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Panel on Economic Development
Meeting on 22 February 2010

Background brief on operation of Ngong Ping 360 ropeway

Purpose

This paper sets out the background to the development of Ngong Ping 360 ropeway, and the incident of the cabin dislodgement on 11 June 2007. It also summarizes Members' views and concerns expressed on the subject matter.

Background

Development of the Ngong Ping 360 ropeway

2. In 1998, the Financial Secretary announced Government's decision to construct a cable car project linking Tung Chung and Ngong Ping on Lantau Island as a tourist attraction. According to the framework of implementation, the Government would grant a 30-year franchise for the financing, design, construction, operation and maintenance of the Tung Chung Cable Car System on a Build-Operate-Transfer basis.

3. In July 2002, the Government entered into a Provisional Agreement with the MTR Corporation Limited (MTRCL) to allow the latter to commence preparatory work on the project before the grant of the franchise. The Tung Chung Cable Car Ordinance (Cap. 577) was enacted on 28 May 2003 following scrutiny by a bills committee of the Legislative Council which had examined the operation and safety standards of the ropeway and also the financial penalties on the franchisee in the event of persistent failure to comply with the statutory requirements.

4. In November 2003, the Government entered into a Project Agreement with MTRCL for a 30-year franchise of operating the Ngong Ping 360 ropeway, and granted it a 30-year land lease for the development of complementary tourist facilities in the form of a themed village at Ngong Ping (the Village). MTRCL appointed the Skyrail-ITM (Hong Kong) Limited (Skyrail) to operate and manage the whole project.

5. On 2 November 2005, the Tung Chung Cable Car Bylaw was made under section 22 of the Tung Chung Cable Car Ordinance, providing safety precautions to passengers on the Ngong Ping 360 ropeway and people in nearby area.

Opening of the ropeway

6. Skyrail conducted trial runs on the ropeway and invited guests from 8 June 2006 to take a ride before opening the facility to the public on 24 June 2006. During the trial run on 17 June 2006, a service interruption incident occurred leading to some passengers being stranded in the cable cars. Skyrail and the cable car manufacturer, Leitner GmbH, subsequently made adjustments to the system and conducted reliability tests. A new series of trial run resumed from 30 August 2006 onwards involving more than 8 000 people. Following the successful conclusion of the trial run, the Ngong Ping 360 ropeway was officially opened to the public on 18 September 2006.

7. Since its official launching, the Ngong Ping 360 ropeway has experienced a series of stoppages and delay in services due to strong wind and signal problems. On these occasions, visitors expressed grave dissatisfaction about Skyrail's failure to notify the public on the possibility of suspension or delay in services in a timely manner. The Skyrail was urged to disseminate service interruption information at major MTR stations and through the media.

Cabin dislodgement incident in 2007

8. In accordance with the Aerial Ropeways (Safety) Ordinance (Cap. 211), Skyrail commenced an annual ropeway survey on 7 June 2007, which was expected to last for about one week, after the operating hours of the ropeway service to test different system components. On 11 June 2007 at around 8:00 pm, in the course of conducting a brake test, a cabin dislodged from the ropeway and fell through about 50 metres before collapsing on the ground next to Tower 2B. The Electrical and Mechanical Services Department (EMSD), which is responsible for monitoring the safety of the cable car systems, immediately ordered the MTRCL to close the ropeway. Meanwhile, the Government appointed an Expert Panel¹ to conduct detailed investigation into the incident; review the design, operation, maintenance and management of the ropeway; and recommend prerequisite requirements for re-opening of the ropeway for use by the public.

9. The Expert Panel was of the opinion that the incident was caused by improper operation of the service brakes, and the brake test conducted (which was to simulate the failure of modulation of both groups of service brakes²) during annual examination

¹ The Expert Panel was chaired by Prof. Dr. Gábor Oplatka, past President and Honourary Member of the International Organisation for the Study of the Endurance of Wire Ropes of the International Organisation for Transportation by Cables, with Prof. Dr. Josef Nejez, Chairman of the Austrian Standards Committee on Ropeways, as Deputy.

² The brake test conducted was to simulate the failure of modulation of both groups of service brakes, the possibility of which is extremely remote during normal operation of the ropeway. According to the ropeway manufacturer, there has not been any occurrence of simultaneous failure of both groups of service brakes in over 130 similar ropeway systems, either mono-cable or bi-cable systems having the same service brake configuration, installed between 2003 and 2006 by them.

on 11 June 2007 was not necessary and should not be allowed in any circumstances. According to the Expert Panel, the design of the Ngong Ping 360 ropeway was in line with the prevailing international standards and practices. The Expert Panel proposed the following remedial measures to prevent recurrence of similar incident:

- (a) provide refresher training course for ropeway operators and maintenance staff;
- (b) prepare properly documented procedures and necessary work instructions for annual examination;
- (c) introduce a quality management system;
- (d) conduct visual check of possible cabin derailment before system restarting wherever the ropeway experienced excessive deceleration;
- (e) monitor visually the entire ropeway line during brake tests; and
- (f) provide interlock for the operation which must not be carried out at the same time.

10. In parallel, the Government conducted a criminal investigation into the incident which revealed that the assistant manager, the managing director and the operating company³ had contravened section 23A of Cap.211. The case was taken to court. The company pleaded guilty and was fined \$5,000 on 10 January 2008. After reviewing the case, the Director of Public Prosecutors concluded that since the company had accepted full responsibility, it was no longer in the public interest to proceed with the prosecution of the managing director and the assistant manager. As such, the actions taken against them were terminated in March 2009.

Transfer of management and re-opening

11. In accepting the Expert Panel's recommendations for improvements (paragraph 9 above), MTRCL decided to take over the management and operation of the Ngong Ping 360 ropeway through the acquisition of Skyrail. On 27 September 2007, MTRCL announced the new management of Ngong Ping 360 Limited (NP 360 Ltd) which was a subsidiary of MTRCL and comprised local engineers and experienced cable car professionals from overseas. As regards the commercial agreements that Skyrail had entered into with third parties in connection with the operation of the Ngong Ping 360 ropeway and the Village, NP 360 Ltd recognized and would honour the terms of all such contracts signed and any matters arising in relation to the contracts would be handled according to the agreed terms.

³ The operating company was NP 360 Ltd, formerly known as Skyrail-ITM (Hong Kong) Limited.

12. The new management of NP 360 Ltd then identified and pressed ahead with the priority tasks for the re-opening of the Ngong Ping 360 ropeway. The ropeway eventually passed the assessment of EMSD and the closure order was lifted. A "VIP" ride on the ropeway was conducted on 22 December 2007 for members of the Panel on Economic Development⁴ (the Panel), Government officials and other guests. The ropeway was officially re-opened on 31 December 2007.

Concerns raised by LegCo Members

Council meetings

13. At the Council meeting on 28 June 2006, Hon James TIEN asked an oral question about the operation of the Ngong Ping 360 ropeway under strong wind and contingency measures to deal with service suspension. According to the Administration's reply, there would be temporary suspensions of the ropeway in the circumstances of adverse weather conditions, including strong winds, i.e. wind speed of 90 kilometres per hour persistent wind and 135 kilometres per hour gust wind. Under Cap. 211, the operator had the power to suspend the operation of the cable car system having regard to a host of factors, including wind speed, safety and comfort of the passengers.

14. At the Council meeting on 11 July 2007, Hon Jeffrey LAM raised an oral question on the cabin crash incident. Members expressed grave concern about repeated suspension of the Ngong Ping 360 ropeway and considered the incident further revealed the poor performance of Skyrail in operating the ropeway service. There was strong call for the Administration to order MTRCL to terminate the service contract with Skyrail with a view to restoring public confidence on the ropeway.

15. Hon Jeffrey LAM raised a question at the Council meeting on 14 May 2008 on the operation of the Ngong Ping 360 ropeway. He expressed concern whether NP 360 Ltd had fully implemented the measures for improving the operational safety of the cable car system recommended by the Expert Panel in its report on the cabin dislodgement incident. According to the Administration, NP 360 Ltd had complied with all prerequisite before the cable car service was re-opened to the public in end 2007. EMSD would continue to closely monitor the operation of the cable car system and ensure that the company would continuously and effectively implement all improvement measures.

Panel discussions

16. Following the service interruption incident during the trial run in June 2006 (paragraph 6 refers), the Panel discussed with the Administration, MTRCL and Skyrail improvement measures at the special meeting on 18 July 2006. Panel members urged

⁴ The Panel on Economic Services was renamed as the Panel on Economic Development with effect from the 2007-2008 session.

Skyrail to strengthen contingency measures in the event of suspension of the ropeway, including crisis handling and crowd control procedures, communication with the operational staff at the terminals/angle stations, the passengers inside the cable cars as well as the media. They also called upon Skyrail to enhance the transport arrangements for visitors during the evacuation process and step up efforts in promoting the cable car service in order to restore the public confidence.

17. The cabin dislodgement incident in June 2007 (paragraph 8 refers) sparked off wide public concern over the safety of Ngong Ping 360 ropeway. The Panel held a special meeting on 15 June 2007 with the Administration, MTRCL and Skyrail to follow up the matter. Acknowledging the top priority of ensuring the safety of the ropeway, Panel members supported the immediate suspension of cable car service until the cause of the incident was identified and remedial actions taken. They also welcomed the appointment of the Expert Panel to conduct a full investigation into the incident. Given the negative impact of the incident on Hong Kong's tourism, Panel members stressed the needs for the Administration to strengthen promotion on Hong Kong's multi-faceted appeal to tourists, to continue attracting visitors to the Village, as well as to help Village tenants.

18. The Panel received the report on the findings of the investigation into the incident at the meeting on 18 September 2007. Panel members in general welcomed MTRCL's decision to change the cable car management and hoped that the new management would deploy professional experts to run the ropeway. They also called upon the Administration to take note that overseas companies were unable to meet public expectations and manage public relation, while local company should have more understanding in local practices and customers' needs. Panel members urged the Administration and MTRCL to step up their effort in monitoring the cable car operation to ensure the safety of passengers. In response to members' call for helping Village tenants tide over the difficult period, MTRCL undertook to make its best effort to assist them.

19. The Administration briefed the Panel on the transfer of management and re-launching of the Ngong Ping 360 ropeway at the meeting on 26 November 2007. In response to members' concern on the transfer of management, MTRCL explained that the acquisition of Skyrail would allow MTRCL to change the management of the ropeway at the earliest time to facilitate early re-testing and re-opening of the cable car service. As the Expert Panel had pointed out that there was a lack of alertness of the previous management to issues relating to the daily operation of the ropeway, a Panel member expressed concern about the capability of the new management in responding to cable car incidents. MTRCL assured members that the new management, comprising local engineers who were well-versed with the management, operation and maintenance of rail operation, as well as the European cable car professionals with over 20 years' experience in ropeway services, would give prompt response to problems identified and take follow-up actions as appropriate. As regards re-opening of the Ngong Ping 360 ropeway, MTRCL undertook to implement promotional measures to attract visitors and boost their confidence on the cable car system. It

would also conduct various drills to control crowds and handle different operational incidents upon re-opening.

Latest development

20. During the rescue drill in the evening of 18 November 2009, a rescue carrier of the Ngong Ping 360 ropeway was damaged after colliding with the tower of the ropeway system. NP 360 Ltd informed EMSD of the incident on 20 November 2009, i.e. two days after the incident, instead of within 30 minutes of occurrence as stipulated in the Aerial Ropeways (Operation and Maintenance) Regulations (Cap. 211 sub. leg. A). In view of the NP 360 Ltd's failure to follow the established reporting mechanism, EMSD issued a warning letter to the company reiterating the need to comply with the established reporting mechanism, and requested MTRCL to strengthen the monitoring of NP 360 Ltd.

21. The Administration has been invited to brief the Panel on Economic Development on issues relating to the operation of the Ngong Ping 360 ropeway at the meeting on 22 February 2010.

References

22. A list of the relevant papers is in the **Appendix**.

Council Business Division 1
Legislative Council Secretariat
12 February 2010

Background brief on operation of Ngong Ping 360 ropeway

List of relevant papers

| Panel/Committee | Date | Paper |
|---|------------------|--|
| Panel on Economic Services Panel (ES Panel) | 3 July 2002 | Legislative Council brief on Tung Chung Cable Car (File Ref.: ESB CR 6/2091/98 (02) Pt. 24) http://www.legco.gov.hk/yr01-02/english/panels/es/papers/esb_cr_6_2091_98_02_pt24.pdf Minutes of the meeting (LC Paper No. CB(1)2428/01-02) http://www.legco.gov.hk/yr01-02/english/panels/es/minutes/es020703.pdf |
| ES Panel | 25 November 2002 | Administration's information on the Tung Chung Cable Car Bill http://www.legco.gov.hk/yr02-03/english/panels/es/papers/es1125cb1-327-3e.pdf Minutes of the meeting (LC Paper No. CB(1)658/02-03) http://www.legco.gov.hk/yr02-03/english/panels/es/minutes/es021125.pdf |
| Bills Committee on Tung Chung Cable Car Bill | | Legislative Council brief on the Tung Chung Cable Car Bill http://www.legco.gov.hk/yr02-03/english/bills/brief/b29_brf.pdf Report of the Bills Committee to the House Committee (LC Paper No. CB(1)1681/02-03) http://www.legco.gov.hk/yr02-03/english/hc/papers/hc0516cb1-1681.pdf |
| Subcommittee on Proposed Resolution under Section 22 of the | | Proposed resolution on the Tung Chung Cable Car Bylaw http://www.legco.gov.hk/yr04-05/english/subleg/positive/sc10-04-e.pdf Report of the Subcommittee to the House Committee (LC Paper No. CB(1)32/05-06) |

| Panel/Committee | Date | Paper |
|---|-----------------|---|
| Tung Chung Cable Car Ordinance (Cap. 577) | | http://www.legco.gov.hk/yr05-06/english/hc/papers/hc1014cb1-32-e.pdf |
| ES Panel | 24 April 2006 | <p>Administration's paper on the update on the Ngong Ping 360 Project (LC Paper No. CB(1)1303/05-06(05)) http://www.legco.gov.hk/yr05-06/english/panels/es/papers/es0424cb1-1303-5e.pdf</p> <p>Minutes of the meeting (LC Paper No. CB(1)1496/05-06) http://www.legco.gov.hk/yr05-06/english/panels/es/minutes/es060424.pdf</p> |
| Council meeting | 28 June 2006 | <p>Hon James TIEN raised an oral question on the operation of Ngong Ping Skyrail http://www.legco.gov.hk/yr05-06/chinese/counmtg/floor/cm0628ti-confirm-c.pdf</p> |
| ES Panel | 18 July 2006 | <p>Administration's paper on the update on the Ngong Ping 360 Project (LC Paper No. CB(1)1972/05-06(01)) http://www.legco.gov.hk/yr05-06/english/panels/es/papers/es0718cb1-1972-1e.pdf</p> <p>Background brief (LC Paper No. CB(1)1973/05-06) http://www.legco.gov.hk/yr05-06/english/panels/es/papers/es0718cb1-1973-e.pdf</p> <p>Minutes of the meeting (LC Paper No. CB(1)2298/05-06) http://www.legco.gov.hk/yr05-06/english/panels/es/minutes/es060718.pdf</p> |
| ES Panel | 23 October 2006 | <p>Administration's paper on update on Ngong Ping 360 (LC Paper No. CB(1)121//06-07(03)) http://www.legco.gov.hk/yr06-07/english/panels/es/papers/es1023cb1-121-3-e.pdf</p> <p>Background brief (LC Paper No. CB(1) 121/06-07(04)) http://www.legco.gov.hk/yr06-07/english/panels/es/papers/es1023cb1-121-4-e.pdf</p> |

| Panel/Committee | Date | Paper |
|-----------------|--------------|--|
| | | <p>Minutes of the meeting (LC Paper No. CB(1)345/06-07) http://www.legco.gov.hk/yr06-07/english/panels/es/minutes/es061023.pdf</p> |
| ES Panel | | <p>Administration's information paper on update on Ngong Ping 360 (LC Paper No. CB(1)1496/06-07(01)) http://www.legco.gov.hk/yr06-07/english/panels/es/papers/escb1-1496-1-e.pdf</p> |
| Press release | | <p>Press release on "EMSD investigates into the fall of cable car cabin" http://www.info.gov.hk/gia/general/200706/11/P200706110288.htm</p> |
| ES Panel | 15 June 2007 | <p>Administration's paper on the incident of the falling of a cabin of Ngong Ping Skyrail (LC Paper No. CB(1)1906/06-07(01)) http://www.legco.gov.hk/yr06-07/english/panels/es/papers/es0615cb1-1906-1-e.pdf</p> <p>Submission from Liberal Party regarding on agenda item "The incident of the falling of a cabin of Ngong Ping 360" (Chinese version only) [CB(1)1923/06-07(01)] (15 June 2007) http://www.legco.gov.hk/yr06-07/chinese/panels/es/papers/es0615cb1-1923-1-c.pdf</p> <p>Powerpoint presentation material on "Background on the incident of 11 June 2007" http://www.legco.gov.hk/yr06-07/english/panels/es/papers/es0615cb1-1923-2-e.pdf</p> <p>Minutes of the meeting (LC Paper No. CB(1)2342/06-07) http://www.legco.gov.hk/yr06-07/english/panels/es/minutes/es070615.pdf</p> |
| Council meeting | 11 July 2007 | <p>Hon Jeffrey LAM raised an oral question on the cabin crash incident of Ngong Ping Skyrail (Hansard p.79 to 85) http://www.legco.gov.hk/yr06-07/chinese/counmtg/floor/cm0711-confirm-ec.pdf</p> |

| Panel/Committee | Date | Paper |
|-----------------|-------------------|---|
| ES Panel | 18 September 2007 | <p>Background brief (LC Paper No. CB(1) 2366/06-07(01)) http://www.legco.gov.hk/yr06-07/english/panels/es/papers/es0918cb1-2366-1-e.pdf</p> <p>Information paper provided by the Administration on "Report on Ngong Ping Skyrail Cabin Dislodgement Incident" (follow-up paper) [CB(1)2376/06-07(01)] http://www.legco.gov.hk/yr06-07/english/panels/es/papers/es0918cb1-2376-1-e.pdf</p> <p>Administration's response to the letter dated 21 September 2007 from Hon Fred LI Wah-ming (follow-up paper) [CB(1)2435/06-07(02)] http://www.legco.gov.hk/yr06-07/english/panels/es/papers/es0918cb1-2435-2-e.pdf</p> <p>Minutes of the meeting (LC Paper No. CB(1) 289/07-08) http://www.legco.gov.hk/yr06-07/english/panels/es/minutes/es070918.pdf</p> |
| ES Panel | 26 November 2007 | <p>Information paper on re-launching Ngong Ping 360 provided by the Administration [CB(1)76/07-08(03)] http://www.legco.gov.hk/yr07-08/english/panels/es/papers/eDEV1022cb1-76-3-e.pdf</p> <p>Information paper on MTR Corporation's arrangement with Skyrail provided by the MTR Corporation [CB(1)76/07-08(04)] http://www.legco.gov.hk/yr07-08/english/panels/es/papers/eDEV1022cb1-76-4-e.pdf</p> <p>Administration's paper on the liability of parties for possible claims arising from the transfer of management of Ngong Ping 360 (follow-up paper) [CB(1)737/07-08(01)] http://www.legco.gov.hk/yr07-08/english/panels/es/papers/eDEV1126cb1-737-1-e.pdf</p> <p>Supplementary information on the liability of parties for possible claims arising from the transfer of management of Ngong Ping 360 provided by the Administration (follow-up paper) [CB(1)1172/08-09(01)]</p> |

| Panel/Committee | Date | Paper |
|-------------------------------|-------------|--|
| | | <p>http://www.legco.gov.hk/yr07-08/english/panels/es/papers/eDEV1126cb1-1172-1-e.pdf</p> <p>An abstract of the Report on The incident of the falling of a cabin of Ngong Ping 360 provided by the Administration (follow-up paper) (LC Paper No. CB(1)988/08-09(01))</p> <p>http://www.legco.gov.hk/yr06-07/english/panels/es/papers/eDEVcb1-988-1-e.pdf</p> <p>Minutes of the meeting (LC Paper No. CB(1)551/07-08)</p> <p>http://www.legco.gov.hk/yr07-08/english/panels/es/minutes/ev071126.pdf</p> |
| Council meeting | 14 May 2008 | <p>Hon Jeffrey LAM raised a question on operation of Ngong Ping 360 (Hansard p.63 to 68)</p> <p>http://www.legco.gov.hk/yr07-08/english/counmtg/hansard/cm0514-translate-e.pdf</p> |
| Panel on Economic Development | | <p>Administration's paper on reporting mechanism of the Ngong Ping 360 ropeway</p> <p>CB(1)779/09-10(02)</p> <p>http://www.legco.gov.hk/yr09-10/english/panels/eDEV/papers/eDEVcb1-779-2-e.pdf</p> |

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