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**Report of the Subcommittee on Matters Relating to Railways
for submission to the Panel on Transport**

Purpose

This report gives an account of the work of the Subcommittee on Matters Relating to Railways ("the Subcommittee") during the 2014-2015 legislative session.

The Subcommittee

2. The Panel on Transport ("the Panel") agreed by circulation in late October 2014 that the Subcommittee should continue its work in the 2014-2015 session to facilitate more focused discussion on matters relating to railways. The terms of reference and membership list of the Subcommittee are at **Appendices I and II** respectively.

3. Under the chairmanship of Hon CHAN Han-pan, the Subcommittee has discharged its functions according to its terms of reference and held five meetings (up to June 2015) with the Administration and the MTR Corporation Limited ("MTRCL").

Major work

4. In the current session, the Subcommittee has followed up on various issues relating to the planning and implementation of new railway projects, as well as the operation of existing railways. The discussions

of the Subcommittee with the Administration and MTRCL are summarized in the ensuing paragraphs.

A. Planning of new railway projects

Public consultation on the review and update of the Railway Development Strategy 2000

5. The Railway Development Strategy 2000 ("RDS-2000") was announced in May 2000, mapping out a plan for the expansion of Hong Kong's railway network up to year 2016. Consequently a number of railway projects have been completed and come into operation or are at different stages of implementation. Members noted that the Administration commissioned a consultant in March 2011 to conduct a study for the review and update of RDS-2000, with a view to updating the long-term railway development blueprint to meet the local transport needs up to year 2031. To recap, the Administration conducted the Stage 1 Public Engagement Exercise from April to July 2012 which featured conceptual schemes of three major regional railway corridors, namely the Hong Kong-Shenzhen Western Express Line, Northern Link and Coastal Railway between Tuen Mun and Tsuen Wan ("the Tuen Mun to Tsuen Wan Link"), for public discussion. Also, the Administration conducted the Stage 2 Public Engagement Exercise from February to May 2013 to collect public opinion on the seven local enhancement schemes for existing railway lines. The seven schemes included the North Island Line, Siu Sai Wan Line, South Island Line (West), Tuen Mun South Extension, Hung Shui Kiu Station, Tung Chung West Extension and Kwu Tung Station.

6. In March 2013, the Administration advised the Subcommittee that upon completion of the said Public Engagement Exercises, the consultant would collate the views of public, and the entire study would be completed in 2013. The Administration would then consider the consultant's final recommendations and explore the way forward for different railway projects.

Railway Development Strategy 2014

7. In October 2014, the Subcommittee was briefed by the

Administration on the Railway Development Strategy 2014 ("RDS-2014"), which was based on the findings and final recommendations of the abovementioned review and update of RDS-2000 consultancy study. RDS-2014 recommended that seven railway projects be completed in the planning horizon up to 2031 having regard to transport demand, cost-effectiveness and the development needs of New Development Areas and other new developments. The seven planned projects were Northern Link and Kwu Tung Station (combined as one); Tuen Mun South Extension; East Kowloon Line; Tung Chung West Extension; Hung Shui Kiu Station; South Island Line (West); and North Island Line. The proposed indicative implementation window for planning purpose and the preliminary cost estimates for the individual railway projects were set out in the table at **Appendix III**.

8. The Subcommittee members generally supported the development of the proposed East Kowloon Line because it would be able to alleviate the traffic congestion problem in East Kowloon and serve the major development projects planned in the vicinity of the East Kowloon area, like the one at Anderson Road Quarry. Nevertheless, some members were worried that after commissioning of the East Kowloon Line, the additional patronage would add pressure on Diamond Hill Station, the interchange station for the Shatin to Central Link ("SCL") and the Kwun Tong Line. Besides, they suggested adding a station between the proposed Po Tat Station of the East Kowloon Line and Po Lam Station of the Tseung Kwan O Line to benefit more Tseung Kwan O residents whose homes were not covered by rail network.

9. The Subcommittee supported the development of the North Island Line, which would be an extension of the Tung Chung Line and the Tseung Kwan O Line along the northern shore of the Hong Kong Island, and would not lead to significant disruption to the operation of the existing Island Line and affect the travel habits of the commuters. Given that the construction of the North Island Line was proposed to take place in 2021 for completion in 2026, some members suggested expediting the implementation of this railway project in order to relieve the crowdedness of the existing Island Line.

10. The Subcommittee noted that, like the North Island Line, the South Island Line (West) was proposed to take place in 2021 for

completion in 2026. Some members suggested expediting the implementation of this railway project or implementing it by phases to cover Aberdeen and Tin Wan first, so that residents of these areas could enjoy the benefits brought by railway service as early as possible. Notwithstanding this, some of the members expressed worry that the additional patronage to be brought by the proposed South Island Line (West) might create a bottleneck problem for HKU Station, the interchange station planned for the South Island Line (West) and West Island Line ("WIL"). In addition, they opined that the Administration should handle the objections from residents in the vicinity of Cyberport carefully.

11. Some of the Subcommittee members expressed regret that the Tuen Mun to Tsuen Wan Link was excluded in RDS-2014. They urged the Administration to reconsider the development of this railway project in future as railway development should not be demand-driven, but be forward-looking enough to drive new town development near the stations. The Administration explained that economic benefits of the proposed railway project had yet to be proven. Taking account of the future new development plans for North West New Territories and North New Territories, the Administration would examine the feasibility and the desirability of new transport infrastructures for meeting the additional transport demand. Apart from the Tuen Mun to Tsuen Wan Link, some Subcommittee members also expressed concern that the Siu Sai Wan Line was not included in RDS-2014. They suggested that the Administration should implement measures, such as constructing a light rail transit between Siu Sai Wan and Heng Fa Chuen to enhance the connectivity of these districts, and revisit the implementation of the Siu Sai Wan Line in future.

12. Some members opined that the railway projects set out in RDS-2014 would not only increase rail shares, but also adversely affect the sustainability of other transport modes, such as buses, mini-buses and taxis. They therefore urged the Administration to ensure that the public could enjoy efficient services with reasonable choices whereas the public transport operators could run a sustainable and profitable business. Also, some members suggested enhancing MTRCL's governance and reviewing the MTR Fare Adjustment Mechanism in view of the growing rail share.

B. Implementation of new railway projects

13. The Subcommittee has been monitoring closely the implementation of the five railway projects under construction, namely the Hong Kong section ("HKS") of the Guangzhou-Shenzhen-Hong Kong Express Rail Link ("XRL"), SCL, WIL, South Island Line (East) ("SIL(E)") and Kwun Tong Line Extension ("KTE"). HKS of XRL and SCL are implemented under the concession approach¹ whereas WIL, SIL(E) and KTE are implemented under the ownership approach². The key information of the five railway projects is attached at **Appendix IV**.

Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link

14. Subsequent to the announcement of MTRCL and the Administration in mid-April 2014 that it would be impossible to complete the construction of HKS of XRL by the original target of August 2015, the Subcommittee expressed grave concern over the delay of the works progress and the financial implications. The Subcommittee continued to monitor the progress of the implementation of HKS of XRL and urged the Administration and MTRCL to implement measures to mitigate the delay of the construction of HKS of XRL. Having noted the need to remove a significant quantity of rock, the complexity of the steel structure and low production rate for the steelworks of the West Kowloon Terminus ("WKT") (Contract 810A) and the labour shortage problem as presented by MTRCL, members in general were worried that the project might be further delayed. They expressed doubts on whether the revised commissioning target of 2017 was achievable or not.

15. The Subcommittee was informed by the Administration in November 2014 that MTRCL's estimated cost to complete for HKS of XRL would be \$71.52 billion, which was about \$6.5 billion more than the entrustment cost of \$65 billion, and also exceeded the approved project estimate of \$66.8 billion. The Highways Department ("HyD"), with the assistance of its monitoring and verification consultant ("M&V

¹ Under the concession approach, the Administration is responsible for the construction costs of the railway project whilst MTRCL is entrusted with the planning and design of the project. Upon completion of the construction, MTRCL will be granted a service concession for the operation of the railway line while the Administration will receive a service concession payment annually.

² Under the ownership approach, MTRCL is responsible for the financing, design, construction, operation and maintenance of the railway project, and will own the railway.

consultant"), had completed the assessment of MTRCL's cost to complete. However, HyD and its M&V consultant identified certain items which had not been included in the cost to complete or which would need to be reviewed to ensure adequate coverage in the risk allowances. MTRCL was asked to review again the cost to complete, which was expected to be completed in the second quarter of 2015. Members were worried that the amount of cost overrun would be further increased in future.

16. The Subcommittee also expressed much concern about the implementation of the arrangements for co-location of boundary control facilities ("the co-location arrangements") at WKT because it was very important to the realization of the intended purpose of HKS of XRL to be a timesaving express railway. Some members therefore urged the Administration to resolve the relevant legal and constitutional issues as quickly as possible. The Administration explained that they were actively studying the implementation of the co-location arrangements and discussing the issues with the Mainland counterparts, and aimed to implement the co-location arrangements at WKT upon the commissioning of HKS of XRL at the end of 2017.

Shatin to Central Link

17. The Subcommittee was briefed that there was a cumulative delay of at least 11 months for the Tai Wai to Hung Hom Section arising from archaeological discovery in To Kwa Wan and this Section was estimated to be commissioned in 2019. Members also noted that for the Hung Hom to Admiralty Section, the commissioning date would be deferred to 2021 to allow flexibility for the topside development of the convention centre at the Exhibition Station, and to cater for the reclamation works under Wan Chai Development Phase II and the construction of the Central-Wan Chai Bypass tunnel thereof. Members expressed worry that archaeological discovery at To Kwa Wan Station, discovery of a large metal object on the seabed in the vicinity of the old Wan Chai Ferry Pier and manpower shortage problem would further delay the construction progress of SCL. They therefore urged the Administration to speed up the project and suggested arranging the commissioning of SCL by phases.

18. Members expressed serious concern about the possible cost overrun of SCL project. The Subcommittee was thus briefed by

MTRCL on the financial situation of the construction of SCL. MTRCL advised that there would be an additional cost of at least \$4.1 billion for the Tai Wai to Hung Hom Section of SCL. The Subcommittee enquired whether the Administration or MTRCL should be responsible for the additional cost arising from SCL archaeological work and whether the Administration planned to seek approval from the Legislative Council ("LegCo") for additional funding for the project. The Administration explained that they were responsible for financing the construction of SCL and the archaeological work, including those costs incurred by project delay. Besides, given that the current contingency of SCL would not be sufficient to meet the additional expenditure arising from the archaeological and conservation works, the Transport and Housing Bureau would seek additional funding from LegCo together with the Development Bureau in due course.

West Island Line

19. The Subcommittee noted that WIL, together with HKU Station and Kennedy Town Station, was commissioned on 28 December 2014 whilst Sai Ying Pun Station (except Ki Ling Lane Entrance) was completed and opened on 29 March 2015. The Subcommittee was advised that owing to the impact of earlier construction works, the ground freezing works for the passenger adit between Ki Ling Lane entrance and First Street/Second Street entrance were still ongoing. The Subcommittee noted that the Ki Ling Lane entrance could be opened to the public in the fourth quarter of 2015. Members also noted that the latest capital cost of WIL was \$18.5 billion, which was higher than the originally estimated capital cost of \$15.4 billion.

20. Some members expressed concern about passenger safety in emergency cases at the lift-only entrances at WIL Stations, including fire evacuation procedures for handling more than 200 passengers at the refuge lift lobbies. MTRCL advised that extra fire and smoke protection devices such as refuge lift lobbies and fire curtains were designed to enhance passenger safety in emergency cases at HKU Station. In addition, some Subcommittee members expressed concern about water seepage problems at some locations of the three stations of WIL. MTRCL explained that the water seepage was mainly caused by underground water penetrating through construction joints of concrete

lining and that the Corporation had immediately carried out remedial measures by sealing up the linings in HKU Station.

South Island Line (East)

21. The Subcommittee noted that based on the current assessment, there were still risks to achieve the target commissioning of SIL(E) at the end of 2016. The Administration advised that MTRCL would need to expedite the remaining construction works of SIL(E) to achieve the target commissioning date. MTRCL also briefed members that the estimated cost of SIL(E) had increased from \$12.4 billion to \$15.2 billion. According to MTRCL, the capital cost of SIL(E) was likely to rise given the complexities of the construction works and the various difficulties and challenges encountered.

22. The Subcommittee expressed grave concern about the delay in the underpinning works beneath the Island Line tunnel at Admiralty Station, which was the major reason hampering the overall progress of the construction of SIL(E). MTRCL explained that despite the challenges encountered, they would strive their best to expedite the works progress of SIL(E), say working on a seven-day-a-week, 24-hour basis and deploying additional manpower and machinery.

Kwun Tong Line Extension

23. The Subcommittee received briefings by MTRCL on the progress of the construction of KTE. Members noted that as the excavation works for the platform tunnel connecting the East and West concourses of the Whampoa Station were still ongoing and in view of the uncertainties arising from the complex geological conditions, there were risks to achieve the target of commissioning in mid-2016. Noting the persistent delay of the excavation works at Whampoa Station of KTE, the Subcommittee suggested that MTRCL should report both the planned and actual progress of the works of KTE project to members for better monitoring.

24. Some Subcommittee members also expressed concern about the impact of the construction works of KTE on the public, in particular the residents in the vicinity of Whampoa Station. They were worried that

the temporary closure on section of Shung King Street traffic lane in mid-2015 for a few months would adversely affect the traffic condition nearby. MTRCL advised that the pedestrian walkway would remain open and emergency vehicular access would be maintained for emergency purposes. The Corporation was working closely with relevant government departments, local community and public transport operators to implement the temporary traffic management scheme with a view to minimizing the impact on nearby traffic and residents.

Reporting of the Administration

25. To enhance the reporting to LegCo on the progress update and financial situation of the construction of the aforesaid railway projects, the Administration has, starting from the current session, undertaken to submit quarterly reports to the Subcommittee instead of at six-month intervals.

C. Operation of existing railways

26. The Subcommittee continued to follow up with the Administration and MTRCL on issues relevant to operation of railways.

Railway safety

27. In February 2014, the Subcommittee was briefed that the East Rail Line incidents on 9 February and 18 February 2014 as well as the Light Rail incident on 22 January 2014 had been caused by faulty overhead line insulators. Subsequent to the incidents, MTRCL engaged an independent overhead line expert from overseas to conduct a comprehensive review of MTR overhead line system, covering key aspects like technical specifications, procurement, quality control, installation and repairs/maintenance.

28. In March 2015, the Administration and MTRCL completed the abovesaid review and advised the Subcommittee that Lloyd's Register Rail, the independent overseas expert appointed by MTRCL, considered the Corporation's practices in respect of the standard and design, installation and replacement mechanism of insulators appropriate. Notwithstanding this, MTRCL's independent expert suggested improving

the Corporation's procurement and quality control, and recommended improvement measures. Also, members noted that KEMA Nederland B.V., an independent expert appointed by the Electrical and Mechanical Services Department ("EMSD"), looked into MTRCL's independent expert's review and considered that the outcome of the review and various recommended improvement measures were in order. EMSD also considered that recommended improvement measures made by MTRCL's independent expert and EMSD's independent expert were in order. MTRCL had accepted all recommended improvement measures made by its independent expert, EMSD's independent expert and EMSD and improvement measures were being implemented.

29. Some Subcommittee members expressed worry that the underlying reasons for the incidents might be lack of experience or technical guidelines in the procurement and quality control of MTRCL. MTRCL explained that it had established a set of strict rules and regulations for its procurement and quality control. Given the large number of various types of components, MTRCL had been adopting a risk-based procurement management approach. Before the incidents, the product quality history of the concerned supplier was taken into account for the procurement of higher value or more important components. However, the same approach would be applied to the procurement of some components such as insulators, which were not expensive but had greater impact on railway service.

30. Besides, some members expressed dissatisfaction that the senior management of MTRCL was not held accountable for railway service disruptions and the current fine penalty system for serious service disruptions was considered inadequate to compensate the affected passengers for their loss in journey time as well as monetary losses. The Administration advised that the Board of MTRCL agreed to take into account the railway service performance when reviewing the remuneration packages of the senior management of MTRCL. Furthermore, the Administration would pass on the Subcommittee's suggestion on introducing more compensation mechanisms to the Board of MTRCL for consideration.

Other issues

Stray dog incident on the East Rail Line on 20 August 2014

31. The Subcommittee expressed concern about an incident occurring on the East Rail Line on 20 August 2014 in which a dog was found dead on the tracks. MTRCL was invited to brief members on the incident at the Subcommittee's meeting on 6 March 2015. Members noted from MTRCL's report an account of the incident and MTRCL's proposed improvement measures in consultation with the Agriculture, Fisheries and Conservation Department and animal welfare organizations. The three improvement measures included strengthening the boundary fencing along the railway line to prevent intrusion into the track area by dogs; enhancing training for front-line staff in handling intrusion by stray dogs into the track area; and adopting a more prudent approach when a dog was reported or confirmed to be found in the track area.

32. Some members expressed that many members of the public, in particular animal lovers, were unhappy about the incident. Some members also suggested improvement measures to avoid recurrence of similar incidents which might lead to disruption of railway service, say conducting more frequent inspections of the boundary fencing to prevent intrusion into track areas by dogs; developing an app that could allow the public to report to MTRCL gaps identified at the boundary fencing along railway lines; and installing sensors to detect dogs or other animals entering the track areas.

Proposed creation of two directorate posts in the Railways Branch of the Electrical and Mechanical Services Department to enhance monitoring of railway safety

33. The Administration consulted the Subcommittee on the proposal to create two permanent Chief Engineer (Chief Electrical and Mechanical Engineer/Chief Electronics Engineer) (D1) posts in the Railways Branch of EMSD to enhance safety inspection and monitoring of existing railway service and new railway projects. Whilst members in general expressed support for the proposal, some members requested the Administration to further explain about the differences between having and not having the said posts for the Railways Branch to regulate and oversee the safe

operation of the MTR system.

34. The Administration advised the Subcommittee that the current workload of the Railways Branch was heavy. There were only 16 staff in the Branch while the total route length of the railway network exceeded 200 kilometres. Under existing manpower, the Railways Branch had to carefully prioritize the tasks when discharging duties. With the creation of two directorate posts and nine non-directorate posts, safety inspection and monitoring of existing railway service and new railway projects would be enhanced. For instance, the safety inspection of the asset management work for railway system could be carried out more frequently and comprehensively.

Recommendation

35. The Panel is invited to note the work of the Subcommittee.

Council Business Division 4
Legislative Council Secretariat
19 June 2015

Panel on Transport

Subcommittee on matters relating to railways

Terms of Reference

To follow up various issues relating to the planning and implementation of new railway projects, and the operation of existing railways as follows:

Planning and implementation of new railway projects

- (a) planning and financing of new railway projects;
- (b) environmental impact assessment of new railway projects;
- (c) resumption of land arising from the implementation of new railway projects under the Railways Ordinance (Cap. 519);
- (d) progress update on the implementation of new railway projects;
- (e) provision of supporting public infrastructure for new railway projects; and
- (f) co-ordination of public transport services arising from the commissioning of new railway lines.

Railway operation

- (a) performance of existing railway lines including train service performance and safety management;
- (b) maintenance programme; and
- (c) train service disruptions and breakdowns, and arrangements for handling emergency situations.

Matters relating to corporate governance of the post-merger corporation and fares, including review of the fare adjustment mechanism, should be dealt with by the Panel on Transport.

Panel on Transport

Subcommittee on Matters Relating to Railways

Membership list for 2014-2015 session

Chairman	Hon CHAN Han-pan, JP
Deputy Chairman	Hon WONG Kwok-hing, BBS, MH
Members	Hon LEE Cheuk-yan Hon James TO Kun-sun Hon CHAN Kam-lam, SBS, JP Hon Ronny TONG Ka-wah, SC Hon CHAN Hak-kan, JP Hon Mrs Regina IP LAU Suk-ye, GBS, JP Hon Paul TSE Wai-chun, JP Hon LEUNG Kwok-hung Hon Claudia MO Hon Michael TIEN Puk-sun, BBS, JP Hon Frankie YICK Chi-ming Hon WU Chi-wai, MH Hon Gary FAN Kwok-wai Dr Hon Elizabeth QUAT, JP Hon TANG Ka-piu, JP Ir Dr Hon LO Wai-kwok, BBS, MH, JP Hon Christopher CHUNG Shu-kun, BBS, MH, JP Hon Tony TSE Wai-chuen, BBS
	(Total: 20 members)
Clerk	Ms Sophie LAU
Legal Adviser	Miss Evelyn LEE

Appendix III

Proposed indicative implementation programme and the preliminary cost estimates for railway projects under planning

Railway projects under planning	Indicative implementation window for planning purpose	Preliminary cost estimate (\$ billion, in 2013 prices)
(a) Northern Link and Kwu Tung Station	2018 – 2023*	23
(b) Tuen Mun South Extension	2019 – 2022	5.5
(c) East Kowloon Line	2019 – 2025*	27.5
(d) Tung Chung West Extension	2020 – 2024*	6
(e) Hung Shui Kiu Station	2021 – 2024*	3
(f) South Island Line (West)	2021 – 2026*	25
(g) North Island Line	2021 – 2026	20
Total		110

* Implementation of the schemes will be contingent upon the progress of the residential developments in the vicinity.

Key information of the five railway projects under construction

	Hong Kong section of Guangzhou-Shenzhen-Hong Kong Express Rail Link	Shatin to Central Link	West Island Line	South Island Line (East)	Kwun Tong Line Extension
<i>Length of the rail line</i>	26 km	17 km	3 km	7 km	2.6 km
<i>Estimated construction cost</i>	\$66.8 billion	\$79.8 billion	\$15.4 billion	\$12.4 billion	\$5.3 billion
<i>The MTR Corporation Limited's ("MTRCL") latest estimated construction cost</i>	\$71.52 billion (<i>\$4.72 billion increased</i>)	At least \$4.1 billion increased	\$18.5 billion (<i>\$3.1 billion increased</i>)	\$15.2 billion (<i>\$2.8 billion increased</i>)	\$5.3 billion
<i>Funding arrangement</i>	Implemented under the concession approach Construction of the railway works: \$55 billion Construction of the non-railway works: \$11.8 billion Special ex-gratia payments in relation to the project: \$86 million	Implemented under the concession approach Protection works: \$695 million Advance works: \$7.7 billion Construction of the railway works – main works: \$65.4 billion Construction of the non-railway works – main works: \$5.98 billion	Implemented under the ownership approach Funded by a capital grant of \$12.7 billion	Implemented under the ownership approach MTRCL granted the property development right of the ex-Wong Chuk Hang Estate to bridge the funding gap of \$9.9 billion	Implemented under the ownership approach MTRCL granted the property development right of ex-Valley Road Estate Phase 1 site to bridge the funding gap of \$3.3 billion

	Hong Kong section of Guangzhou-Shenzhen-Hong Kong Express Rail Link	Shatin to Central Link	West Island Line	South Island Line (East)	Kwun Tong Line Extension
<i>Works commenced in</i>	2010	2012	2009	2011	2011
<i>Original target commissioning dates</i>	2015	December 2018: Tai Wai to Hung Hom Section December 2020: Hung Hom to Admiralty Section	August 2014	December 2015	August 2015
<i>Target opening</i>	End of 2017	2019: Tai Wai to Hung Hom Section 2021: Hung Hom to Admiralty Section	HKU Station and Kennedy Town Station were opened on 28 December 2014 Sai Ying Pun Station (except Ki Ling Lane Entrance) was opened on 29 March 2015 Ki Ling Lane entrance would be opened to the public in the fourth quarter of 2015	End of 2016	Mid-2016
<i>Journey time</i>	Between Hong Kong and Futian, Shenzhen: 14 minutes Between Hong Kong and Shenzhen North: 23 minutes	Between Wu Kai Sha and Admiralty: 36 minutes Between Tai Wai and Diamond Hill: 6 minutes Between Tai Wai and Kai Tak: 8 minutes	Between Sheung Wan and Kennedy Town: less than 10 minutes	Between Admiralty and South Horizons: 10 minutes	Between Mong Kok and Whampoa: 5 minutes

	Hong Kong section of Guangzhou-Shenzhen- Hong Kong Express Rail Link	Shatin to Central Link	West Island Line	South Island Line (East)	Kwun Tong Line Extension
	Between Hong Kong and Guangzhou South: 48 minutes	Between Hung Hom and Admiralty: 5 minutes Between Tai Wai and Admiralty: 17 minutes Between Lo Wu and Admiralty: 50 minutes			

Updated as at May 2015