

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Recreation, Culture and Amenities – Open spaces

415RO – District open space in Area 18, Tung Chung, Lantau

Members are invited to recommend to Finance Committee the upgrading of **415RO** to Category A at an estimated cost of \$230.0 million in money-of-the-day prices for the construction of district open space in Area 18, Tung Chung, Lantau.

PROBLEM

We need to provide more public open space in Tung Chung, Lantau.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Home Affairs, proposes to upgrade **415RO** to Category A at an estimated cost of \$230.0 million in money-of-the-day (MOD) prices for the construction of district open space in Area 18, Tung Chung, Lantau.

/PROJECT

PROJECT SCOPE AND NATURE

3. The project site covers an area of about 3.8 hectares (ha) in Area 18, Tung Chung, Lantau. The scope of **415RO** includes –

- (a) a 7-a-side hard-surfaced soccer pitch and a skateboard ground;
- (b) a landscape garden with a jogging trail and a children play area;
- (c) a woodland;
- (d) fitness corners for the elderly with a natural grass lawn and a pebble walking trail;
- (e) a Chinese herbs garden, and an exhibition hall for display of Chinese herbs and education materials; and
- (f) a park office and ancillary facilities including toilets, changing rooms, storerooms and loading and unloading areas.

————— A site plan showing the conceptual layout of the proposed district open space is at Enclosure 1. We plan to start the construction works in July 2008 for completion in June 2010.

JUSTIFICATION

4. Tung Chung New Town is a fast growing new town in the Islands District. Currently, Tung Chung New Town has a population of about 79 000, which is expected to increase by about 14.2 % to 90 200 in 2016. As a reference, the Hong Kong Planning Standards and Guidelines suggest a provision of about 15.8 hectares of public open space for the current population of Tung Chung New Town. At present, there are about 14.4 hectares of public open space in Tung Chung, including about 11.2 hectares of open space provided by the Housing Department. The proposed project will help improve the provision of open space in the area. There is only one temporary 7-a-side hard-surfaced soccer pitch and no skateboard ground in Tung Chung. The utilisation rate of existing leisure facilities, including the temporary 7-a-side hard-surfaced soccer pitch in Tung Chung is very high and there is continuous demand for active outdoor recreational

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and sports facilities. A special feature of the project is the provision of a Chinese herbs garden and an exhibition hall for display of Chinese herbs and education materials. These facilities are supported by the Islands District Council and are expected to be welcomed by the public as they will help enhance public knowledge and interest in Chinese herbs.

5. There are a number of public and private housing estates in the vicinity of the project site, namely Coastal Skyline, Caribbean Coast, Seaview Crescent, Tung Chung Crescent, Fu Tung Estate and Yu Tung Court; and four secondary schools and four primary schools. The total population of these estates is about 40 000. It is expected that the proposed district open space will become a popular recreational venue for the local residents.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be \$230.0 million in MOD prices (see paragraph 7 below), made up as follows –

	\$ million
(a) Site works and geotechnical works	17.3
(b) Building	36.8
(c) Building services	17.6
(d) Drainage	14.5
(e) External works	91.3
(f) Soft landscaping works	11.7
(g) Furniture and equipment ¹	2.2
(h) Fitting out works for exhibition hall	5.0

/\$ million

¹ Based on the furniture and equipment provided in existing/planned facilities of similar scale (e.g. office furniture, litter bins and portable signages, etc).

		\$ million	
(i)	Consultants' fees for –	8.7	
	(i) Contract administration	3.5	
	(ii) Site supervision	5.2	
(j)	Contingencies	18.9	
	Sub-total	224.0	(in September 2007 prices)
(k)	Provision for price adjustment	6.0	
	Total	230.0	(in MOD prices)

We propose to engage consultants to undertake contract administration and site supervision of the project. A detailed breakdown of the estimate for the consultants' fees by man-months is at Enclosure 2. We consider the estimated project cost reasonable as compared with similar projects undertaken by the Government.

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

Year	\$ million (Sept 2007)	Price adjustment factor	\$ million (MOD)
2008 – 09	15.0	1.00750	15.1
2009 – 10	90.0	1.01758	91.6
2010 – 11	60.0	1.02775	61.7
2011 – 12	42.0	1.03803	43.6
2012 – 13	17.0	1.05619	18.0
	224.0		230.0

/8.

8. We have derived the MOD estimates 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 2008 to 2013. We will award the contract on a lump-sum basis because we can clearly define the scope of the works in advance. The contract will not provide for price adjustment because the contract period will not exceed 21 months.

9. We estimate the annual recurrent expenditure arising from this project to be \$5.1 million.

PUBLIC CONSULTATION

10. We consulted the Community Affairs, Culture and Recreation Committee (CACRC) of the Islands District Council on the scope of the project on 4 July 2005 and 6 March 2006. Members supported the project. We consulted the CACRC on the conceptual layout of the project on 9 July 2007. Members strongly supported the project and urged for its early implementation.

11. We circulated an information paper to the Legislative Council Panel on Home Affairs on 5 December 2007. Members did not raise any objection to the submission of the funding proposal to the Public Works Subcommittee.

ENVIRONMENTAL IMPLICATIONS

12. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project has very little potential for giving rise to adverse environmental impacts.

13. During construction, we will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the contract. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

14. We have considered measures in the planning and design stages to reduce the generation of construction waste where possible (e.g. using metal site /hoardings

hoardings and signboards so that these materials can be recycled or reused in other projects). In addition, we will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the site) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste to public fill reception facilities². We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimise the generation of construction waste.

15. We will also require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

16. We estimate that the project will generate in total about 20 520 tonnes of construction waste. Of these, we will reuse about 13 800 tonnes (67.2 %) of inert construction waste on site and deliver 5 800 tonnes (28.3%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 920 tonnes (4.5%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$271,600 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne³ at landfills).

17. This project has adopted various forms of energy efficient features, including –

/(a)

² Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

³ 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/m³), nor the cost to provide new landfills (which is likely to be more expensive), when the existing ones are filled.

- (a) T5 energy efficient fluorescent tubes with lighting control; and
- (b) heat pumps.

18. For renewable energy technologies, we will use solar hot water heating.

19. For recycled features, we will adopt rain water recycling system for irrigation purpose.

20. The total estimated additional cost for adoption of the energy efficient, renewable energy and recycled features is around \$1.8 million. There will be about 6% energy savings in the annual energy consumption.

HERITAGE IMPLICATIONS

21. This project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interests and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

22. The project does not require any land acquisition.

BACKGROUND INFORMATION

23. We upgraded **415RO** to Category B in September 2006. We engaged an architectural consultant to undertake the detailed design and a quantity surveying consultant to prepare tender documents in April 2007. We charged the total cost of \$6.8 million to block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". The architectural consultant has completed the detailed design. The quantity surveying consultant is finalising the tender documents.

24. The proposed development of the district open space will involve removal of 172 trees, including 157 trees to be replanted within the project site and 15 trees to be transplanted elsewhere. All trees to be removed are not important trees⁴. We will incorporate planting proposals as part of the project, including an estimated quantities of 561 trees, 59 000 shrubs, 50 000 ground covers and 731 climbers.

25. We estimate that the proposed works will create about 177 jobs (159 for labourers and another 18 for professional/technical staff) providing a total employment of 3 337 man-months

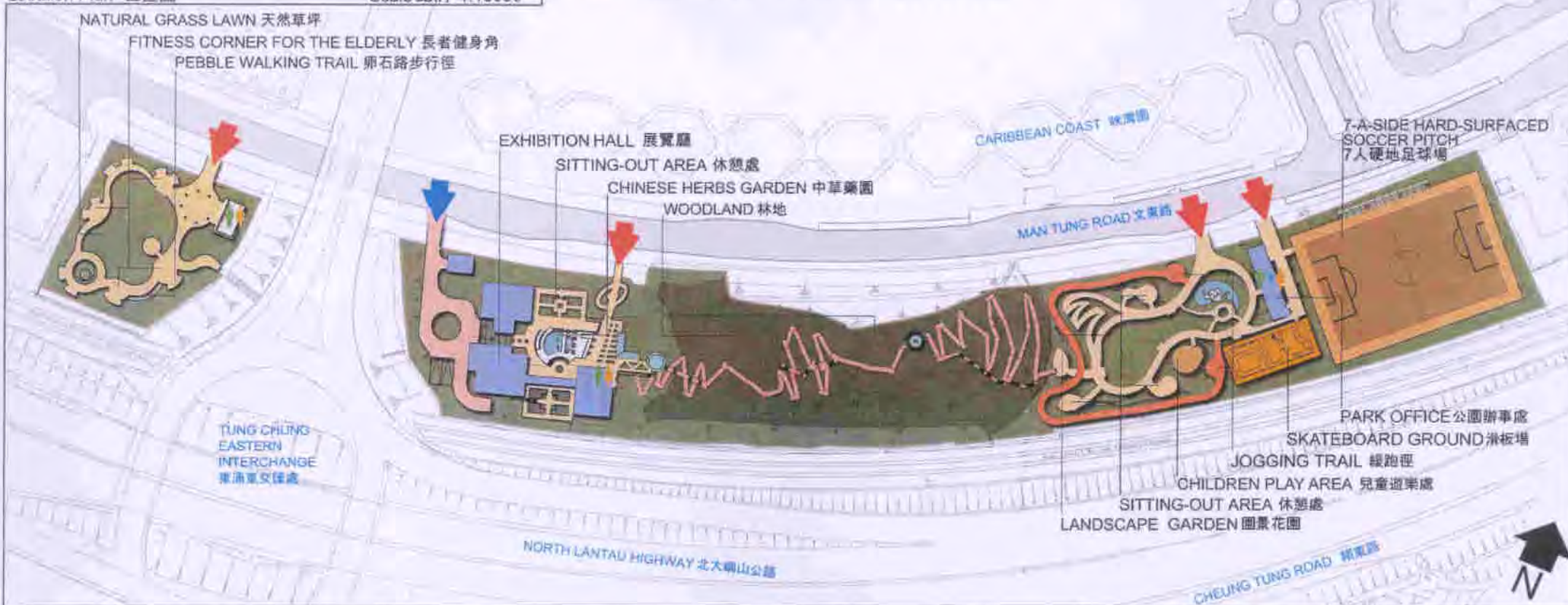
Home Affairs Bureau
January 2008

⁴ "Important tree" refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 m.



- PEDESTRIAN ENTRANCE 行人出入口
- VEHICULAR ENTRANCE 車輛出入口
- TOILET 洗手間
- TOILET CUM CHANGING ROOMS 洗手間及更衣室



415RO DISTRICT OPEN SPACE IN AREA 18, TUNG CHUNG, LANTAU 大嶼山東涌第18區地區休憩用地	drawn by	Dennis Yeung	date	15-11-2007	drawing no. AB/5098/XA001	scale 1:1800
	approved by	Celina Kwok	date	15-11-2007		
	office	ARCHITECTURAL BRANCH		ARCHITECTURAL SERVICES DEPARTMENT		

415RO – District open space in Area 18, Tung Chung, Lantau**Breakdown of the estimate for consultants' fees**

Consultants' staff costs		Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a)	Contract administration (Note 2)				
	Professional	–	–	–	2.8
	Technical	–	–	–	0.7
(b)	Site supervision (Note 3)	172	14	1.6	5.2
				Total	8.7

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of resident site staff supplied by the consultants. (As at 1 April 2007, MPS point 14 = \$18,840 per month.)
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **415RO**. The assignment will only be executed subject to Finance Committee's approval to upgrade **415RO** to Category A.
3. The consultants' staff cost for site supervision is based on the estimate prepared by the Director of Architectural Services. We will only know the actual man-months and actual costs after completion of the construction works.