For discussion **PWSC(2007-08)82**
on 20 February 2008

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS
Recreation, Culture and Amenities – Sports Facilities
261RS – Sports Centre in Area 28A, Fanling / Sheung Shui

Members are invited to recommend to Finance Committee the upgrading of **261RS** to Category A at an estimated cost of $249.5 million in money-of-the-day prices for the construction of a sports centre in Area 28A, Fanling / Sheung Shui.

PROBLEM

We need to provide more recreational facilities in North District to meet local needs.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Home Affairs, proposes to upgrade **261RS** to Category A at an estimated cost of $249.5 million in money-of-the-day (MOD) prices for the construction of a sports centre in Area 28A, Fanling / Sheung Shui.

PROJECT SCOPE AND NATURE

3. The scope of **261RS** comprises the construction of a sports centre on site of 7 800 square metres (m^2) in Area 28A, Fanling / Sheung Shui to provide the following facilities –

/(a) …..

(a) a multi-purpose main arena with two basketball courts or two volleyball courts or eight badminton courts and a seating capacity of 1 200 spectators including 800 fixed seats and retractable bleacher for 400 persons;

(b) a multi-purpose activity room;

(c) a table-tennis room;

(d) a fitness room;

(e) a children play room;

(f) an indoor running track;

(g) an outdoor climbing wall and landscaped areas; and

(h) a management office and ancillary facilities including booking office, changing rooms, toilets, baby care room, first aid room, conference room, equipment store rooms, car parking spaces, etc.

The site plan is at Enclosure 1 and the artist's impression of the sports centre is at Enclosure 2. We plan to start the construction works in September 2008 for completion in February 2011.

JUSTIFICATION

4. The North District has a population of about 303 200 which is expected to increase by about 9.1% to 330 800 by 2015. As a reference, the Hong Kong Planning Standards and Guidelines suggest a provision of five sports centres for the population in 2015. At present, there are four sports centres in the North District, and their existing utilization rate is high. The project will help improve the provision of sports centres in the district.

5. There are a number of public housing estates in the vicinity of the project site, namely, Tai Ping Estate, Tin Ping Estate, Choi Yuen Estate, Choi Po Court, Yuk Po Court; and nine secondary/primary schools. The total population of these estates is over 50 000. In addition, the Fanling and Sheung Shui new towns are geographically bisected by the East Rail. The majority of the existing recreational facilities are provided on the eastern side of the railway. Only one of the four existing

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sports centres, namely Wo Hing Sports Centre, is on the western side of the railway but not within walking distance from the project site. It is expected that the project will become a popular recreational facility for the local residents.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be $249.5 million in MOD prices (see paragraph 7 below), made up as follows –

		$ million	
(a)	Site works	3.5	
(b)	Piling	43.1	
(c)	Building	102.6	
(d)	Building services	44.2	
(e)	Drainage works	4.1	
(f)	External works	4.0	
(g)	Consultants' fees for	18.1	
	(i) contract administration	8.5	
	(ii) site supervision	9.6	
(h)	Furniture and equipment[1]	2.4	
(i)	Contingencies	20.2	
	Sub-total	242.2	(in September 2007 prices)
(j)	Provision for price adjustment	7.3	
	Total	249.5	(in MOD prices)

/We …..

[1] The estimated cost of furniture and equipment is based on an indicative list of items required, including recreation and sports equipment, fitness equipment in fitness training room, office furniture, first aid equipment, etc.

We propose to engage consultants to undertake contract administration and site supervision for the project. A detailed breakdown of the estimate for the consultants' fees by man-months is at Enclosure 3. The construction floor area (CFA) of the sports centre is 8 130 m^2. The estimated construction unit cost, represented by the building and the building services costs, is $18,057 per m^2 of CFA in September 2007 prices. 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	60.0	1.01758	61.1
2010 – 11	90.0	1.02775	92.5
2011 – 12	50.0	1.03803	51.9
2012 – 13	20.0	1.05619	21.1
2013 – 14	7.2	1.07732	7.8
	242.2		249.5

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 2014. We intend to award the contract on a lump-sum basis because we can clearly define the scope of the works in advance. The contract will provide for price adjustments because the contract period will exceed 21 months.

9. We estimate the annual recurrent expenditure arising from this project to be $7.8 million.

PUBLIC CONSULTATION

10. We consulted the Recreation and Culture Committee of North District Council on the scope and conceptual layout of the project on 3 November 2005 and 5 July 2007 respectively. Members supported the project and urged for its early implementation.

11. We circulated an information paper to the Legislative Council Panel on Home Affairs on 11 January 2008. 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 will not have any long-term environmental impact.

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 relevant contracts. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site.

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 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. using 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 facilities[2]. 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. …..

[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.

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 18 200 tonnes of construction waste. Of these, we will reuse about 2 300 tonnes (13%) of inert construction waste on site and deliver 14 400 tonnes (79%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 1 500 tonnes (8%) 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 $576,300 for this project (based on a unit cost of $27/tonne for disposal at public fill reception facilities and $125/tonne[3] at landfills).

ENERGY CONSERVATION MEASURES

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

(a) fresh water evaporative cooling tower;

(b) demand control of fresh air supply with carbon dioxide sensor;

(c) T5 energy efficient fluorescent tubes with occupancy / photo sensors control; and

(d) automatic on/off switching of lighting and ventilation fan inside the lift.

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

/19. …..

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

19. For greening features, there will be a lawn area on rooftop and vertical greening (i.e. climbers) along periphery of the building for environmental and amenity benefits.

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

21. The total estimated additional cost for adoption of the energy efficient, renewable energy, greening and recycled features is around $1.4 million. There will be about 11.0% energy savings in the annual energy consumption.

HERITAGE IMPLICATIONS

22. 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

23. The project does not require any land acquisition.

BACKGROUND INFORMATION

24. We upgraded **261RS** to Category B in October 2006. We employed consultants to carry out minor investigation works including topographical survey and traffic impact assessment in January 2007. We also engaged a term contractor to conduct ground investigation works in March 2007. We have appointed a consultant to perform quantity surveying services for the pre-contract works. The total cost of the above consultancy services and works is about $6.7 million. We charged this amount to block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". All minor investigation works and ground investigation works have been completed. We are now preparing the tender documents.

/25. …..

25. The proposed project will involve removal of ten trees which will be replanted within the project site. All trees to be removed are not important trees[4]. We will incorporate planting proposals as part of the project, including estimated quantities of 43 trees, 2 500 shrubs and 250 m^2 of grassed area.

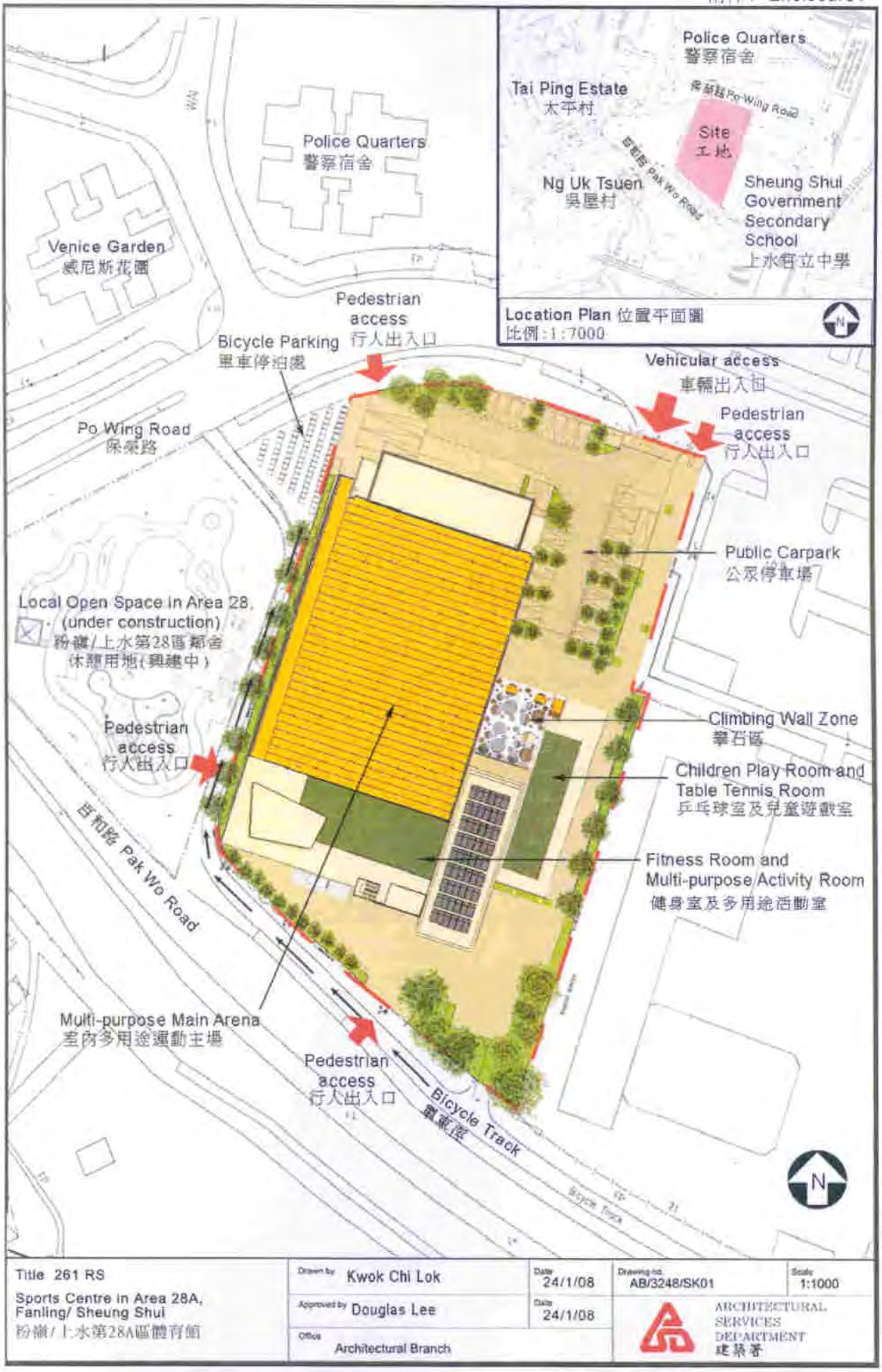
26. We estimate that the proposed works will create about 183 jobs (165 for labourers and 18 for professional/technical staff) providing a total employment of 3 950 man-months.

Home Affairs Bureau
February 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 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 25m.

附件1 Enclosure1



Title 261 RS Sports Centre in Area 28A, Fanling/ Sheung Shui 粉嶺/上水第28A區體育館	Drawn by Kwok Chi Lok	Date 24/1/08	Drawing no. AB/3248/SK01	Scale 1:1000
	Approved by Douglas Lee	Date 24/1/08	ARCHITECTURAL SERVICES DEPARTMENT 建築署	
	Office Architectural Branch			

VIEW OF THE SPORTS CENTRE FROM SOUTH-EASTERN DIRECTION (ARTIST'S IMPRESSION)
從東南面望向體育館的構思圖

Title 261 RS

Sports Centre in Area 28A, Fanling/ Sheung Shui
粉嶺/上水第28A區體育館

Drawn by: Kwok Chi Lok — Date: 31/1/08

Approved by: Douglas Lee — Date: 31/1/08

Office: Architectural Branch

Drawing no: AB/3248/SK02

Scale: NTS

ARCHITECTURAL SERVICES DEPARTMENT
建築署

261RS – Sports centre in Area 28A, Fanling / Sheung Shui

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	–	–	–	7.6
	Technical	–	–	–	0.9
(b) Site supervision (Note 3)	Technical	318	14	1.6	9.6
				Total	18.1

*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 **261RS**. The construction stage of the assignment will only be executed subject to Finance Committee's approval to upgrade **261RS** 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.