

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 – HIGHWAYS

Transport – Footbridges and pedestrian tunnels

156TB – Fortress Hill pedestrian link

Members are invited to recommend to Finance Committee the upgrading of **156TB** to Category A at an estimated cost of \$23.8 million in money-of-the-day prices for the construction of a pedestrian link at Fortress Hill.

PROBLEM

We need to improve the facilities for pedestrian movement between King's Road and mid-level of Fortress Hill.

PROPOSAL

2. The Director of Highways, with the support of the Secretary for the Environment, Transport and Works (SETW), proposes to upgrade **156TB** to Category A at an estimated cost of \$23.8 million in money-of-the-day (MOD) prices for the construction of a pedestrian link adjacent to the Fortress Metro Tower from King's Road level up to the existing unnamed road between Fortress Garden and Clementi Secondary School (the unnamed road) at the Fortress Hill mid-level to enhance pedestrian movement in the area.

PROJECT SCOPE AND NATURE

3. The scope of **156TB** includes the design and construction of –

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- (a) two lifts in a single lift tower of approximately 14 metres (m) in height between King's Road at the foothill level and the platform of the existing stairway at the mid-height of the slope beside Fortress Metro Tower (the platform);
- (b) a covered one-way escalator of approximately 45 m in length between the platform and the unnamed road, and a stair lift¹ fitted to the maintenance staircase alongside the escalator;
- (c) covers to the existing stairway and footpath; and
- (d) associated works including slope works, stairway modifications and diversion of the affected utilities.

—— A site plan and a photomontage showing the proposed works are at Enclosures 1 and 2 respectively.

4. We plan to commence the detailed design and construction works in December 2004 for completion in December 2006.

JUSTIFICATION

5. Fortress Hill is a hilly area bounded by King's Road at the foothill level where the Fortress Hill Mass Transit Railway (MTR) Station, tram stations and stops for some 40 bus routes as well as mini-bus stops are sited and Tin Hau Temple Road at the mid-level where many residential buildings and a few educational institutions are located.

6. Apart from Fortress Hill Road, connecting the foothill and mid-level area is a stairway which rests on a high vertical slope adjacent to the Fortress Metro Tower leading from King's Road to the unnamed road (see site plan at **Enclosure 1**). In view of its convenient location, residents and students in the vicinity make frequent use of this stairway. The pedestrian survey conducted by the Transport Department in May 2004 indicated that during weekdays / school days there were about 2 000 pedestrian trips up and 7 000 pedestrian trips down the stairway daily.

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¹ A stair lift is an electrically operated lifting platform fitted on the wall of a staircase for transporting wheelchair users to commute between the top and bottom levels of the staircase.

7. The stairway is without a cover and has a level difference of some 26 m and is about 90 m in length. Climbing up this long and steep stairway of about 180 steps, particularly during adverse weather conditions, is a taxing experience.

8. In line with our policy objective to place more emphasis on pedestrian facilities, we propose to construct a pedestrian link in situ. We will make suitable modifications to the lowest flight of the existing stairway to make way for construction of the lift tower, and provide two lifts in that lift tower and an escalator to assist pedestrian movement. We will also take the opportunity to provide covers to the existing stairway as well as the footpath at King's Road from the entrance/exit of the Fortress Hill MTR Station to the proposed lift tower and the existing stairway.

9. The enhanced pedestrian link will provide a safe, comfortable and direct link for users and is expected to attract additional patronage with the estimated pedestrian flow rising to 14 000 pedestrian trips two-way per day. With more people attracted to use the pedestrian link, especially for going up from King's Road to Fortress Hill mid-level, we may also see a reduction in usage of private car as a mode of transport in the area.

FINANCIAL IMPLICATIONS

10. We estimate the cost of this project to be \$23.8 million in MOD prices (see paragraph 11 below), made up as follows –

	\$ million
(a) Lifts	7.3
(i) civil works	3.3
(ii) electrical and mechanical (E&M) works	4.0
(b) Covered escalator	9.2

/(i)

		\$ million	
(i)	civil works	4.0	
(ii)	E&M works	5.2	
(c)	Cover provision to stairway	2.7	
(d)	Slope works, utilities diversion and stairway modification	3.6	
(e)	Contingencies	2.1	
	Sub-total	24.9	(in September 2003 prices)
(f)	Provision for price adjustment	(1.1)	
	Total	23.8	(in MOD prices)

11. Subject to approval, we will phase the expenditure as follows –

Year	\$ million (Sep 2003)	Price Adjustment Factor	\$ million (MOD)
2004 – 2005	2.0	0.97150	1.9
2005 – 2006	12.0	0.95450	11.5
2006 – 2007	9.9	0.95450	9.4
2007 – 2008	1.0	0.96643	1.0
	<hr/> 24.9 <hr/>		<hr/> 23.8 <hr/>

12. We have derived the MOD estimate on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2004 to 2008. We will invite tenders for the works under a design-and-build contract. We will not allow for price adjustment in the contract as the contract period will not exceed 21 months.

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13. We estimate the annual recurrent expenditure upon completion of the project to be \$ 1.3 million.

PUBLIC CONSULTATION

14. We consulted the Eastern District Council on 19 February 2004. Members supported the project. However, some Members raised concern over the possible noise nuisance caused by the pedestrian flow along the proposed escalator to the adjacent Fortress Metro Tower. In view of the concern, we will install translucent louvre panels along the side of the escalator facing the Fortress Metro Tower to minimise possible noise nuisance. The Owners' Committee of Fortress Metro Tower agreed to this proposal.

15. We gazetted the project under the Roads (Works, Use and Compensation) Ordinance (the Ordinance) on 6 February 2004 and received no objection. The Permanent Secretary for the Environment, Transport and Works (Environment and Transport), under delegated authority from the SETW, authorised the project under the Ordinance on 24 April 2004 and the notice of authorisation was gazetted on 30 April 2004.

16. We circulated an information paper to the Legislative Council Panel on Transport in May 2004. Members have no objection to the project.

ENVIRONMENTAL IMPLICATIONS

17. The project is a non-designated project under the Environmental Impact Assessment Ordinance and will not cause long-term environmental impact. We will include in the construction contract the requirement for implementing suitable mitigation measures for controlling the environmental impacts during construction, such as noise reduction, dust suppression, solid waste management and waste water control. We estimate the cost of implementing the mitigation measures to be \$500,000. We have included this cost in the project estimate.

18. At the design stage, we will require the contractor to fully consider measures and options to minimise the generation of construction and demolition (C&D) materials and to reuse/recycle C&D materials as much as possible. We

/will

will encourage the contractor to use non-timber formwork and recyclable materials for temporary works to reduce construction waste. We will use suitable excavated materials for filling within the project site to minimise off-site disposal. In addition, we will require the contractor to use metal site hoardings and signboards so that we can recycle or reuse these materials in other projects.

19. We will require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill and C&D waste to designated public filling facilities and landfills respectively through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

20. We estimate that the project will generate about 100 cubic metres (m^3) of C&D materials. Of these, we will reuse about 30 m^3 (30%) on site, and dispose of 70 m^3 (70%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$8,750 for this project (based on a notional unit cost² of \$125/ m^3).

LAND ACQUISITION

21. The proposed works do not require land acquisition.

BACKGROUND INFORMATION

22. We upgraded **156TB** to Category B in December 2003.

23. To facilitate the construction of the works, we will carry out temporary traffic diversions as and when required. We will consult the Eastern District Council on major temporary traffic arrangements before their implementation.

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² This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/ m^3), nor the cost to provide new landfills (which are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

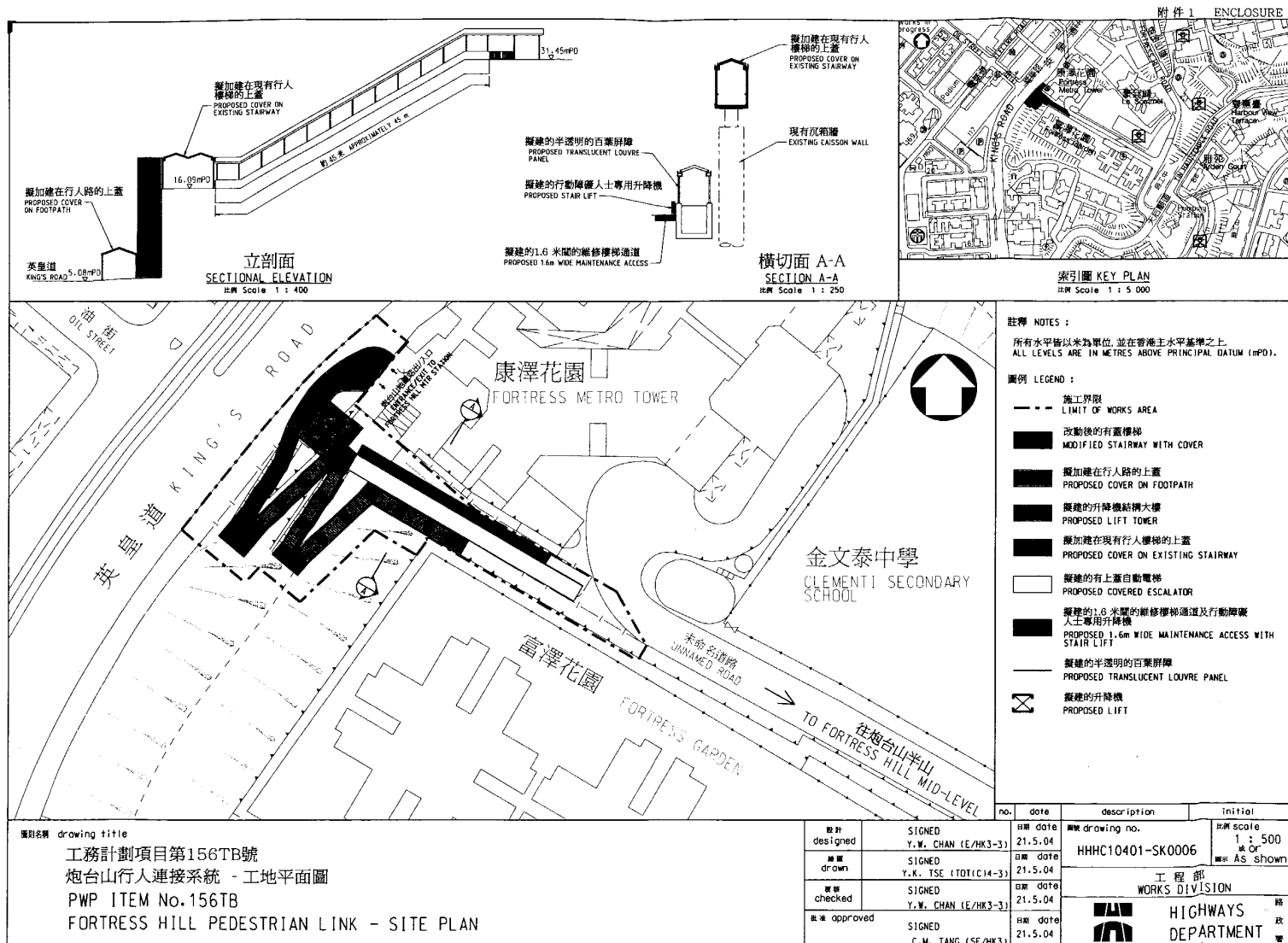
24. The proposed pedestrian link may necessitate the removal of 15 trees. All trees to be removed are not important trees³. No compensatory planting proposal is included as space available after the construction of the pedestrian link will be very limited and not suitable for planting.

25. We estimate that the proposed works will create about 35 jobs (30 for labourers and another five for professional / technical staff) providing a total employment of 400 man-months.

Environment, Transport and Works Bureau
June 2004

³ Important trees refer to trees on the Register of Old and Valuable Trees, and any other trees which meet one or more of the following criteria—

- (a) trees over 100 years old;
- (b) trees of cultural, historical or memorable significance;
- (c) trees of precious or rare species;
- (d) trees of outstanding form; or
- (e) trees with trunk diameter exceeding one metre (measured at one metre above ground level).





Highways Department
(Works Division)
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工務計劃項目第 156TB 號
炮台山行人連接系統 - 模擬圖
PWP ITEM No. 156TB
FORTRESS HILL PEDESTRIAN LINK - PHOTOMONTAGE

Drawing No.:
HSD/HK/1048-MC/0007

Date:
May 2004