidence provided, the Commission’s key findings, covering changes in design, extent of coupler connection failures, effectiveness of supervision and inspection, as well as safety of the structure, are summarised in the ensuing paragraphs.

8. Firstly, during the construction of the station box structure³, on the evidence before the Commission, there were two distinct changes in design — the first

³ The station box structure comprises, essentially, the east and west diaphragm walls, the upper platform slab for the East West Corridor and the lower platform slab for the North South Corridor. The platform slabs are further divided into six separate “areas”, i.e. Areas A, Hong Kong Coliseum, B, C1, C2 and C3.

change related to the omission of “U” bars at the top of the east diaphragm wall; and the second change referred to the trimming down of the top of the east diaphragm wall and replacing coupler connections therein with through bars. Neither of these two changes compromised the structural safety of the completed works. Seemingly due to miscommunication, MTRCL’s design management team was not aware of the two changes at the time of implementation and hence the changes were not included in the relevant submissions made by MTRCL to BD.

9. Secondly, after considering all the evidence given on behalf of MTRCL, Leighton, China Technology and Fang Sheung, the Commission was satisfied that there were instances when the threaded ends of rebars were cut or rebars that were inserted into couplers were not fully engaged. However, the Commission found that such instances were not extensive or systematic, and in context amounted only to isolated behaviour. On a material number of occasions of rebars being cut, this was done when workers ran out of Type A rebars and wished to convert Type B rebars into Type A⁴. Insofar as there was any cutting of threads from rebars and/or a failure to properly install rebars into their couplers, the persons responsible were employees of Fang Sheung.

10. Thirdly, there were a number of deficiencies in the oversight and inspection regimes employed on the SCL Project by MTRCL and Leighton. To begin with, Leighton did not meet the requirements related to qualification of inspection personnel and “full-time and continuous supervision” under the quality supervision plan. On the part of MTRCL, there had been a lack of clarity in respect of the designated responsibility for formal inspections and for maintaining records for the East West Corridor (“EWL”) platform slab. With the high reliance from both MTRCL and Leighton on the Request for Inspection, Survey and Check (“RISC”) forms as a primary contemporaneous record, the veracity of some of these forms was questionable and the process for completing the RISC forms was, at best, less than systematic. In June 2018, MTRCL and Leighton had both engaged in the compilation of retrospective record sheets for the coupler installations, notably on false assumptions that couplers had been correctly installed when no couplers had been installed at all due to the second change (described in paragraph 8).

⁴ Type A rebars had approximately 10/11 threads while Type B rebars had approximately 20/21 threads.

11. Fourthly, on issues relating to the structural integrity of the station box structure, the independent structural engineering experts met on 18 December 2018 and agreed on the Joint Expert Memorandum at Annexure E of the Interim Report. The Joint Expert Memorandum set out the expert opinions on general code requirements, bottom mat reinforcement in EWL platform slab, the two changes in design, miscellaneous defects, load testing and opening up. Amongst other things, the independent experts were of the opinion that the opening up at the bottom of the EWL platform slab was unnecessary and that the opening up of the diaphragm walls and the North South Corridor (“NSL”) platform slab should also be reviewed.

12. On hearing all of the expert evidence and after receiving closing submissions from counsel for all the involved parties, the Commission took into account the following considerations when assessing whether the structure is safe —

- (a) there is no safety related issue in relation to the changed detail at the top of the east diaphragm wall;
- (b) there is significant redundancy in the structure;
- (c) with over 80% of the couplers at the top of the east diaphragm wall in Areas B and C being replaced by through bars, the actual number of couplers subjected to tensile forces had been reduced to a relatively small number. And so, for the large part of the EWL platform slab, any defective coupler connections would have no structural significance;
- (d) as the connection between the bottom of the EWL platform slab and the diaphragm walls is always in compression, the couplers there had no structural significance and any defective coupler connections at the bottom of the EWL platform slab were of no structural consequence;
- (e) defects such as honeycombing of concrete were not matters of safety and could all be repaired;
- (f) the station box structure had already sustained its most severe loading

conditions during the construction stages in 2015 and 2016, and had shown no signs of distress which would give rise to any safety concerns; and

- (g) the opening up exercise had not (so far) revealed anything of concern in relation to structural safety.

13. On a consideration of all the evidence, especially that of the independent structural engineering experts, the Commission is confident that the station box structure is safe and that no rebuilding or strengthening of the diaphragm walls or the platform slabs are necessary.

14. With the above findings, the Commission reached the determinations that the Hung Hom Station Extension diaphragm wall and platform slab construction works were not executed in accordance with Contract No. 1112 in material respects. Notwithstanding, the Commission finds that the relevant works are safe.

The Commission's Recommendations

15. On promoting public safety, the Commission accepted the advice from the independent structural engineering experts and recommended ongoing monitoring of the station box structure during the operation of the station. The diaphragm walls and platform slabs should be instrumented by means of fibre optics or other approved measures to detect movement, if any, which should be monitored and reported to the Government to provide reassurance to the public.

16. The Commission has also put forward recommendations to promote assurance on quality of works. Chapter 11 and Annexure F of the Interim Report have summarised the recommendations, covering enhancement measures to MTRCL's project management system and the Government's monitoring mechanism. The major recommendations cover the following areas, among others —

- (a) restructuring the Government's project sponsorship arrangements to provide both authority and responsibility for the railway projects, and enhancing project governance and high-level supervision;

- (b) rationalising and clarifying rules and requirements, especially in relation to supervision, record keeping, non-conformance reporting and as-built drawings;
- (c) reviewing and substantially changing MTRCL's Project Integrated Management System ("PIMS") procedures, making MTRCL's Project Management Plans ("PMPs") more comprehensive and relevant to individual projects, as well as improving the interface between PIMS manuals and PMPs;
- (d) inducing closer communications within MTRCL to avoid the risk of silo-working, and introducing site presence of the designer to assist in ensuring that the design intent is duly implemented in the work;
- (e) adopting latest technological applications and tools to support efficient and effective making of site records, as well as adopting Building Information Modelling ("BIM") as a collaboration tool;
- (f) ensuring ongoing competence of project-related staff through review of competence requirements for the relevant personnel;
- (g) extending the role and reviewing the engagement arrangement of the Monitoring and Verification consultant of HyD ("M&V Consultant"); and
- (h) fostering collaborative culture between the Government, MTRCL and contractors with the object of achieving more successful project outcomes.

17. The Commission also recommended conducting an independent follow-up audit 12 months following the date of the interim report, to provide assurance to the Chief Executive that the recommended measures have been properly implemented and/or satisfactory progress towards their implementation is being made.

The Government's Responses

18. The Government appreciates the dedicated efforts by the Commission in

ascertaining the circumstances surrounding the diaphragm wall and platform slab construction works and reviewing MTRCL's project management system and the Government's monitoring mechanism.

19. Since the various issues surrounding the Hung Hom Station Extension have come to light in late May last year, the Legislative Council, the media and the general public are very much concerned about the quality of works and the long-term safety of the completed station structure. The Commission has, on the basis of evidence received and considered, determined that the diaphragm wall and platform slab construction works are safe. At the same time, the Commission has pointed out the need of providing reassurance to the public and therefore recommended ongoing monitoring of the station structure (paragraph 15 above refers).

20. The Government also sees that it has the duty to be absolutely sure of the soundness of the structure in all legal and contractual respects when considering the acceptability of the completed works in due course. In this respect, MTRCL is conducting the Holistic Assessment on the condition of the completed structures, and the media diligently make regular reports on the progress of this assessment. We consider it prudent that MTRCL needs to continue with and to complete the Holistic Assessment Strategy in good time so as to assure the public of the conditions and safety of the built structure.

21. The Government attaches great importance to the Commission's recommendations on suitable measures to promote public safety and assure the quality of works. In fact, some of the recommendations have been implemented through HyD's enhancement measures since the discovery of the issues at Hung Hom Station Extension as follows —

- (a) on project supervision (paragraph 16(a) above refers), the Project Supervision Committee ("PSC") chaired by the Director of Highways has already started reviewing MTRCL's systemic issues relating to site supervision and communication and requesting MTRCL to report on the non-conformance statistics to enhance transparency and supervision. The BO Team, which comprises professional staff seconded from BD to HyD to handle plan submissions for the SCL Project, has also been required to

attend PSC meetings regularly to report on matters relating to MTRCL's compliance with the building safety standard under the BO and progress of plan submissions for working out appropriate follow-up actions;

- (b) on the role of the "M&V Consultant" (paragraph 16(g) above refers), the frequency of its site walks have been increased from quarterly to monthly for some critical contracts (the M&V Consultant carried out 72 site walks between 8 August 2018 and 28 February 2019). The M&V Consultant has also deployed additional staff to conduct reviews on non-conformance reports issued by MTRCL to contractors, assist the EAT to conduct audits on other SCL stations (as detailed in paragraph 34(b) below) and monitor the opening up works under the Holistic Assessment Strategy; and
- (c) on site supervision (paragraph 16(b) above refers), HyD's in-house staff has started carrying out independent surprise checks to inspect if MTRCL has complied with its site supervision plan (54 site surprise checks were conducted between 10 September 2018 and 28 February 2019). HyD has demanded MTRCL to consider improvement measures on site supervision and communications of the SCL Project. It is also actively exploring the adoption of digitised site supervision system in other transport infrastructure projects undertaken by the Department.

22. The Commission's recommendation that the station box structure should be instrumented to detect movement (see paragraph 15 above) dovetails with Preliminary Recommendation ("PR") No. 2.6 in the EAT's Interim Report No. 1 submitted to the Government and made public on 19 and 24 October 2018 respectively. PR No. 2.6 reads, "MTRCL should consider supplementing the automatic deformation monitoring system with other monitoring devices, such as those that could record small structural strains and deformation, to measure and monitor the structural health of the platform slabs and diaphragm walls in the Hung Hom Station Extension."⁵ As part of the Holistic Assessment Strategy, a long-term instrumentation and monitoring programme of the station structure will be developed by MTRCL based on the assessment results under the third stage of the Holistic Assessment Strategy.

⁵ The EWL platform slab has already been monitored for any sign of movement by an automatic deformation monitoring system since October 2018 and for any sign of distress by weekly site inspections by HyD's M&V Consultant.

23. The Government concurs with the Commission’s views about the importance of a more collaborative culture in the industry and the adoption of technology (paragraphs 16(e) and (h) above refers). Indeed, over the past decade, the Government has been advocating the adoption of a collaborative approach in project management and dispute avoidance for public works projects. Examples include promoting the application of the New Engineering Contract (“NEC”) form and dispute resolution advisers system in public works projects. On the application of NEC form, about 100 public works contracts so far have adopted the NEC form and trial application of NEC4 form is in the pipeline. On the application of technology, as the Commission pointed out, the Government set out the requirement in end 2017 to use Building Information Modelling technology in major capital works projects to enhance project management. With regard to the Commission’s opinion that the process for completing the RISC forms in Contract No. 1112 was less than systematic, the Government has already reminded the industry stakeholders of the importance of strict compliance with the relevant procedures in handling RISC forms in public works projects. As an ongoing effort, the Government is exploring means to further enhance the standard and efficiency of the site supervision system in trial projects involving the use of innovative technology to collect real-time data on site environment and works progress for record, monitoring and analysis purposes.

24. On the observations and recommendations of the Commission regarding the role of the M&V Consultant, the matter could perhaps be considered in the light of the contractual arrangement between the Government and MTRCL for the SCL Project. Under the entrustment arrangement, MTRCL is the project manager and receives substantial project management fees of around \$8 billion from the Government to, among others, employ the required manpower to manage the SCL Project with the skill and care reasonably expected of a professional and competent project manager. It is MTRCL’s duty to ensure that the contractor carries out the works in accordance with the contractual requirements and other relevant statutory provisions. At the same time, the Government maintains a high-level supervisory role using a “check the checker” approach, under which the M&V Consultant supports HyD to monitor and verify that MTRCL complies with its obligations in the entrustment agreements through site inspections and review of various reports and submissions by MTRCL⁶. The “check the checker”

⁶ The M&V Consultant’s scope of work includes—

approach is a risk based sampling approach to verify delivery of the requirements of the project scope and authorised expenditure, bearing in mind that the Government's resources should be utilised effectively to avoid repetition and micro-management of the project. This is reflected in the monitoring manpower arrangements of HyD and its M&V Consultant, which is much smaller than that of MTRCL under the SCL Project. At its peak, the number of project management staff of MTRCL responsible for the SCL Project was about 900, while the combined manpower of HyD and its M&V Consultant at the same period was about 50. That said, we will undertake further reviews to refine the role of the M&V Consultant in future railway projects.

25. As for other recommendations in the Interim Report, the Government will study them in detail and explore the implementation arrangements in consultation with relevant stakeholders as appropriate.

EXPANDED SCOPE OF THE COMMISSION

26. It has recently come to light that in respect of the North Approach Tunnels, the South Approach Tunnels and the Hung Hom Stabling Sidings (also under Contract No. 1112 of SCL), some of the required works-related documentation has been found missing and some of the construction works involving deviations from the designs, plans or drawings accepted by the HyD or BA might have been carried out. As a result, on 19 February 2019, the Chief Executive in Council approved the expansion of the Commission's Terms of Reference to investigate the steel reinforcement fixing or concreting works at these three locations, as well as an extension of time for the Commission to submit its report to the Chief Executive by 30 August 2019. The Government will continue to fully cooperate with the work of the Commission.

WAY FORWARD FOR THE SCL PROJECT

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- (a) reviewing key documents relating to the SCL works including construction programmes, proposals bearing major implications, project finance reports, submissions to Project Control Group and public safety plans;
 - (b) monitoring MTRCL's works through review of project documents and necessary site inspection, identification of and providing advice on key issues of the SCL Project on cost, programme and public safety; and
 - (c) carrying out verification by conducting audits to the activities/processes undertaken by MTRCL to ensure that those processes comply with MTRCL's internal management control and procedures and the requirements and standards stipulated in the entrustment agreements.

Holistic Assessment Strategy for Hung Hom Station Extension

27. The opening up works at the second stage of the Holistic Assessment Strategy started on 10 December 2018 and are still in progress. On 29 January 2019, a large deviation was observed between the embedded lengths measured using non-destructive Phased Array Ultrasonic Test (“PAUT”) and the direct measurements after cutting the rebar with the coupler connected. The measurement by PAUT was immediately suspended and the Government requested MTRCL to investigate the root causes of such a deviation.

28. MTRCL and its technical team have conducted a detailed investigation of the incident, and carried out an in-depth study and enhanced the PAUT in order to improve its accuracy and reliability. MTRCL also conducted validation on the enhanced PAUT. During the investigation and validation process, the EAT, the expert team from the University of Hong Kong, HyD and BD provided comments to MTRCL.

29. The enhanced PAUT has been repeatedly tested and validated in laboratories and on-site by MTRCL. The validation results revealed that, compared with the enhanced PAUT results, all the direct measurements of the embedded length of the threaded steel bar inside the coupler fall within the 3 millimetres' allowable tolerance of PAUT results. In view of the above results, the Government accepted the proposal from MTRCL to continue with the use of PAUT in the second stage investigation with a view to minimising damage to the structure.

30. MTRCL resumed testing on 15 March 2019 using the enhanced PAUT on the exposed (including previously tested and yet-to-be-tested) couplers. The verified test results by the laboratory will be announced in a timely manner on HyD’s website for the SCL Project for public reference (www.hyd.gov.hk/en/road_and_railway/railway_projects/scl/index.html).

31. The Government has urged MTRCL to expedite the opening up and testing process, with a view to completing the second stage of the Holistic Assessment Strategy in late April 2019. We will strive to ensure MTRCL would complete

the structural analysis in the third stage of the Holistic Assessment Strategy in good time before the Commission winds up its work, so that the Commission may take the results into account, if it so wishes, in preparing its final report. We will continue to closely monitor the investigation works.

Commissioning of the SCL

32. The Tai Wai to Hung Hom Section of the SCL was scheduled to be commissioned in mid-2019. However, due to the concerns of the quality of works of Hung Hom Station and other stations, the target commissioning date will need to be reviewed.

33. As regards requests for partial commissioning of the Tai Wai to Hung Hom Section, we have asked MTRCL to study different options with a view to commissioning as many stations and sections as possible, if partial commissioning is found necessary. The Government and MTRCL will make a fuller assessment in the light of findings of the Holistic Assessment Strategy, taking into account the technical feasibility of opening part of the railway section, the capacity of the railway system, the modification to the signalling system, the compatibility of the road transport, etc. In the meantime, MTRCL is undertaking the necessary preparatory groundwork to preserve and protect all practicable options.

34. As part of the preparation for the commissioning of the Tai Wai to Hung Hom Section, we have implemented a three-tier audit of all relevant stations (other than Hung Hom Station) as follows –

- (a) firstly, the Government has asked MTRCL to conduct an internal audit on other SCL stations in order to ensure the construction details are in compliance with the design and acceptable standards;
- (b) secondly, HyD and its M&V Consultant are conducting audits on other SCL stations under the supervision of the EAT. The first stage audit was conducted from end January to early March 2019 and covered To Kwa Wan Station and Diamond Hill Station with focus on records on quality control of works and site supervision. The RISC forms and coupler-related site records for Diamond Hill Station were found to be generally acceptable.

Nevertheless, there were deficiencies in the RISC forms of the structural works and coupler-related site records for To Kwa Wan Station. MTRCL was informed of the audit findings on 18 March 2019 and the Government requested MTRCL to carry out an investigation to assess the full extent of the problem and its potential implications, and propose remedial actions. The audit will be extended to the remaining SCL stations, with priority given to those essential under various options of partial commissioning of the Tai Wai to Hung Hom Section, i.e. Tai Wai Station, Hin Keng Station, Kai Tak Station and Sung Wong Toi Station; and

- (c) finally, for the purpose of vetting, MTRCL has to submit to the Government the Certification of Completion together with relevant documents including record drawings, test reports on construction materials and certificates. The Government will then perform the necessary site inspection/audit and site witness. If the works were completed to the Government's satisfaction, a no objection letter would be issued by the relevant authority (BA or HyD as appropriate) to acknowledge the Certification of Completion.

35. As regards the Hung Hom to Admiralty Section of the SCL, the target commissioning date remains to be 2021. HyD has asked MTRCL to proactively explore measures to recover the progress so as to minimise the risks on construction delay.

**TRANSPORT AND HOUSING BUREAU
DEVELOPMENT BUREAU
HIGHWAYS DEPARTMENT
BUILDINGS DEPARTMENT
March 2019**

**Commission of Inquiry into the Construction Works
at and near the Hung Hom Station Extension
under the Shatin to Central Link Project**

**Expanded Terms of Reference
(as approved on 19 February 2019)**

Regarding the MTR Corporation Limited (“MTRCL”)’s Contract No. 1112 (“Contract”) of the Shatin to Central Link Project:

- (a) (1) in respect of the diaphragm wall and platform slab construction works at the Hung Hom Station Extension,
 - (i) to inquire into the facts and circumstances surrounding the steel reinforcement fixing works, including but not limited to those works at locations that have given rise to extensive public concern about their safety since May 2018;
 - (ii) to inquire into the facts and circumstances surrounding any other works which raise concerns about public safety; and
 - (iii) to ascertain whether the works in (1)(i) and (ii) above were executed in accordance with the Contract. If not, the reasons therefor and whether steps for rectification have been taken;

- (2) in respect of the construction works at the North Approach Tunnels, the South Approach Tunnels and the Hung Hom Stabling Sidings,
 - (i) to inquire into the facts and circumstances surrounding any problem relating to the steel reinforcement fixing or concreting works, including but not limited to any lack of proper inspection, supervision or documentation of such works undertaken, any lack of proper testing of the materials used for such works and of proper documentation of such testing, and any deviation of such works undertaken from the designs, plans or drawings accepted by the Highways Department or the Building Authority;

- (ii) to inquire into the facts and circumstances surrounding any works or matters which raise concerns about public safety or substantial works quality; and
 - (iii) to ascertain whether the works and matters involved in (2)(i) and (ii) above were executed in accordance with the Contract. If not, the reasons therefor and whether steps for rectification have been taken;
- (b) to review, in the light of (a) above,
 - (i) the adequacy of the relevant aspects of the MTRCL's project management and supervision system, quality assurance and quality control system, risk management system, site supervision and control system and processes, system on reporting to Government, system and processes for communication internally and with various stakeholders, and any other related systems, processes and practices, and the implementation thereof; and
 - (ii) the extent and adequacy of the monitoring and control mechanisms of the Government, and the implementation thereof; and
- (c) in the light of (b) above, to make recommendations on suitable measures with a view to promoting public safety and assurance on quality of works.

**Commission of Inquiry into the Construction Works
at and near the Hung Hom Station Extension
under the Shatin to Central Link Project**

Membership

Chairman and Commissioner

Mr Michael John HARTMANN, GBS

Mr Michael John HARTMANN served in the Judiciary in Hong Kong for over 20 years, retiring as Justice of Appeal in 2012. After retirement, he remained a Non-Permanent Judge of the Court of Final Appeal until 2016. He is currently Chairman of the Market Misconduct Tribunal, the Securities and Futures Appeals Tribunal and the Higher Rights Assessment Board. Mr Hartmann specialises in public and administrative law.

Commissioner

**Professor Peter George HANSFORD,
FREng, FICE, FAPM, FRSA**

Professor Peter George HANSFORD, a Past President of the Institution of Civil Engineers and a Fellow of the Royal Academy of Engineering in the United Kingdom (UK), has over 40 years of experience in the delivery of major infrastructure projects. He was appointed as Chief Construction Adviser to the UK Government from 2012 to 2015, and is currently an Honorary Professor of University College London. In November 2018 he was awarded the Sir Monty Finniston Award for lifetime achievement by the Association for Project Management.

**Commission of Inquiry into the Construction Works
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under the Shatin to Central Link Project**

**Brief Description of the Roles of Involved Parties
in the SCL Project**

The involved parties of the Commission of Inquiry into the Construction Works at and near the Hung Hom Station Extension under the Shatin to Central Link (“SCL”) Project include —

- (a) the Transport and Housing Bureau (“THB”), Development Bureau (“DEVB”), Highways Department (“HyD”) and Buildings Department (“BD”) (collectively as “the Government”) — THB and HyD act as the owner of the SCL Project and perform a general monitoring role, while DEVB and BD carry out their functions and duties in relation to regulation actions against contractors on DEVB’s “List of Approved Contractors for Public Works” and building safety control respectively;
- (b) MTR Corporation Limited (“MTRCL”) — entrusted as the project manager through three entrustment agreements entered into between the Secretary for Transport and Housing (representing the HKSAR Government) and MTRCL for (i) design and site investigation; (ii) advance works; and (iii) construction and commissioning of the SCL Project respectively;
- (c) Leighton Contractors (Asia) Limited (“Leighton”) — engaged by MTRCL as the main contractor of the construction works under Contract No. 1112 of the SCL Project;
- (d) China Technology Corporation Limited — engaged by Leighton as the sub-contractor responsible for erecting formwork and pouring concrete for the platform slabs;

- (e) Fang Sheung Construction Company — engaged by Leighton as the sub-contractor responsible for the reinforcement bar cutting, bending and fixing works for the platform slabs;
- (f) Intrafor Hong Kong Limited — engaged by Leighton as the sub-contractor responsible for the construction of diaphragm walls, barrettes and associated works;
- (g) Atkins China Limited — engaged by MTRCL as its detailed design consultant, and by Leighton as its technical advisor; and
- (h) PYPUN-KD & Associates Limited — engaged by HyD as the Government’s monitoring and verification consultant to monitor the performance of MTRCL under the entrustment agreement for the construction and commissioning of the SCL Project.