

## ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

### HEAD 703 – BUILDINGS

#### Recreation, Culture and Amenities – Open spaces

#### 411RO – Ngau Chi Wan Recreation Ground, Wong Tai Sin

Members are invited to recommend to Finance Committee the upgrading of **411RO** to Category A at an estimated cost of \$199.4 million in money-of-the-day prices for the development of Ngau Chi Wan Recreation Ground, Wong Tai Sin.

### PROBLEM

We need to provide more public open space and recreational facilities in Wong Tai Sin District.

### PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Home Affairs, proposes to upgrade **411RO** to Category A at an estimated cost of \$199.4 million in money-of-the-day (MOD) prices for the development of Ngau Chi Wan Recreation Ground.

### PROJECT SCOPE AND NATURE

3. The project site, formerly the Ngau Chi Wan Landfill, covers an area of about 7.4 hectares (ha). It comprises four platforms with a total usable flat area of approximately 4.0 ha. The scope of **411RO** includes –

- (a) an archery field with natural turfed ground;
- (b) jogging trail and elderly fitness corners ;

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- (c) children play areas for different age groups;
- (d) a central lawn with associated facilities such as pavilions and seating, etc;
- (e) a basketball court with floodlight;
- (f) landscaped gardens with Tai Chi areas and sitting-out facilities with extensive planting with flowering trees and shrubs; and
- (g) a service building and ancillary facilities including changing rooms, toilets, storerooms, car parking spaces, loading and unloading areas, and associated external works.

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A site plan showing the conceptual layout of the proposed recreation ground is at Enclosure 1. We plan to start the construction works for the platform at the junction of Fung Shing Street and Ping Ting Road East in January 2008, as indicated in the site plan, for completion by April 2009. The remaining works will be completed by March 2010.

## **JUSTIFICATION**

4. Wong Tai Sin is a densely populated residential area. It has a current population of 429 200. As a reference, the Hong Kong Planning Standards and Guidelines (HKPSG) suggests a provision of about 86 ha of public open space for the current population in Wong Tai Sin District. At present, there are about 128 ha of public open space in Wong Tai Sin, including about 73 ha of local open space provided by the Housing Department. In considering the development of new leisure services projects, we also take into account other factors including the views of the District Council, the changing needs of the community and the utilisation rate of existing facilities. At present, there is a shortage of basketball courts in Wong Tai Sin District and the utilisation rate of the existing leisure facilities in the district is very high. The pitch at the roof of the service reservoir in the Lion Rock Park for archery activities is well patronised by the public and had an average utilisation rate of about 90% in 2005 and 2006.

5. The site is surrounded by a number of residential developments including Scenic View, Choi Fai Estate, Choi Wan Estate, Choi Fung Court and Fung Shing Street Discipline Services Quarters, with a local population of over 45 000. The catchment area of the site also covers three schools, namely, Po Leung Kok Mrs Chan Nam Chong Memorial Primary School, Choi Wan St.

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Joseph's Primary School and Margaret Trench Red Cross School. The demand for recreation and sports facilities in the area is high. The proposed facilities in the project such as the archery field and soft landscaping areas will complement the existing active recreation facilities in the nearby Ping Shek Playground and better serve the different needs of local residents.

## FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be \$199.4 million in MOD prices (see paragraph 7 below), made up as follows –

	<b>\$ million</b>	
(a) Site works	4.7	
(b) Geotechnical works	39.5	
(c) Building	25.2	
(d) Building services	19.3	
(e) Drainage works	16.8	
(f) External works	53.1	
(g) Soft landscaping works	9.2	
(h) Consultants' fees for	9.2	
(i) contract administration	4.1	
(ii) site supervision	5.1	
(i) Furniture and equipment <sup>1</sup>	0.9	
(j) Contingencies	17.8	
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Sub-total	195.7	(in September 2006 prices)
(k) Provision for price adjustment	3.7	
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Total	199.4	(in MOD prices)
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<sup>1</sup> Based on the furniture and equipment provided in existing/planned facilities of similar scale (e.g. office furniture, litter bins and portable signages, etc).

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 –

<b>Year</b>	<b>\$ million (Sept 2006)</b>	<b>Price adjustment factor</b>	<b>\$ million (MOD)</b>
2007 – 08	1.0	0.99900	1.0
2008 – 09	49.0	1.00649	49.3
2009 – 10	80.0	1.01656	81.3
2010 – 11	39.0	1.02672	40.0
2011 – 12	19.0	1.03699	19.7
2012 - 13	7.7	1.05514	8.1
	195.7		199.4

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 2007 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 provides for price adjustment because the contract period exceeds 21 months.

9. We estimate the annual recurrent expenditure arising from this project to be \$8.8 million.

## **PUBLIC CONSULTATION**

10. We consulted the District Facilities Management Committee of Wong Tai Sin District Council on the conceptual layout of the project on 23 January 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 16 April 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. Preliminary landfill gas hazard assessment has been carried out and agreed by the Director of Environmental Protection (DEP) in November 2005. Preventive measures for construction stage, operation stage and design measures have been identified. A Preliminary Environmental Review (PER) was completed in May 2007. The PER concludes that with the implementation of the recommended mitigation measures and management procedures, it is unlikely to cause any insurmountable environmental impact during the construction and operation phases of the project. To minimise the potential landfill gas hazard, the PER recommends various preventive measures for incorporation into the building design, e.g. installation of geomembrane at the bottom of building structure, adoption of raise floor filled with granular layer, installation of gas detectors at toilet block and park office etc., and a detailed landfill gas hazard assessment be carried out based on the final design.

14. 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 relevant contracts. 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.

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15. We have considered measures in the planning and design stages to reduce the generation of construction and demolition (C&D) materials where possible (e.g. use metal site hoardings and signboards so that we can recycle or reuse these materials in other projects). In addition, we will require the contractor to reuse inert C&D materials on site or in other suitable construction sites as far as possible (e.g. use suitable excavated materials for filling within the site), in order to minimise the disposal of C&D materials to public fill reception facilities<sup>2</sup>. We will encourage the contractor to maximise the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork to further minimise the generation of construction waste.

16. We will also 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 also control the disposal of public fill, C&D materials and C&D waste to public fill reception 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 also record the disposal, reuse and recycling of C&D materials for monitoring purposes.

17. Since excavation works is not preferred for the existing capping soil of landfill site, the volume of public fill material generated is minimal and is likely to be reused on site. We estimate that the project will generate about 8 340 tonnes of C&D materials. Of these, we will reuse about 5 870 tonnes (70.4%) on site, and deliver 1 630 tonnes (19.5%) to public fill reception facilities for subsequent reuse. In addition, we will dispose of 840 tonnes (10.1%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be \$149,010 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne<sup>3</sup> at landfills).

## LAND ACQUISITION

18. The project does not require any land acquisition.

### **/BACKGROUND .....**

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2 Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill 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 of 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<sup>3</sup>), nor the cost to provide new landfills, (which is likely to be more expensive) when the existing ones are filled.

**BACKGROUND INFORMATION**

19. We upgraded **411RO** to Category B in January 2006. We engaged an architectural consultant to carry out the topographical survey in September 2006 and the detailed design in December 2006. In February 2007, we engaged a quantity surveying consultant to prepare the tender documents. We charged the total cost of \$7.4 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 topographical survey and detailed design of the project. The quantity surveying consultant is finalising the tender documents.

20. The proposed development of the recreation ground will involve removal of 16 trees, which will be replanted within the project site. All trees to be removed are not important trees<sup>4</sup>. We will incorporate planting proposals as part of the project, including an estimated quantity of 400 new trees, 46 000 shrubs and 12 000 m<sup>2</sup> of grassed area.

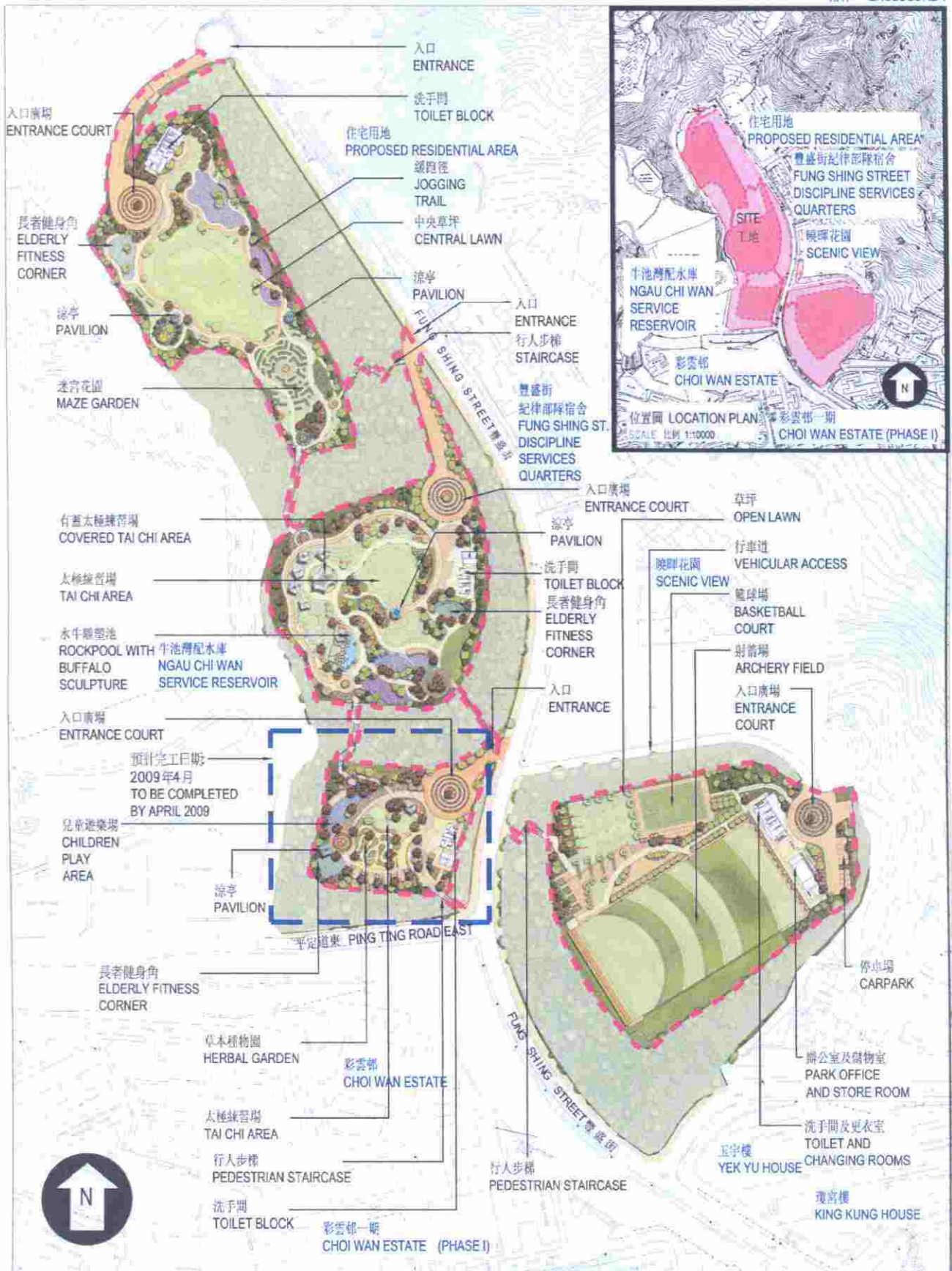
21. We estimate that the proposed works will create about 158 jobs (140 for labourers and 18 for professional/technical staff) providing a total employment of 3 300 man-months.

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Home Affairs Bureau  
June 2007

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4 "Important trees" 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 trees, trees as landmark of monastery or heritage monument, and trees in memory of important persons 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 metres.



title : 411RO

黃大仙牛池灣遊樂場

NGAU CHI WAN RECREATION GROUND,  
WONG TAI SIN

drawn by

伍世儀 JUDY S.Y. NG

approved

譚志華 C.W.TAM

office

ARCHITECTURAL BRANCH 建築設計處

date

28.04.2007

date

28.04.2007

drawing no.

AB/1732/XA 101

scale

1:2500



ARCHITECTURAL  
SERVICES  
DEPARTMENT 建築署



## 411RO – Ngau Chi Wan Recreation Ground, Wong Tai Sin

## 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	–	–	–	2.7
	Technical	–	–	–	1.4
(b) Site supervision (Note 3)	Technical	177	14	1.6	5.1
				<b>Total</b>	<u>9.2</u>

\*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 January 2007, MPS point 14 = \$18,010 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 **411RO**. The construction stage of the assignment will only be executed subject to Finance Committee's approval to upgrade **411RO** to Category A.
3. We will only know the actual man-months and actual costs after completion of the construction works.