For discussion **PWSC(2008-09)8**
on 7 May 2008

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS
Education – Secondary
265ES – Extension of Lai Chack Middle School at Scout Path, Kowloon

Members are invited to recommend to Finance Committee the upgrading of **265ES** to Category A at an estimated cost of $80.7 million in money-of-the-day prices for the construction of an extension block for Lai Chack Middle School at Scout Path, Kowloon.

PROBLEM

Lai Chack Middle School lacks some essential facilities required by a secondary school of current standard.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Education (SED), proposes to upgrade **265ES** to Category A at an estimated cost of $80.7 million in money-of-the-day (MOD) prices for the construction of an extension block for Lai Chack Middle School (the School) at Scout Path, Kowloon.

/PROJECT.....

PROJECT SCOPE AND NATURE

3. The proposed extension block will have the following facilities –

(a) an assembly hall (which can be used for a wide range of physical activities such as badminton, gymnastics and table-tennis);

(b) a multi-purpose area;

(c) a library;

(d) three special rooms, including a multi-purpose room, a computer room and a computer-assisted learning room;

(e) a green corner[1];

(f) a cover to an existing walkway; and

(g) ancillary facilities, including a lift and relevant facilities for the handicapped.

A site plan is at Enclosure 1 and views of the school premises (artist's impression) are at Enclosure 2. We plan to start the construction works in January 2009 for completion in June 2010.

JUSTIFICATION

4. The existing building, which was constructed in the 1950s, comprises the following facilities –

(a) 29 classrooms;

(b) three small group teaching rooms;

(c) a guidance activity room;

/(d) .....

[1] Green corner is a designated area inside the campus to enable students to develop an interest in horticulture and natural environment. The green corner may include a greenhouse, a weather station and planting beds.

(d) two interview rooms;

(e) 13 special rooms;

(f) a library; and

(g) a basketball court.

The School is operating 29 classes with an enrolment rate above 95% in the 2007/08 school year. It is located at 180 Canton Road with a site area of about 1 700 m^2. Its existing premises falls short of provision in terms of the current standard schedule of accommodation. In particular, the School has no assembly hall and associated facilities and multi-purpose area. Some of its essential facilities such as computer rooms and library are far below the current standard. In-situ improvement works have not been feasible due to site constraints.

5. We have identified the nearby vacant government land at Scout Path for constructing an extension to the School. An existing walkway will be covered to link the existing school premises and the extension block. The extension block will provide the School with the essential facilities to improve its learning and teaching environment. Upon completion, the existing computer rooms and library would be reprovisioned to the extension block. The space so freed up will be converted into some special rooms.

6. As the extension block does not comprise classrooms and the school will continue to operate the same number of classes, this project will not have any impact on the supply and demand of public sector school places in Yau Tsim Mong District, in which the School is located.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be $80.7 million in MOD prices (see paragraph 8 below), made up as follows –

/(a) .....

			$ million	
(a)	Site formation and slope protection works		6.3	
(b)	Piling		9.0	
(c)	Building		31.0	
(d)	Building services		7.9	
(e)	Drainage		1.5	
(f)	External works		4.5	
(g)	Furniture and Equipment[2]		1.8	
(h)	Consultants' fees for –		5.7	
	(i) Contract administration	1.5		
	(ii) Site supervision	4.2		
(i)	Contingencies		6.0	
	Sub-total		73.7	(in September 2007 prices)
(j)	Provision for price adjustment		7.0	
	Total		80.7	(in MOD prices)

We propose to engage consultants to undertake contract administration and site supervision of the school construction works. A detailed breakdown of the estimate for consultants' fees by man-months is at Enclosure 3. The construction floor area (CFA) of the new extension block under **265ES** is 3 636 m^2. The estimated construction unit cost, represented by the building and the building services costs, is $10,699 per m^2 of CFA in September 2007 prices. We consider this comparable to similar school extension projects built by the Government.

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[2] Based on the standard furniture and equipment reference list prepared by the Education Bureau for a new 30-classroom secondary school adopting the standard schedule of accommodation. The actual amount will be determined on the basis of a survey on the serviceability of the existing furniture and equipment.

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

Year	$ million (Sept 2007)	Price adjustment factor	$ million (MOD)
2008 – 09	1.0	1.02575	1.0
2009 – 10	27.6	1.06293	29.3
2010 – 11	35.2	1.10545	38.9
2011 – 12	7.7	1.14967	8.9
2012 – 13	2.2	1.19566	2.6
	73.7		80.7

9. 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.

10. The cost of furniture and equipment, estimated to be $1.8 million, will be borne by the Government. This is in line with the existing policy. We estimate the additional annual recurrent expenditure for **265ES** to be $400,000.

PUBLIC CONSULTATION

11. We consulted the Yau Tsim Mong District Council on **265ES** on 21 February 2008. Members of the Council supported the project.

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12. We consulted the Legislative Council Panel on Education on 24 October 2005 on our review of the School Building Programme. Members noted our plan to proceed with reprovisioning and redevelopment projects to upgrade substandard facilities in existing schools. **256ES** is an extension project to upgrade the facilities in the existing substandard premises.

ENVIRONMENTAL IMPLICATIONS

13. We engaged a consultant to conduct a Preliminary Environmental Review (PER) for **265ES** in February 2008. According to the PER, the predicted road traffic noise levels at all noise sensitive rooms would not exceed the Hong Kong Planning Standards and Guidelines criterion of 65dB(A). Noise mitigation measures in the form of insulated windows and air-conditioning would not be required for the School.

14. During site formation and school 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 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.

15. We have considered measures in the planning and design stages to reduce the generation of construction waste where possible. These include coordinating the site formation design and the school building design to reduce the extent of site formation works and the amount of earthworks, and 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. 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 facilities[3]. 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.

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[3] 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.

16. 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.

17. We estimate that the project will generate in total about 6 500 tonnes of construction waste. Of these, we will reuse about 2 400 tonnes (36.9%) of inert construction waste on site and deliver 3 600 tonnes (55.4%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 500 tonnes (7.7%) 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 $159,700 for this project (based on a unit cost of $27/tonne for disposal at public fill reception facilities and $125/tonne[4] at landfills).

ENERGY CONSERVATION MEASURES

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

(a) T5 energy efficient fluorescent tubes with electronic ballast and lighting control by daylight sensor will be adopted in all offices and rooms at the perimeter of the building;

(b) heat recovery fresh air pre-conditioners for air-conditioned rooms;

(c) automatic on/off switching of lighting and ventilation fan inside the lift; and

(d) Light emitting diode (LED) type exit signs.

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[4] 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. There are no renewable energy features to be provided in this project due to limited space on the rooftop.

20. We will provide landscape in the appropriate area on the main roof of the extension block and also provide terraces for environmental and amenity benefits.

21. The total estimated additional cost for adoption of the energy efficient and greening features is around $506,200, which has been included in the cost estimate for the project. There will be about 8% 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 **265ES** to Category B in September 2006. We engaged an architectural consultant in July 2007 to undertake the detailed design and PER. We engaged a quantity surveying consultant in November 2007 to prepare tender documents. The total cost of the above consultancy services and works is about $2.3 million. We have 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". The architectural consultant has completed the detailed design and PER. The quantity surveying consultant is finalising the tender documents.

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25. The proposed works will involve felling of 35 trees. All trees to be removed are not important trees[5]. We will incorporate planting proposals as part of the project, including estimated quantities of 52 trees, 1 200 shrubs and 100 m^2 of grassed area.

26. We estimate that the proposed works will create about 109 jobs (99 for labourers and another ten for professional/technical staff) providing a total employment of 1 565 man-months.

Education Bureau
April 2008

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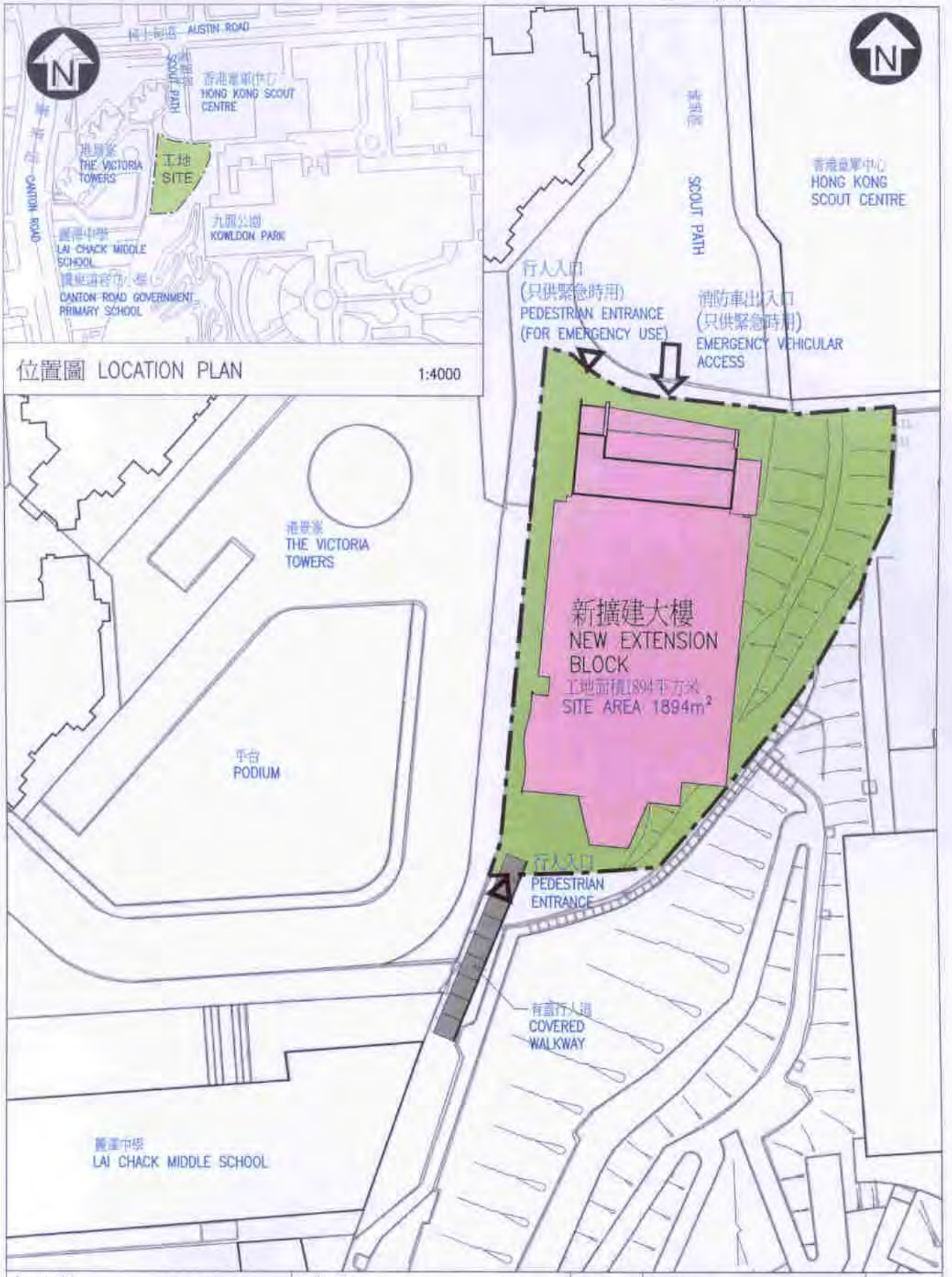
[5] "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria -

(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 metres.



Project Title: 265ES 九龍童軍徑 麗澤中學擴建計劃 EXTENSION OF LAI CHACK MIDDLE SCHOOL AT SCOUT PATH, KOWLOON	DRAWN BY: ALEXANDER NGAI 魏志堅	DATE: MARCH 08	DRAWING NO.: AB/7122/XA001	SCALE: 1:600	
	APPROVED BY: TOM IP 葉福全	DATE: MARCH 08			
	OFFICE: ARCHITECTURAL BRANCH 建築設計處		ARCHITECTURAL SERVICES DEPARTMENT 建築署		

VIEW OF THE SCHOOL EXTENSION FROM EASTERN DIRECTION (ARTIST'S IMPRESSION)
從東面望向校舍的構思圖

VIEW OF THE SCHOOL EXTENSION FROM WESTERN DIRECTION (ARTIST'S IMPRESSION)
從西面望向校舍的構思圖

Project Title: 265ES 九龍童軍徑 麗澤中學擴建計劃 EXTENSION OF LAI CHACK MIDDLE SCHOOL AT SCOUT PATH, KOWLOON	DRAWN BY: ALEXANDER NGAI 魏志堅	DATE: MARCH 08	DRAWING NO.: AB/7122/XA002	SCALE: N.T.S.
	APPROVED BY: TOM IP 葉福全	DATE: MARCH 08		
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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	–	–	–	1.1
		Technical	–	–	–	0.4
(b)	Site supervision (Note 3)	Professional	13.2	38	1.6	1.2
		Technical	99.5	14	1.6	3.0
					Total	5.7

* 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 38 = $56,945 per month and 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 **265ES**. The assignment will only be executed subject to Finance Committee's approval to upgrade **265ES** 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.