

## **For Information**

### **Legislative Council Panel on Transport**

#### **Territory-wide Review on Provision of Escalator Links/Elevator Systems**

### **PURPOSE**

This paper informs members of the approach and programme for the territory-wide study on the provision of escalator links/elevator systems for uphill areas in Hong Kong. It also recommends the engineering option to be adopted for the proposed scheme at Fortress Hill.

### **BACKGROUND**

2. At the Transport Panel meeting on 15 March 2002, we informed members of the criteria for providing escalator links/elevator systems and the two proposed schemes for Hong Kong Island. Taking on members' suggestion, we undertook to conduct a comprehensive review on the provision of escalator links/elevator systems for uphill areas on a territory-wide basis.

### **STUDY APPROACH**

3. We will adopt the following phased approach in carrying out the study –

- (i) Establishment of the objectives for the provision of escalator links/elevator systems.
- (ii) Establishment of selection criteria for identifying suitable locations for further detailed study. The possible selection criteria would include the following aspects –
  - (a) The catchment areas of the system should either be reasonably populated, or there exists a commercial element which would be further enhanced to

attract users;

- (b) There should be a steady flow of users throughout the day. Areas where usage is confined to certain short periods of the day, such as school area, do not alone justify the provision of the system;
  - (c) The gradient of the area should be steep. Escalator links would be suitable for streets with steep gradient whereas elevator systems would be more appropriate for linking areas with large drop in vertical level;
  - (d) Priority should be given to systems that can connect to railway stations or major public transport interchanges;
  - (e) Environmental considerations (e.g. whether the provision could encourage the habit of walking which is environmentally friendly and would reduce the reliance on vehicular transport);
  - (f) Consideration would also be given to developed areas with severe physical constraints for building additional road links or expanding public transport services, and yet where major re-development schemes are anticipated to generate substantial traffic demand; and
  - (g) Social benefits arising from the provision of escalator links/elevator systems (e.g. beneficial effects on those with disabilities, the elderly and tourists).
- (iii) Comprehensive site search in the territory in accordance with the established criteria, with a view to identifying suitable locations for further study. The site search will cover, among other places, the list of potential areas in the Annex which we have initially identified. Most of these sites are found on Hong Kong Island where most of

the uphill areas are developed areas with severe physical constraints for building additional road links.

- (iv) Preliminary assessment on the feasibility of each identified site involving the following steps –
  - (a) Collection of essential planning data such as population centres, present and future developments and major transport facilities in the vicinity, employment places, and traffic pattern;
  - (b) Identification of possible link routes;
  - (c) Assessment on the potential of each link from land use planning point of view, taking into account long-term planning implications, development opportunities and constraints and estimated patronage of the link; and
  - (d) Further investigation of each link in respect of its land requirement, traffic and transport justifications, engineering constraints, environmental implications and cost-effectiveness etc., to a level of details sufficient for evaluating the preliminary feasibility of each link.
- (v) Establishment of ranking criteria to determine the priority of the recommended links. The ranking criteria would include the following elements –
  - (a) Social benefits;
  - (b) Economic benefits;
  - (c) Environmental improvements;
  - (d) Technical constraints;
  - (e) Cost effectiveness; and

- (f) Degree of improvement to traffic congestion.
- (vi) Prioritization of the recommended links in accordance with the agreed ranking criteria.
- (vii) Evaluation of implementation options and recommendation on an implementation strategy. The option of private sector participation will also be looked into where applicable.

## **PROGRAMME**

4. Due to the shortage of in-house resources, consultants need to be employed for carrying out the study. We will seek funding for the study and proceed with the consultant selection process as soon as possible. Subject to funding availability, we plan to commence the study in December 2002 for completion in October 2003. We will consult the relevant District Councils during the course of study as regards the proposed escalator links/elevator systems.

## **FORTRESS HILL LINK**

5. At the panel meeting on 15 March 2002, we informed members of our plan to provide an elevator system linking the Fortress Hill MTR Station to the upper section of the Fortress Hill Road. We have further investigated the technical feasibility of various engineering options for the Fortress Hill Link since the last meeting, namely –

- (a) Option 1 – the installation of lifts and an elevated walkway;
- (b) Option 2 – the installation of lifts and an escalator link; and
- (c) Option 3 – the installation of an escalator system.

6. Following the investigations, it is considered that Option 1 is the most suitable. From the engineering point of view, an escalator link would be more suitable for streets with steep gradient whereas an elevator system would be better for linking areas with large drop in vertical level. The provision of an elevator system is therefore considered more appropriate in this case because there is a vertical height of about 27 metres from the

MTR station to the upper Fortress Hill road level. Although Option 1 entails a longer operating cycle as compared with the other options, it is more favourable in the context of serving the disabled and providing both uphill and downhill service. Also, by installing two lifts for the system, the operating cycle and the number of waiting passengers could be greatly reduced. The majority of Eastern District Council members have expressed support for Option 1 during consultations.

### **ADVICE SOUGHT**

7. Members are invited to take note of this paper.

Transport Bureau  
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## List of Potential Study Areas

Hong Kong Island	Kennedy Road/Ship Street area, Wanchai
	Ladder Street area, Western
	Mount Davis in Kenndy Town, Western
	Sands Street area, Western
	Lei Tung Estate, Ap Lei Chau
	Ap Lei Chau Main Street area
	Shek Pai Wan Estate, Aberdeen
	A Kung Ngam area, Shau Kei Wan
	Braemar Hill Area
Kowloon	Tsz Wan Shan
	Choi Wan
	Shun On
	Lam Tin South
NT East	Tsui Lam area in Tseung Kwan O
NT West	Tsing Yi (Mount Haven, Cheung Hang Estate, Cheung Wang Estate)