沙田至中環綫項目工程進展

Progress Update of the Construction of the Shatin to Central Link

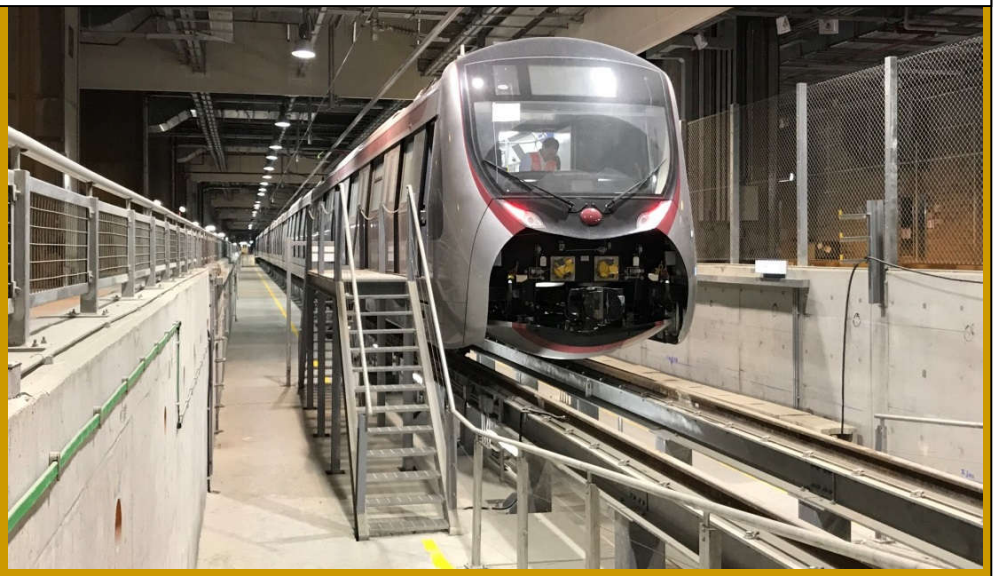
(截至2018年12月31日) (As at 31 December 2018)

立法會交通事務委員會
鐵路事宜小組委員會
Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways

2019年2月1日
1 February 2019

截至 2018年12月31日整體工程進度
As at 31 December 2018, the overall works completed 89%

各車站及不同系統正進行測試及法定檢測工作
Testing and statutory inspections are in progress for various stations and systems



大圍至紅磡段 99%
Tai Wai to Hung Hom Section

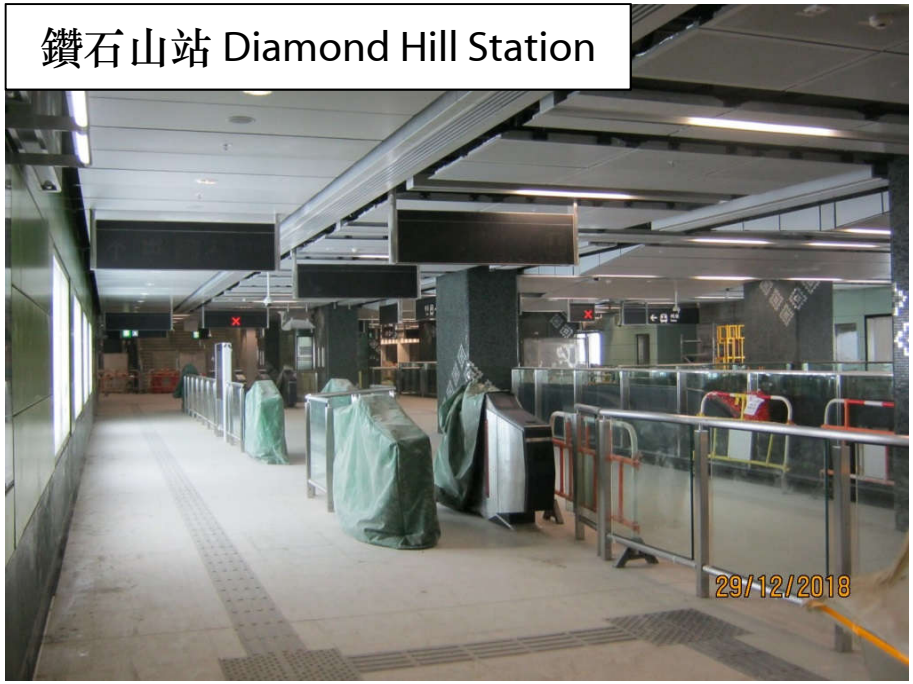
全部過海隧道預製組件完成安裝
All IMT pre-cast units immersed and installed

紅磡至金鐘段 76%
Hung Hom to Admiralty Section

顯徑站及鑽石山站
Hin Keng & Diamond Hill Stations

顯徑站 Hin Keng Station

鑽石山站 Diamond Hill Station



- 顯徑站：車站土木工程、機電、屋宇設備、車站設施及消防裝備等相關法定檢測已完成
  Hin Keng Station: Statutory inspections on civil, E&M, building and fire services installation works were completed

- 鑽石山站：所有相關法定檢測工作預計於今年第一季完成
  Diamond Hill Station: All statutory inspections are targeted to complete in Q1 2019

啟德站
Kai Tak Station

啟德站 Kai Tak Station

- 會繼續於二零一九年第一季進行餘下的法定檢測工作

  The remaining statutory inspections will continue in Q1 2019

宋皇臺站及土瓜灣站
Sung Wong Toi and To Kwa Wan Stations

宋皇臺站 Sung Wong Toi Station

土瓜灣站 To Kwa Wan Station

- 裝修、機電及屋宇裝備工程已大致完成
  Fitting out works, E&M and building services works are substantially completed

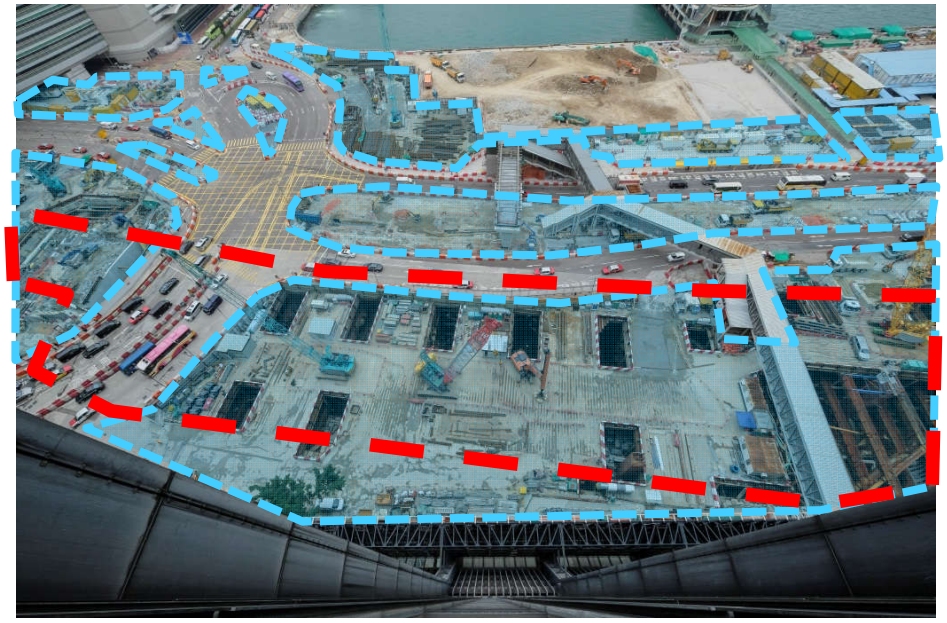
- 車站已通過消防安全裝置檢測
  Fire services inspection was completed

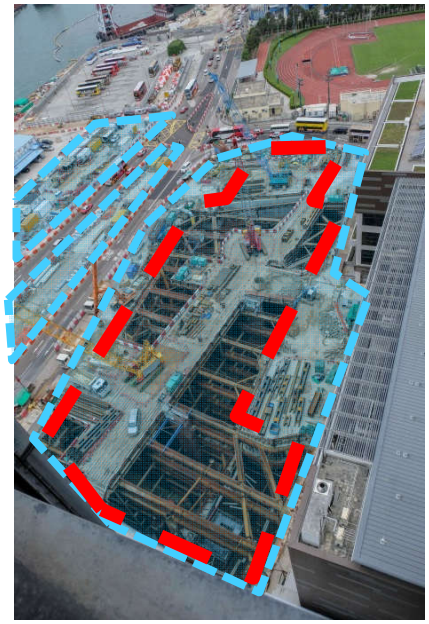
紅磡站
Hung Hom Station

- 車站土木工程、裝修、機電及屋宇裝備工程已大致完成
  Civil works, fitting out works, E&M and building services works substantially completed

- 核實工作分階段進行，第二階段的開鑿工作已於二零一八年十二月十日展開
  The opening-up works have started since 10 December 2018

會展站大型挖掘工程
Bulk Excavation at Exhibition Centre Station (EXC)





圖例

沙中綫工地
SCL works site

會展站
EXC

- 會展站的挖掘工程於二零一八年九月恢復。
  Excavation works of EXC resumed in September 2018.

- 挖掘工程預計於2019年上半年完成
  Excavation works are expected to complete in the first half of 2019

現有鐵路綫提升工程
Improvement Works for Operating Railways

馬鞍山綫及西鐵綫提升工程
Improvement Works for Ma On Shan Line (MOL) and West Rail Line (WRL)

馬鞍山綫 (Ma On Shan Line)

西鐵綫 (West Rail Line)

- 全部15列八卡車已投入服務
  Full fleet of 15 8-car trains are in service

- 9個車站全部720對自動月台閘門完成安裝
  Retrofitting works of 720 pairs of Automatic Platform Gate at 9 stations completed

- 西鐵綫七卡列車於去年5月全面更換成八卡列車
  Conversion of all 7-car trains to 8-car trains on the WRL completed in May 2018

東鐵綫提升工程
Improvement Works for East Rail Line (EAL)

新信號系統
New Signalling System

月台改善工程
Platform Modification Works

新列車
New Trains

- 東鐵綫正進行後期重鋪月台地面及修補工程
  Floor tiling and defect rectification works at EAL stations are underway
- 信號系統測試已進入最後階段，預計於2019年完成
  Final stage of the signalling tests are underway, with completion expected in 2019

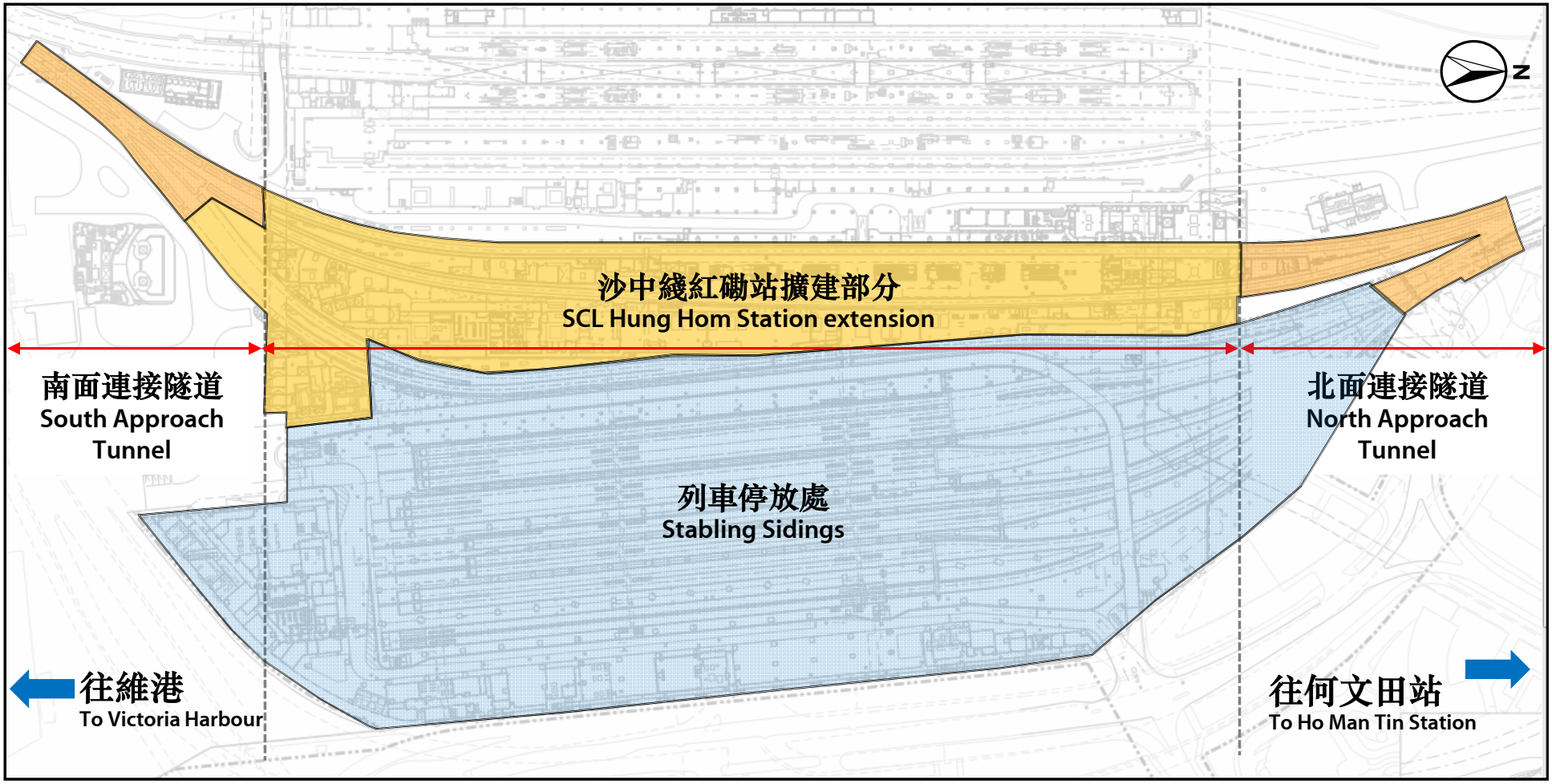
東鐵綫晚間非行車時間全綫試車
EAL Full-line Train Tests during non-traffic hours

- 為免影響東鐵綫日常列車服務，新信號系統測試只能於晚上非行車時間進行
  To avoid impact on day-time train service, signalling tests could only be conducted during non-traffic hours

- 測試期間所發出的聲響或會對較接近鐵路的居民造成不便，會採取適當緩解措施
  Mitigation measures would be in place as appropriate to minimise the possible noise impact

紅磡站擴建部分及其相連結構工程
Hung Hom Station extension and its connecting structures

沙中綫紅磡站擴建部分及其相連結構位置圖
Location plan of SCL Hung Hom Station extension and its connecting structures



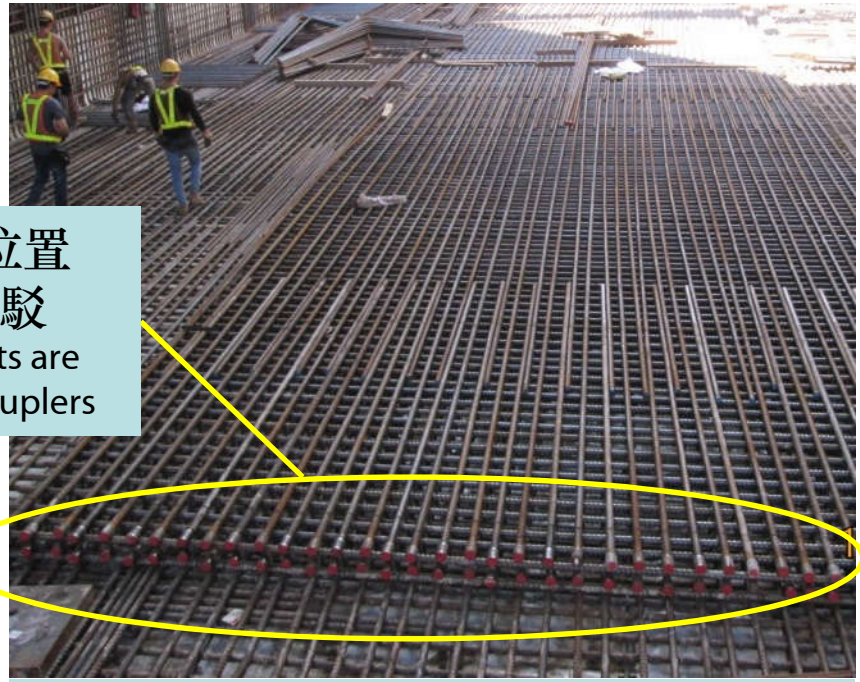
檢查及測量申請表格截至目前情況
Up to Date Status of RISC Forms

	鋼筋檢查及測量申請表格 RISC Forms for steelworks	應備存表格總數 Total no. of RISC forms to be filed
北面連接隧道 North Approach Tunnel	16 (27%)	59
南面連接隧道 South Approach Tunnel	25 (64%)	39
列車停放處 Stabling Sidings	174 (37%)	474

施工連接縫位置
Construction joints

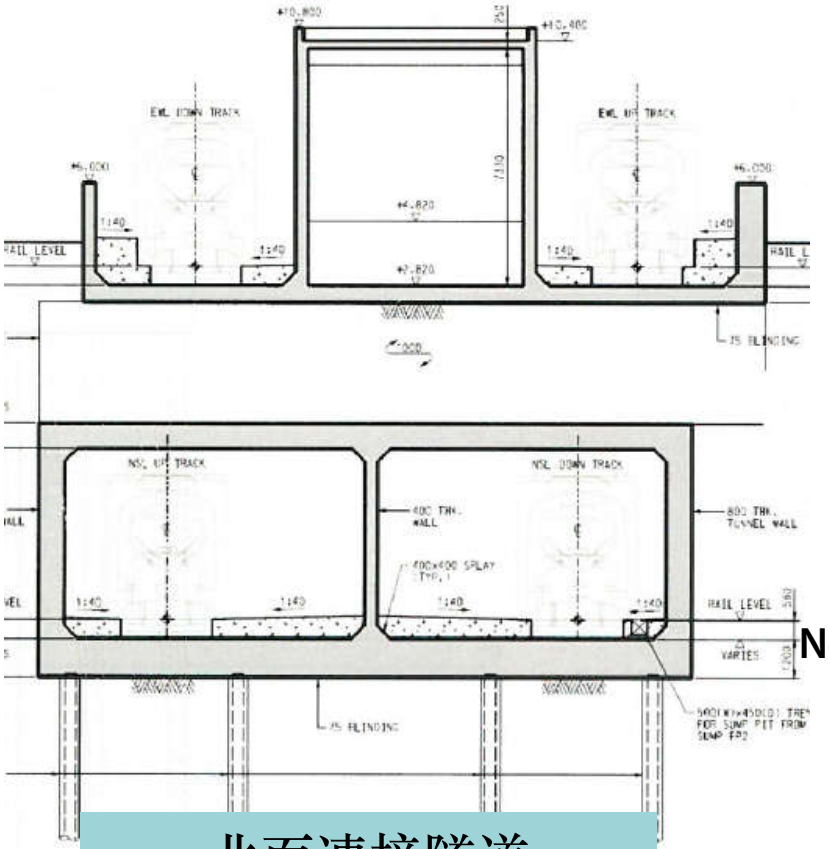
施工連接縫位置
以螺絲帽接駁
Construction joints are connected with couplers

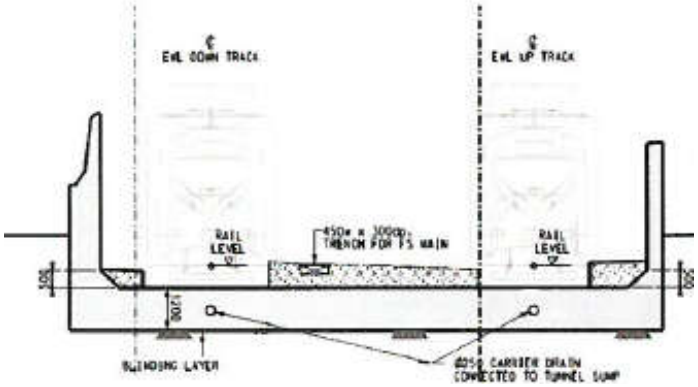
連接隧道牆身
Tunnel wall



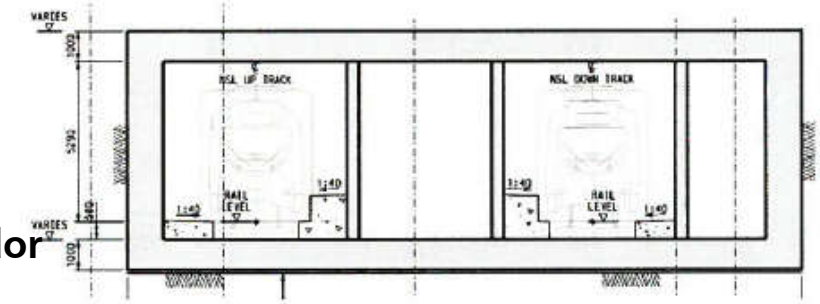
連接隧道底部
Tunnel base slab

北面及南面連接隧道 (切面圖)
North and South Approach Tunnels (Cross-section)





東西走廊
East West Corridor

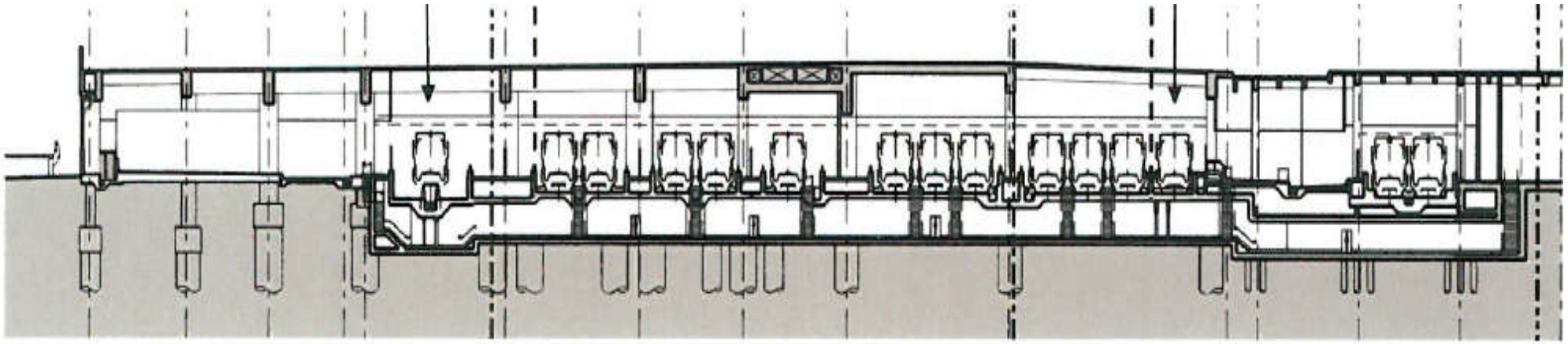


南北走廊
North South Corridor

北面連接隧道
North Approach Tunnel

南面連接隧道
South Approach Tunnel

紅磡列車停放處 (切面圖)
Hung Hom stabling sidings (Cross-section)



列車停放處
Hung Hom Stabling Sidings

總結
Conclusion

- 港鐵公司對禮頓未能提供所需記錄及文件，感到非常失望，會保留追究權利。我們亦應加強對承建商督促及監察，並落實所需的改善措施。
  The Corporation is disappointed with Leighton in their lack of documentation. We reserve our rights to take action against them. We should also have done better regarding our vigilance on the contractor and we will implement necessary improvement measures.

- 完整的文件記錄對核實工程實際情況非常重要。在複雜的大型基建項目中，在施工連接縫位置作出細節改動，包括以搭接方式連接鋼筋改為螺絲帽連接，配合工地實際情況，並不罕見。
  Proper documentation is critical to provide evidence of what has been built. As far as the construction joints are concerned, changes in construction details, such as from lapped bars to couplers, to suit the situation on site, are relatively common in large complex construction projects.

- 目前，沒有任何證據或跡象顯示有任何結構安全上的關注。
  There is currently no evidence or sign of any structural issues that may raise concerns regarding safety.

紅磡站擴建工程
全面評估及核實工作
Verification and assurance works of Hung Hom Station Extension

評估目的 – 確定車站結構安全及完整性
Purpose of the study – Verifying the structural safety and integrity of extension works

兩項主要範疇:
Two key focuses:

- 確認月台的竣工狀況與最新收到的修訂設計圖則一致
  Verify the as-constructed condition of the platform slabs are consistent with the latest design amendment drawings received

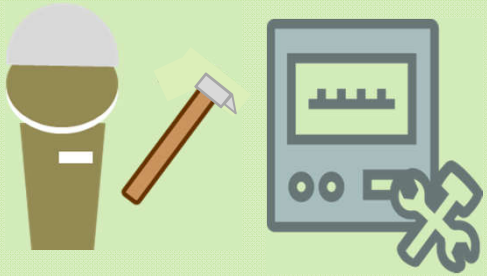
- 釐清螺絲帽接駁的施工質量，以及其他已知或懷疑出現不合規格的狀況，以釋除疑慮
  Assess the workmanship of the coupler connections in light of allegations raised, and on other known or suspected irregularities

分階段進行全面核實工作
Staged approach for verification works

1

整合及覆核
修訂設計圖則及記錄
Compile and check design amendment drawings against construction records

2



實地檢測
On-site physical investigation

3

設計分析、結構評估
Design analysis and structural assessment

檢測初步結果(截至2019年1月30日)
Initial results of investigation (As at 30 Jan 2019)

- 定期向相關政府部門以及調查委員會提交工地檢測報告

  Regular onsite investigation reports submitted to relevant Government departments and the Commission of Inquiry

	已開鑿位置 No. of locations opened up	已外露並檢測的螺絲帽數目 No. of couplers exposed and tested
第一個目的 Purpose 1	18	18
第二個目的 Purpose 2	28 (東西走廊 EWL) 13 (南北走廊 NSL)	72 (東西走廊EWL) 31 (南北走廊NSL)

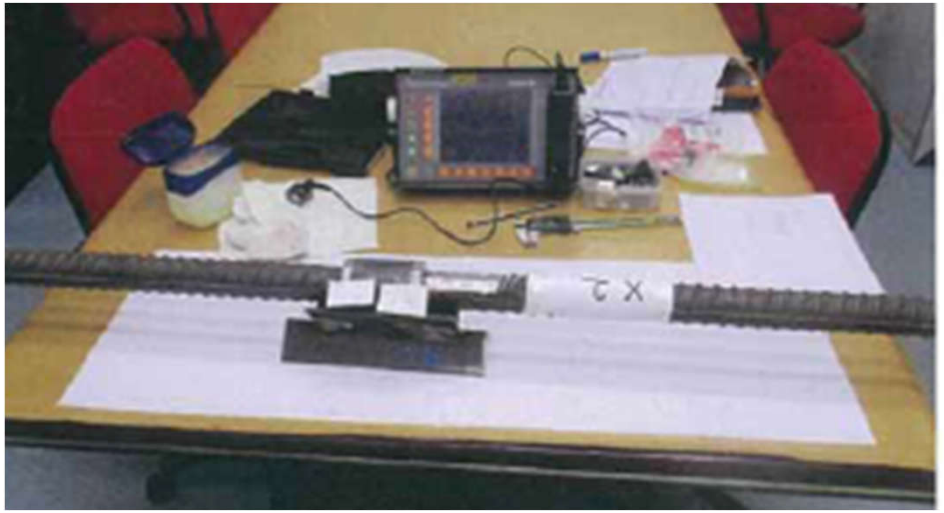
陣列式超音波檢測
Phased Array Ultrasonic Test (PAUT)

- 在不破壞月台層板的前提下進行螺絲帽接駁質量的檢測工作。
  To carry out the verification without damaging the structure of the platform slab

- 在建議非破壞性測試的方式前，已在實驗室及模擬實況反覆測試。政府代表、其專家顧問團及其委聘的學者亦在場見證有關測試。
  Before proposing with the non-destructive tests, repeated trials were conducted in laboratory and on-site. Government representatives, its expert adviser team and their engaged academics also witnessed the tests

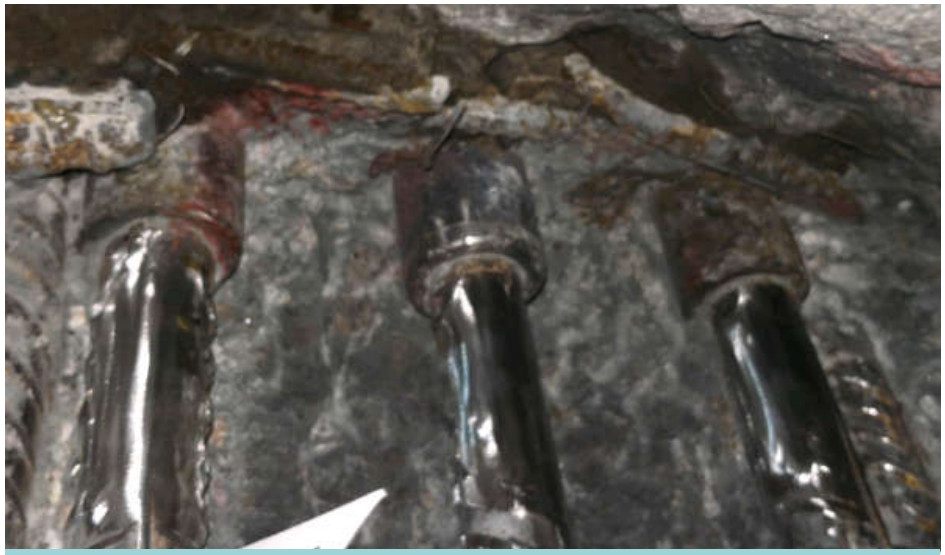
- 全面評估策略建議（包括非破壞性測試）獲政府同意及接納。
  The holistic proposal including the non-destructive test was submitted to and accepted by the Government

陣列式超音波檢測的過程 – 實驗室測試
Process of Phased Array Ultrasonic Test (PAUT) – laboratory test



陣列式超音波檢測的過程 – 工地實地測試
Process of Phased Array Ultrasonic Test (PAUT) – On-site test

開鑿石屎以露出鋼筋及螺絲帽
Open up concrete to expose couplers and steel bars

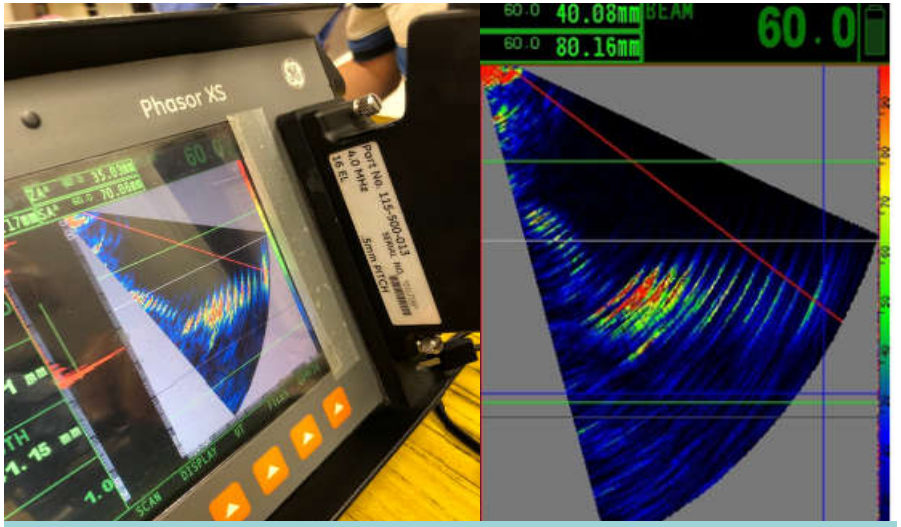


將鋼筋接觸面磨平滑
Smoothen the surface of steel bars

陣列式超音波檢測的過程
Process of Phased Array Ultrasonic Test (PAUT)

探測器
Probe

將探測器放上鋼筋接觸面
Put the detector on the steel bar surface



釋放超音波頻譜檢測鋼筋扭入長度
Ultrasound emitted to measure embedded length

下一步工作
Way forward

- 重新檢討非破壞性測試的細節，再與政府溝通，然後會繼續進行檢測。

  We are reviewing the details of non-destructive tests. We will communicate with government on our findings before proceeding further with the tests .

- 收集到的所有詳細資料，均會納入第三階段評估，就結構完整性及安全進行整體分析；現階段作任何結論，是言之尚早。

  All detailed data will be gathered for holistic assessment on overall structural integrity and safety in Stage 3. It is too early to draw any conclusion at this stage.

多謝
Thank You