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**Legislative Council**

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**Panel on Transport**  
**Subcommittee on Matters Relating to Railways**  
**Meeting on 31 March 2009**

**Updated background brief on West Island Line**

**Purpose**

This paper provides background information on the West Island Line (WIL) project and summarizes the major concerns expressed by the Subcommittee on Matters Relating to Railways (the Subcommittee) on the project.

**Background**

2. The Island Line Extensions, which comprises the North Hong Kong Island Line<sup>1</sup> and WIL, is one of the six rail projects short-listed for implementation in the Railway Development Strategy 2000.

3. In June 2005, the Administration invited the MTR Corporation Limited (MTRCL) to proceed with the preliminary planning and design of the proposed WIL, involving the extension of the heavy rail MTR Island Line from Sheung Wan to Kennedy Town with two intermediate stations at Sai Ying Pun and University<sup>2</sup>; and that negotiations with MTRCL on the detailed scope, cost and implementation programme for WIL should commence.

4. In October 2005, MTRCL commenced the preliminary design and the Environmental Impact Assessment Study of the project. In August 2006, MTRCL submitted to the Administration the Revised Project Proposal of WIL containing the scheme intended for gazetting under the Railways Ordinance (Cap. 519) (RO). The proposed route length of the WIL is about 3 km long and its alignment is shown at **Appendix I**.

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<sup>1</sup> The North Hong Kong Island Line, which provides an additional corridor from Hong Kong Station to Fortress Hill Station, is currently under review.

<sup>2</sup> In its earlier proposals, MTRCL had proposed 'Belcher' as one of the intermediate stations. 'Belcher' was replaced with 'University' under the proposal of February 2005.

5. In October 2007, MTRCL was invited to proceed with further planning and detailed design of the proposed WIL project. The scheme was gazetted under RO on 26 October 2007. According to the Administration, MTRCL planned to commence the construction works of WIL in early 2009 for completion in 2013-2014.

### **Financial implications of WIL**

6. The overall estimated project cost of WIL is \$8.9 billion, including the costs for design and construction of the railway works, procurement of rolling stock, and the reprovisioning of government facilities affected by WIL. MTRCL has indicated that revenue derived from WIL can only cover the operation cost and part of the capital cost resulting in an estimated funding gap<sup>3</sup> of about \$6 billion.

7. The Administration has in the past mainly relied on granting property development rights as the means for providing financial support to bridge the funding gap for most of the railway projects. However, due to the lack of suitable sites along or adjacent to WIL alignment for property development, the Administration considers that alternative methods to provide the funding would have to be explored. The Administration proposed in November 2007 to provide a capital grant as financial support. The grant is intended as an upfront inducement to lower the capital costs of the project in order to provide the incentive for MTRCL to embark on the project which it would otherwise not undertake given the financial non-viability.

8. In order to more accurately determine the amount of requisite government funding, the Administration has decided to provide funding support in two stages. The first stage covers the design phase expenditure. The second-stage funding support, covering the remainder of the funding gap for the WIL project, will be released after the railway scheme has been authorized under RO and the Project Agreement is established.

9. The Administration explained in November 2007 that under the proposed funding principle, MTRCL would bear all the commercial risks associated with the construction and operation of the railway line in future. The Administration advised that should the patronage and the corresponding fare revenue arising from WIL turn out to be substantially lower than those assumed in determining the funding gap amount, the Administration would have no obligation to provide any further financial support to MTRCL.

10. In accordance with this two-stage approach, the Administration sought funding support from the Finance Committee on 14 December 2007 to cover

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<sup>3</sup> A railway project is considered financially not viable if the present value of all its projected revenues net of projected expenditure falls short of the expected return on capital. This shortfall is known as the funding gap.

the design phase expenditure at an estimated cost of \$400 million in money-of-the-day prices. The funding proposal was endorsed.

### **Discussion on the WIL project by the Subcommittee**

11. The Subcommittee discussed the latest progress of the WIL project on 30 March 2007. The Subcommittee was consulted on the financial proposal for providing funding support to MTRCL for WIL under the two-stage approach on 9 November 2007. While supporting in principle the proposed project, members expressed concerns about various issues concerning the WIL project as follows -

- (a) the potential hazard and risks arising from the storage, handling and use of explosives on nearby residents during construction;
- (b) the impacts of blasting operations on nearby buildings and residents;
- (c) the locations of the ventilation shafts of WIL, and the associated noise and environmental impacts on nearby residents;
- (d) the funding support of about \$6 billion for the WIL project should be provided to MTRCL under certain conditions, e.g. Government should be allowed to participate in determining the fare levels of MTR railways; MTRCL should provide concessionary fares such as weekly and monthly tickets to passengers; and/or use part of its profits to set up a "Fare Stabilization Fund" so as to reduce the pressure to raise railway fares;
- (e) the implication of the funding arrangements for WIL on future railway projects, e.g. the South Island Line and the Shatin to Central Link; and
- (f) the impacts of WIL, as well as the provision of pedestrian links and lift towers connecting area in the vicinity and station concourses of WIL, on the operation and fare revenue of other public transport modes, e.g. buses, green minibuses and taxis.

12. Members requested that the Administration should -

- (a) consider carrying out a comprehensive survey on the buildings in the vicinity before the commencement of the construction works, and appointing an independent surveyor to assess any claims for damages arising from blasting

operations and construction of WIL from nearby residents;

- (b) conduct public consultation on proposed arrangements regarding the storage, handling and use of explosives for the construction of WIL;
- (c) consider providing one more entrance at Kennedy Town station as requested by community groups;
- (d) provide justifications for the provision of three railway stations for WIL given the relatively small population of Western District, whereas only one station was provided in districts such as Tin Shui Wai and Tsuen Wan where had a large population;
- (e) expedite the WIL project in order to improve the traffic condition in Western District;
- (f) provide information on the criteria and planning parameters for the provision of railway lines and stations in a district; and
- (g) provide an assessment report on the impact of WIL on other modes of public transport and reorganization plan(s) of existing public transport network upon the commissioning of WIL.

### **Latest developments**

13. Hon KAM Nai-wai has proposed discussion of this item in view of the concern expressed by the local community about the location of the ventilation shaft of WIL at Hill Road and its environmental impacts. The Subcommittee agreed to discuss the subject at the meeting to be held on 31 March 2009 and to invite deputations from community organizations and residents' groups to give views on the subject.

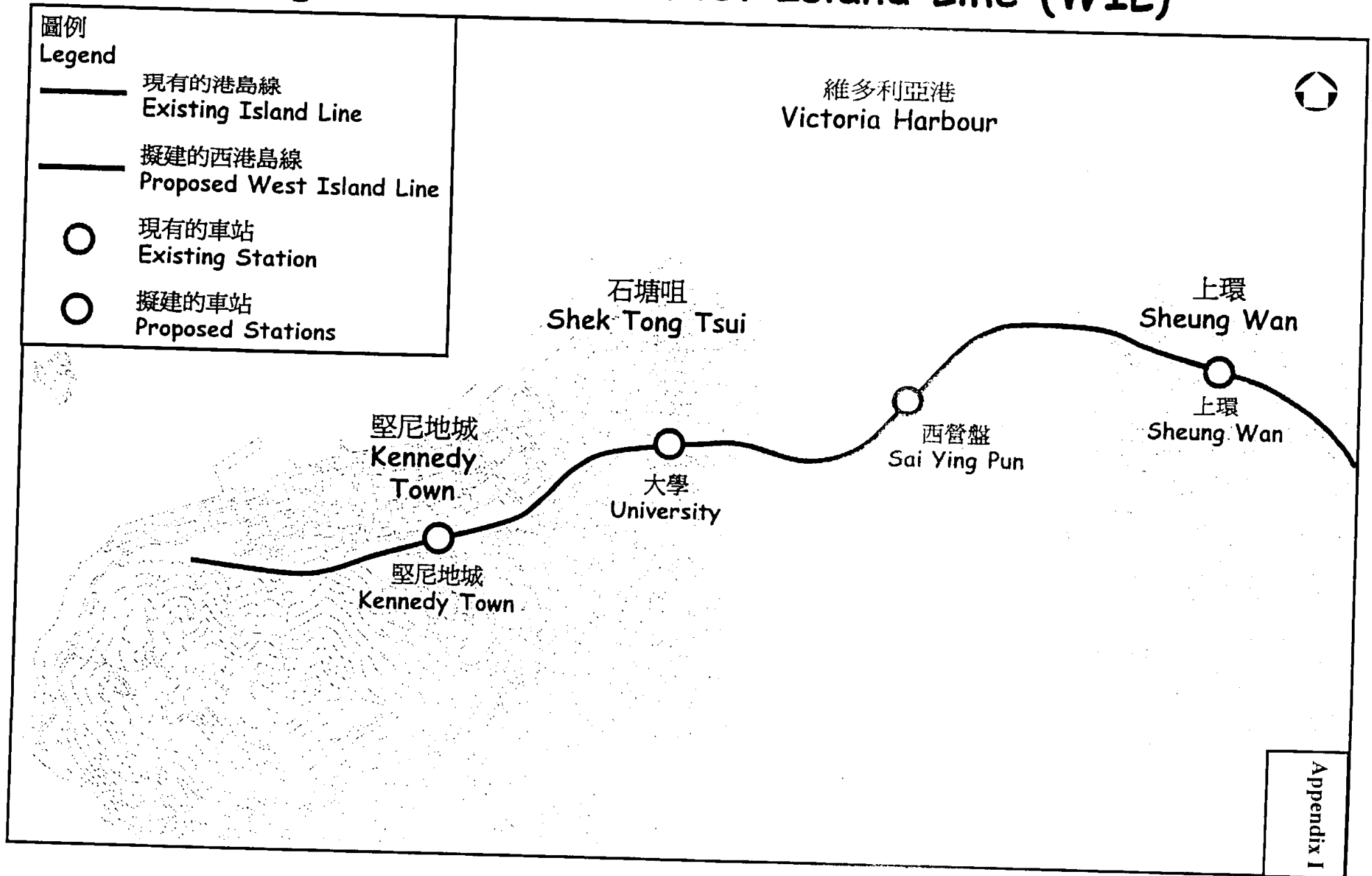
14. Hon Andrew CHENG raised a question on the ventilation shaft of WIL at the Council meeting on 29 October 2008. The question and the Administration's reply are attached at **Appendix II** for members' reference.

### **Relevant papers**

15. A list of relevant papers is at **Appendix III**.

# 西港島線走線圖

## Alignment of The West Island Line (WIL)



LCQ16: Ventilation shaft of West Hong Kong Island Line  
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■ Annex

Following is a question by the Hon Andrew Cheng Kar-foo and a written reply by the Secretary for Transport and Housing, Ms Eva Cheng, at the Legislative Council meeting today (October 29):

Question:

I have received complaints from residents of the Central and Western District that the vent shaft of the West Hong Kong Island Line proposed to be built by the MTR Corporation Limited (MTRCL) at Hill Road will cause noise and air pollution nuisance to residents nearby. In this connection, will the Government inform this Council whether:

(a) it has found out from MTRCL the impact of the vent shaft on the local environment, including the environmental impact data in terms of air quality and noise, etc.; if not, of the reasons for that; and

(b) it has suggested to MTRCL to relocate the vent shaft to another area; if it has, of the relevant details and the relocation cost involved; if not, the reasons for that?

Reply:

President,

The West Island Line (WIL) is an extension of the existing MTR Island Line from Sheung Wan to Kennedy Town with two intermediate stations at Sai Ying Pun and the University of Hong Kong. The MTRCL is now working on the detailed design of the WIL. According to its Project Proposal, there will be a ventilation shaft at Hill Road to serve the station at the University of Hong Kong. My reply to the questions regarding this proposed ventilation shaft is as follows:

a) Ventilation shafts are an integral part of an underground railway system. It will enable air exchanges inside the stations and tunnels with the outside areas. As the trains are powered by electricity, combustion of fossil fuels is not required and hence no harmful or hazardous gases are discharged. Furthermore, the rail tracks and tunnels are washed regularly in order to maintain the cleanliness of the railway.

Apart from that, the MTRCL has conducted air quality tests by setting up a monitoring point at an existing ventilation shaft of the Central Station. The dust level obtained from the monitoring point is very close to those readings obtained from a nearby roadside air quality station set up by the Environmental Protection Department (EPD). This has demonstrated that air exhausted from the ventilation shaft does not cause any adverse impacts on the air quality of the surrounding areas.

In accordance with the Environmental Impact Assessment (EIA) Ordinance, the MTRCL has submitted the EIA report of the WIL to the EPD, and the report has been made available for public inspection. The report has addressed the key environmental impacts during the construction and operation of

the WIL, including air quality, noise, etc. According to the report, the air quality inside railway stations and train compartments during peak hours complies with the Level 1 standard of the "Practice Note for Managing Air Quality in Air-conditioned Public Transport Facilities- Railways" issued by the EPD, i.e. the hourly average of carbon dioxide concentration should be less than 2,500 parts per million (ppm). This indicates that the quality of air exhausted from the stations and the tunnels through the ventilation shaft is good.

As far as noise is concerned, the operation of ventilation shafts has to comply with the requirements stipulated in the Noise Control Ordinance. The stations and the plant rooms that house the ventilation fans of the WIL are in general far below ground with some distance away from the ventilation shaft. Moreover, given that the exhaust air speed is not high and suitable acoustic systems are installed, the noise impact to the public in the vicinity is insignificant and is in compliance with the requirements under the EIA Ordinance.

As regards visual impact, the MTRCL will strive to reduce the scale of the ventilation shaft. Its outlook appearance will be designed to blend with the surroundings so that any visual impact will be minimized.

The Transport and Housing Bureau and the MTRCL have been in close liaison with the Central and Western District Council (C&WDC) and the residents. In order to ease residents' concerns about the proposed ventilation shaft, many briefings and site visits, including visits to ventilation facilities of current stations have been arranged for the members of the C&WDC and the residents.

b) Locations of ventilation shafts are constrained by the design and alignment of the railways. As the Western District is a densely populated area, it is difficult to find suitable locations for the railway facilities. The MTRCL has studied various alternative locations near Hill Road for setting up the ventilation shaft. The results of the study are attached (see Annex).

The above studies mainly concern technical problems and the impact on the residents rather than cost increase which may incur, which is not the major factor in the consideration. After assessing the various factors, the proposed location under the flyover at Hill Road is the more preferable option. As aforesaid, the MTRCL will make every effort to enhance the ventilation shaft structure and to design its external appearance to blend with the surroundings, with a view to minimizing any visual impacts.

Ends/Wednesday, October 29, 2008  
Issued at HKT 12:46

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Annex: The results of the study by the MTRCL on various alternative locations near Hill Road for setting up the ventilation shaft

Alternative Locations Studied	Findings
Slope near Haking Wong Building of the University of Hong Kong, Pokfulam Road	This proposed location is situated on a slope. For the construction of a ventilation shaft, an access road near the slope has to be occupied as works area requiring a prolonged closure of a portion of the access road inside the University of Hong Kong campus. Besides, this proposal presents a major technical problem as the ventilation shaft has to penetrate through the foundation of the retaining wall in front of the slope.
Des Voeux Road West near roundabout for trams at Whitty Street	Since this proposed location is situated over 350m away from the University of Hong Kong Station, the ventilation effect will be limited. Moreover, substantial excavation along Hill Road, Queens Road West and Des Voeux Road West involving utilities and pipes diversion will be required for the construction of adits between the station and the ventilation shaft. It will cause significant adverse traffic impact during construction.
Temporary parking area at Shing Sai Road	Since this proposed location is situated over 400m away from the University of Hong Kong Station, the ventilation effect will be limited. Given that it is also the proposed reprovisioning site for the existing Kennedy Town Swimming Pool, there is no extra space for any ventilation shaft.
Inside Hill Road Garden	The sitting-out area will be significantly reduced due to the occupancy of the ventilation shaft in this proposed location. The residents nearby have objected to this proposal. In addition, this proposal cannot ease the concern to remove the ventilation



	shaft from Hill Road.
Open space at Pokfulam Road near Yam Pak Building	This location has been proposed to house an electrical and mechanical building for the University of Hong Kong Station. There is no extra space.

## West Island Line

## List of relevant papers

Date of meeting	Committee	Minutes/Paper	LC Paper No.
24.10.03	Transport Panel (TP)	<p>Administration's paper on Route 7, Hong Kong Island Line and West Hong Kong Island Line</p> <p>Minutes of meeting</p>	<p>CB(1)100/03-04(04)</p> <p><a href="http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp1024cb1-100-4e.pdf">http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp1024cb1-100-4e.pdf</a></p> <p>CB(1)404/03-04</p> <p><a href="http://www.legco.gov.hk/yr03-04/english/panels/tp/minutes/tp031024.pdf">http://www.legco.gov.hk/yr03-04/english/panels/tp/minutes/tp031024.pdf</a></p>
28.5.04	TP	<p>Administration's paper on West Island Line and South Island Line</p> <p>Paper on West Hong Kong Island Line, South Hong Kong Island Line and Route 4 provided by MTR Corporation Limited</p> <p>Minutes of meeting</p>	<p>CB(1)1929/03-04(01)</p> <p><a href="http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0528cb1-1929-1e.pdf">http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0528cb1-1929-1e.pdf</a></p> <p>CB(1)1912/03-04(25)</p> <p><a href="http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0528cb1-1912-25e.pdf">http://www.legco.gov.hk/yr03-04/english/panels/tp/papers/tp0528cb1-1912-25e.pdf</a></p> <p>CB(1)2408/03-04</p> <p><a href="http://www.legco.gov.hk/yr03-04/english/panels/tp/minutes/tp040528.pdf">http://www.legco.gov.hk/yr03-04/english/panels/tp/minutes/tp040528.pdf</a></p>
25.2.2005	TP	Administration's paper on Route 4 West Hong Kong Island Line South Hong Kong Island Line	<p>CB(1)951/04-05(03)</p> <p><a href="http://www.legco.gov.hk/yr04-05/english/panels/tp/papers/tp0225cb1-951-3e.pdf">http://www.legco.gov.hk/yr04-05/english/panels/tp/papers/tp0225cb1-951-3e.pdf</a></p>

Date of meeting	Committee	Minutes/Paper	LC Paper No.
		Minutes of meeting	CB(1)1179/04-05  <a href="http://www.legco.gov.hk/yr04-05/english/panels/tp/minutes/tp050225.pdf">http://www.legco.gov.hk/yr04-05/english/panels/tp/minutes/tp050225.pdf</a>
		Legislative Council Brief on Mass Transit Railway West Island Line and South Island Line and Route 4	ETWB(T)CR 11/1016/99  <a href="http://www.legco.gov.hk/yr04-05/english/panels/tp/papers/etwb_t_cr_11_1016_99_e.pdf">http://www.legco.gov.hk/yr04-05/english/panels/tp/papers/etwb_t_cr_11_1016_99_e.pdf</a>
30.3.07	Subcommittee on Matters Relating to Railways (SUBC)	Administration's paper on Mass Transit Railway West Island Line	CB(1)1209/06-07(03)  <a href="http://www.legco.gov.hk/yr06-07/english/panels/tp/tp_rdp/papers/tp_rdp0330cb1-1209-3-e.pdf">http://www.legco.gov.hk/yr06-07/english/panels/tp/tp_rdp/papers/tp_rdp0330cb1-1209-3-e.pdf</a>
		Minutes of meeting	CB(1)1445/06-07  <a href="http://www.legco.gov.hk/yr06-07/english/panels/tp/tp_rdp/minutes/rd070330.pdf">http://www.legco.gov.hk/yr06-07/english/panels/tp/tp_rdp/minutes/rd070330.pdf</a>
9.11.2007	SUBC	Legislative Council Brief on the Mass Transit Railway West Island Line  Administration's paper on funding support for the design phase expenditure of the MTR West Island Line	THB(T)CR 11/1016/99  <a href="http://www.legco.gov.hk/yr07-08/english/panels/tp/tp_rdp/papers/tp_rdp1109-thbt_cr11101699-e.pdf">http://www.legco.gov.hk/yr07-08/english/panels/tp/tp_rdp/papers/tp_rdp1109-thbt_cr11101699-e.pdf</a>  CB(1)176/07-08(03)  <a href="http://www.legco.gov.hk/yr07-08/english/panels/tp/tp_rdp/papers/tp_rdp1109cb1-176-3-e.pdf">http://www.legco.gov.hk/yr07-08/english/panels/tp/tp_rdp/papers/tp_rdp1109cb1-176-3-e.pdf</a>

<b>Date of meeting</b>	<b>Committee</b>	<b>Minutes/Paper</b>	<b>LC Paper No.</b>
		Minutes of meeting	CB(1)301/07-08  <a href="http://www.legco.gov.hk/yr07-08/english/panels/tp/tp_rdp/minutes/rd071109.pdf">http://www.legco.gov.hk/yr07-08/english/panels/tp/tp_rdp/minutes/rd071109.pdf</a>