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Panel on Transport

**Subcommittee on Matters Relating to Railways
Meeting on 6 March 2015**

Updated background brief on railway safety

Purpose

This paper provides updated background information on railway safety of both heavy rail and Light Rail. It also summarizes the major views and concerns expressed by the Legislative Council Members during previous discussions on the subject.

Background

2. Both the Administration and the MTR Corporation Limited ("MTRCL") are accountable for ensuring railway safety. Their roles are described in the following paragraphs.

Role of the Administration

3. The Administration requires MTRCL to provide safe and reliable railway services at all times. The Transport and Housing Bureau is responsible for overseeing the overall policy on monitoring railway safety and regulating railway services. The Electrical and Mechanical Services Department ("EMSD") is responsible for monitoring the safety performance aspect of railway services provided by MTRCL.

4. On 11 January 2008, the Finance Committee approved the Administration's staffing proposal to enhance the overseeing of railway safety. The major purposes of the proposal are to strengthen the

manpower of Hong Kong Railway Inspectorate¹ ("HKRI") by upgrading its head from a Chief Electrical and Mechanical Engineer (D1) to a Government Electrical and Mechanical Engineer (D2) post, creating two non-directorate engineering posts, as well as to integrate HKRI into EMSD. Subsequently, the Railways Branch was established under EMSD in February 2008. It is the regulatory body of the MTR Lines and the Automated People Mover at the airport and its role is to oversee the safe operation of the above railways. The main functions of the Railways Branch include investigating into railway incidents; ensuring the adoption of appropriate safety practices by the railway corporations; assessing and approving new railway and major railway modifications; and assessing and following up the railway corporations' improvement measures.

Role of MTRCL

5. MTRCL has legal obligation to ensure passenger safety. In accordance with the Mass Transit Railway Regulations, MTRCL should report to EMSD any incident that occurred at any part of the entire railway premises which has a direct bearing on the safe operation of the railway. According to the information provided by MTRCL in June 2013², of the incidents reportable to EMSD from January to May 2013, more than 90% of the cases were attributable to passenger or public behaviour and external factors. The majority of incidents involve passengers stepping into platform gaps, train door nipping and passengers falling on escalators.

Major concerns over safety of heavy rail

6. Members have discussed safety of heavy rail in the Fourth and Fifth Legislative Councils. Their major views and concerns are summarized in the ensuing paragraphs.

Railway incidents

7. At the Subcommittee meetings on 20 December 2013, 28 February and 4 July 2014, members expressed grave concern over the heavy rail incidents, in particular the one resulting in service suspension of about five hours for Tseung Kwan O Line and part of Kwun Tong Line on 16 December 2013. Also, members raised concern over the role of EMSD in ensuring railway safety and enquired how EMSD would enhance

¹ HKRI, established in 1990, was the regulatory body of the railway lines operated by MTRCL and Kowloon-Canton Railway Corporation, and the automated people mover operated by the Airport Authority in the terminal building of the Hong Kong International Airport.

² Source: MTRCL's paper on "Service performance of MTR Corporation Limited" [LC Paper No. CB(1)1421/12-13(01)] issued in June 2013

its existing standard for checking and monitoring railway safety after the railway incidents.

Train safety

8. At the Subcommittee meetings on 22 November 2013 and 4 July 2014 as well as the Council meeting on 9 April 2014, Members expressed concern over train safety. They expressed worry about the materials contained in some of the newly procured MTR trains because it was reported that those materials might be harmful to the human body. Also, Members were worried about the differences of high speed rail train between the Hong Kong section ("HKS") and the Mainland section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link ("XRL") in terms of functions and operational safety; and compatibility of the signalling systems of HKS and that of the Mainland section. Besides, they raised questions on the standard of train crashworthiness of the trains procured for HKS of XRL.

Platform safety

9. Members at a number of the Council meetings as well as the Subcommittee meetings expressed grave concern over platform safety of heavy rail. They mainly urged the Administration to solve problems of wide platform gaps at MTR stations and to expedite the retrofit of platform screen doors and automatic platform gates ("APGs") in order to prevent passengers from falling onto rail tracks. According to the information provided by MTRCL^{3,4}, platform strengthening works have already taken place at the Racecourse Station during the summer break of horse racing in 2013 and the works have started in other East Rail Line ("ERL") stations by phases starting November 2013. The retrofitting works along ERL is expected to be completed in 2020. Besides, the installation of APGs for the Ma On Shan Line ("MOSL") has commenced on 18 November 2014⁵ and the first set of APGs is now in place on Platform 4 of Tai Wai Station. MTRCL expects to complete the retrofitting works along MOSL in 2017.

Train door safety

10. At the Subcommittee meeting on 13 January 2012, members expressed concern over occurrences of non-stopping of MTR trains and door opening procedures not properly followed by MTR Train Captains for

³ Source: MTRCL's paper on "Retrofitting of automatic platform gates along the East Rail Line and Ma On Shan Line" [LC Paper No. CB(1)308/13-14(03)] issued in November 2013

⁴ Source: MTRCL's website on the Shatin to Central Link
(<http://www.mtr-shatincentrallink.hk/en/construction/related-work.html>)

⁵ Source: MTRCL's press release on "First pair of automatic platform gates installed on Ma On Shan Line" issued on 21 November 2014

the four-month period between 1 October 2011 and 31 January 2012. According to the Administration⁶, since July 2010, platform assistants during peak hours at MTR interchange stations have held up the "Stop" sign and activated the electronic whistle when train doors are about to close, in order to urge passengers not to attempt entering train compartments when train doors are closing. Starting from 10 December 2014⁷, platform and train door chimes have been standardized across MTR lines to facilitate smoother train operations and to raise passenger awareness of door safety by providing clearer audio signals to indicate when doors are opening and closing. The standardization of door chimes on all MTR lines will be completed in the first quarter of 2015.

Escalator and lift safety

11. At the Council meetings in July 2011 and March 2012, Members expressed concern over the safety of MTR's lifts and escalators as accidents involving escalators occurred one after another in railway premises. In response, the Administration explained that all suppliers and maintenance contractors of escalators and passenger lifts in the MTR network were registered with EMSD. The design, construction, examination, testing and maintenance of escalators and passenger lifts should comply with the requirements of the Lifts and Escalators (Safety) Ordinance (Cap. 327) and the relevant codes of practice. All escalators and passenger lifts should be approved by the EMSD before they were put into service.

Major concerns over safety of Light Rail

12. Members have discussed safety of Light Rail and their major views and concerns are summarized in the ensuing paragraphs.

Traffic safety

13. At the Council meeting in June 2011 and the Subcommittee meetings in May 2013 and February 2014, Members expressed concern over safety of Light Rail in view of a number of serious traffic incidents. On 1 June 2011, a Light Rail train collided with a vehicle on the road and was derailed, resulting in over 20 people being injured. More than 70 passengers were injured on 17 May 2013 when a Light Rail train was derailed in Tin Shui Wai, Yuen Long. Besides, Light Rail service at eight stops between Hang Mei Tsuen Stop and Yuen Long Terminus was

⁶ Source: The Administration's press release on "LCQ15: Platform safety of MTR stations" issued in March 2011

⁷ Source: MTRCL's press release on "New '2+1' train service arrangement and next train app enhance MTR Tseung Kwan O Line service" issued in December 2014

suspended on 22 January 2014 because of faulty overhead line insulators. In this connection, Members urged the Administration and MTRCL to implement improvement measures to enhance traffic safety of Light Rail, such as review of the existing Light Rail network, installation of a computer system inside all Light Rail vehicles to monitor the travelling speed and enhancement of MTRCL's quality management in railway operations.

Platform safety

14. Members at the Council meetings in January 2008 and March 2011 expressed concern about platform safety at Light Rail stations and urged the Administration and MTRCL to implement enhancement measures to ensure safety of passengers, in particular visually impaired passengers. The Administration advised that MTRCL had enhanced its public announcement at Light Rail platforms to remind passengers to stand behind the yellow lines and to beware of the platform gap. Plastic fillers were installed at the edge of platforms at Light Rail stations with wide platform gaps so as to narrow the gap. During rush hours, MTRCL deployed platform assistants at Light Rail stations with larger passenger flow to assist passengers in boarding and alighting.

Latest development

15. The Administration plans to seek support for its application to create two directorate posts in the Railways Branch of EMSD to enhance monitoring of railway safety at the Subcommittee meeting to be held on 6 March 2015.

Relevant papers

16. A list of relevant papers is at **Appendix**.

Updated background brief on railway safety

List of relevant papers

Date of meeting	Committee	Minutes/Paper	LC Paper No.
23.11.2007	Panel on Transport	Administration's paper on staffing proposal to enhance railway safety regulation	CB(1)263/07-08(04) http://www.legco.gov.hk/yr07-08/english/panels/tp/papers/tp1123cb1-263-4-e.pdf
		Minutes of meeting	CB(1)398/07-08 http://www.legco.gov.hk/yr07-08/english/panels/tp/minutes/tp071123.pdf
12.12.2007	Establishment Subcommittee	Administration's paper on proposed creation of one permanent post of Government Electrical and Mechanical Engineer (D2) in Electrical and Mechanical Services Department ("EMSD") to be offset by deletion of one permanent post of Chief Electrical and Mechanical Engineer (D1) in Transport Branch of Transport and Housing Bureau of Government Secretariat with effect from 1 February 2008; transfer the Hong Kong Railway Inspectorate in the Transport Branch to EMSD; and adjustment to the establishment ceiling in 2007-08 under the Transport Branch and EMSD	EC(2007-08)13 http://www.legco.gov.hk/yr07-08/english/fc/esc/papers/e07-13e.pdf

Date of meeting	Committee	Minutes/Paper	LC Paper No.
		Minutes of meeting	ESC 17/07-08 http://www.legco.gov.hk/yr07-08/english/fc/esc/minutes/es071212.pdf
11.1.2008	Finance Committee	Recommendations of the Establishment Subcommittee made on 12 December 2007	FCR(2007-08)41 http://www.legco.gov.hk/yr07-08/english/fc/fc/papers/f07-41e.pdf
		Minutes of meeting	FC85/07-08 http://www.legco.gov.hk/yr07-08/english/fc/fc/minutes/fc080111.pdf
23.1.2008	Council Meeting	Hon Daniel LAM raised a question on safety measures at Light Rail platforms	http://www.info.gov.hk/gia/general/200801/23/P200801230161.htm
2.7.2008	Council Meeting	Hon TAM Yiu-chung raised a question on installation of automatic platform gates at MTR stations	http://www.info.gov.hk/gia/general/200807/02/P200807020245.htm
16.1.2009	Subcommittee on Matters Relating to Railways	Administration's paper on follow-up action on MTR Kwun Tong Line overhead power system failure on 8 December 2008	CB(1)557/08-09(06) http://www.legco.gov.hk/yr08-09/english/panels/tp/tp_rdp/papers/tp_rdp0116cb1-557-6-e.pdf
		Minutes of meeting	CB(1) 1146 /08-09 http://www.legco.gov.hk/yr08-09/english/panels/tp/tp_rdp/minutes/rdp20090116.pdf
18.3.2009	Council Meeting	Hon James TO Kun-sun raised a question on retrofitting of automatic platform gates	http://www.info.gov.hk/gia/general/200903/18/P200903180135.htm

Date of meeting	Committee	Minutes/Paper	LC Paper No.
2.12.2009	Council Meeting	Hon TAM Yiu-chung raised a question on measures to solve the problem of wide platform gaps at MTR stations	http://www.info.gov.hk/gia/general/200912/02/P200912020188.htm
17.3.2010	Council Meeting	Hon Andrew CHENG raised a question on platform screen doors and automatic platform gates in MTR stations	http://www.info.gov.hk/gia/general/201003/17/P201003170192.htm
9.6.2010	Council Meeting	Hon Andrew CHENG raised a question on MTR fares and station facilities	http://www.info.gov.hk/gia/general/201006/09/P201006090142.htm
3.11.2010	Council Meeting	Hon WONG Sing-chi raised a question on retrofitting of Platform Screen Doors and Automatic Platform Gates at MTR stations	http://www.info.gov.hk/gia/general/201011/03/P201011030135.htm
19.1.2011	Council Meeting	Hon WONG Sing-chi raised a question on MTR facilities and services	http://www.info.gov.hk/gia/general/201101/19/P201101190133.htm
21.1.2011	Subcommittee on Matters Relating to Railways	Administration's paper on retrofitting of Automatic Platform Gates on the East Rail Line	CB(1)1072/10-11(01) http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/papers/tp_rdp0121cb1-1072-1-e.pdf
		MTR Corporation Limited's paper on retrofitting of Automatic Platform Gates on the East Rail Line	CB(1)1072/10-11(02) http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/papers/tp_rdp0121cb1-1072-2-e.pdf
		Minutes of meeting	CB(1)1916/10-11 http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/minutes/rdp20110121.pdf

Date of meeting	Committee	Minutes/Paper	LC Paper No.
21.2.2011	Subcommittee on Matters Relating to Railways	Administration's paper on recent railway incidents involving MTR rail cracks	CB(1)1323/10-11(02) http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/papers/tp_rdp0221cb1-1323-2-e.pdf
		MTR Corporation Limited's paper on recent railway incidents involving MTR rail cracks	CB(1)1323/10-11(03) http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/papers/tp_rdp0221cb1-1323-3-e.pdf
		Minutes of meeting	CB(1)3029 /10-11 http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/minutes/rdp20110221.pdf
2.3.2011	Council Meeting	Hon KAM Nai-wai raised a question on platform safety of MTR stations	http://www.info.gov.hk/gia/general/201103/02/P201103020118.htm
9.3.2011	Council Meeting	Hon WONG Kwok-hing raised a question on railway safety	http://www.info.gov.hk/gia/general/201103/09/P201103090115.htm
18.3.2011	Subcommittee on Matters Relating to Railways	Administration's paper on MTR Tsuen Wan Line service disruption on 21 October 2010	CB(1)1585/10-11(03) http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/papers/tp_rdp0318cb1-1585-3-e.pdf
		Administration's paper on recent railway incidents involving MTR rail cracks	CB(1)1585/10-11(04) http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/papers/tp_rdp0318cb1-1585-4-e.pdf
		MTR Corporation Limited's paper on follow-up actions on MTR Tsuen Wan Line service disruption on 21 October 2010	CB(1)1585/10-11(05) http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/papers/tp_rdp0318cb1-1585-5-e.pdf

Date of meeting	Committee	Minutes/Paper	LC Paper No.
		MTR Corporation Limited's paper on recent railway incidents involving MTR rail cracks	CB(1)1585/10-11(06) http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/papers/tp_rdp0318cb1-1585-6-e.pdf
		Minutes of meeting	CB(1)2913/10-11 http://www.legco.gov.hk/yr10-11/english/panels/tp/tp_rdp/minutes/rdp20110318.pdf
6.4.2011	Council Meeting	Hon WONG Sing-chi raised a question on retrofitting platform screen doors or automatic platform gates at MTR stations	http://www.info.gov.hk/gia/general/201104/06/P201104060139.htm
1.6.2011	Council Meeting	Hon CHEUNG Hok-ming raised a question on traffic safety of Light Rail	http://www.info.gov.hk/gia/general/201106/01/P201105310251.htm
13.7.2011	Council Meeting	Hon IP Kwok-him raised a question on escalator incidents	http://www.info.gov.hk/gia/general/201107/13/P201107130223.htm
		Hon IP Wai-ming raised a question on safety of lifts and escalators in railway premises	http://www.info.gov.hk/gia/general/201203/28/P201203270466.htm
13.1.2012	Subcommittee on Matters Relating to Railways	MTR Corporation Limited's paper on design of next generation of railway stations and update on retrofitting platform screen doors	CB(1)785/11-12(03) http://www.legco.gov.hk/yr11-12/english/panels/tp/tp_rdp/papers/tp_rdp0113cb1-785-3-e.pdf
		Minutes of meeting	CB(1)2461/11-12 http://www.legco.gov.hk/yr11-12/english/panels/tp/tp_rdp/minutes/rdp20120113.pdf

Date of meeting	Committee	Minutes/Paper	LC Paper No.
2.3.2012	Subcommittee on Matters Relating to Railways	MTR Corporation Limited's supplementary information on retrofitting automatic platform gates along the East Rail Line and Ma On Shan Line	CB(1)1154/11-12(05) http://www.legco.gov.hk/yr11-12/english/panels/tp/tp_rdp/papers/tp_rdp0302cb1-1154-5-e.pdf
		Minutes of meeting	CB(1)1772/11-12 http://www.legco.gov.hk/yr11-12/english/panels/tp/tp_rdp/minutes/rdp20120302.pdf
28.6.2012	Subcommittee on Matters Relating to Railways	MTR Corporation Limited's paper on MTR railway service performance	CB(1)2236/11-12(01) http://www.legco.gov.hk/yr11-12/english/panels/tp/tp_rdp/papers/tp_rdp0628cb1-2236-1-e.pdf
		MTR Corporation Limited's paper on occurrences of non-stopping of MTR trains or door opening procedures not properly followed by MTR train captains	CB(1)1162/11-12(01) http://www.legco.gov.hk/yr11-12/english/panels/tp/tp_rdp/papers/tp_rdp0113cb1-1162-1-e.pdf
		Minutes of meeting	CB(1)2626/11-12 http://www.legco.gov.hk/yr11-12/english/panels/tp/tp_rdp/minutes/rdp20120628.pdf
24.5.2013	Subcommittee on Matters Relating to Railways	Administration's paper on Light Rail incident on 17 May 2013	CB(1)1072/12-13(07) http://www.legco.gov.hk/yr12-13/english/panels/tp/tp_rdp/papers/tp_rdp0524cb1-1072-7-e.pdf
		Minutes of meeting	CB(1)1870/12-13 http://www.legco.gov.hk/yr12-13/english/panels/tp/tp_rdp/minutes/rdp20130524.pdf

Date of meeting	Committee	Minutes/Paper	LC Paper No.
5.7.2013	Subcommittee on Matters Relating to Railways	MTR Corporation Limited's paper on service performance of the MTR Corporation Limited	CB(1)1421/12-13(01) http://www.legco.gov.hk/yr12-13/english/panels/tp/tp_rdp/papers/tp_rdp0705cb1-1421-1-e.pdf
		Minutes of meeting	CB(1)534/13-14 http://www.legco.gov.hk/yr12-13/english/panels/tp/tp_rdp/minutes/rdp20130705.pdf
20.12.2013	Subcommittee on Matters Relating to Railways	Administration's paper on Tseung Kwan O Line service disruption on 16 December 2013	CB(1)595/13-14(01) http://www.legco.gov.hk/yr13-14/chinese/panels/tp/tp_rdp/papers/tp_rdp1220cb1-595-1-c.pdf
		Minutes of meeting	CB(1)1011/13-14 http://www.legco.gov.hk/yr13-14/english/panels/tp/tp_rdp/minutes/rdp20131220.pdf
28.2.2014	Subcommittee on Matters Relating to Railways	Administration's paper on follow-ups on the service suspension of Tseung Kwan O Line and part of Kwun Tong Line on 16 December 2013, and report on subsequent major incidents on East Rail Line and Light Rail	CB(1)980/13-14(05) http://www.legco.gov.hk/yr13-14/english/panels/tp/tp_rdp/papers/tp_rdp0228cb1-980-5-e.pdf
		Minutes of meeting	CB(1)1928/13-14 http://www.legco.gov.hk/yr13-14/english/panels/tp/tp_rdp/minutes/rdp20140228.pdf
9.4.2014	Council Meeting	Hon Albert HO Chun-yan raised a question on railway safety	http://www.info.gov.hk/gia/general/201404/09/P201404090399.htm

Date of meeting	Committee	Minutes/Paper	LC Paper No.
4.7.2014	Subcommittee on Matters Relating to Railways	MTR Corporation Limited's paper on East Rail Line service disruptions on 27 and 28 April, and 1 and 2 May 2014	CB(1)1722/13-14(01) http://www.legco.gov.hk/yr13-14/english/panels/tp/tp_rdp/papers/tp_rdp0704cb1-1722-1-e.pdf
		Minutes of meeting	CB(1)139/14-15 http://www.legco.gov.hk/yr13-14/english/panels/tp/tp_rdp/minutes/rdp20140704.pdf

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