

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Education Subventions

25EA – Redevelopment of St. Stephen's Girls' Primary School at Park Road, Mid-levels

Members are invited to recommend to Finance Committee the upgrading of **25EA** to Category A at an estimated cost of \$88.8 million in money-of-the-day prices for the redevelopment of St. Stephen's Girls' Primary School at Park Road, Mid-levels.

PROBLEM

St. Stephen's Girls' Primary School (the School) in Mid-levels is operating in substandard conditions.

PROPOSAL

2. The Secretary for Education and Manpower (SEM), on the advice of the Director of Architectural Services (D Arch S), proposes to upgrade **25EA** to Category A at an estimated cost of \$88.8 million in money-of-the-day (MOD) prices for the in-situ redevelopment of the School.

PROJECT SCOPE AND NATURE

3. The project scope comprises the demolition of the existing school building and construction of a new 24-classroom primary school premises adopting a non-standard design with the following facilities –

/(a).....

- (a) 24 classrooms;
- (b) six special rooms, including a computer-assisted learning room, a general studies room and a language room;
- (c) four small group teaching rooms;
- (d) a guidance activity room;
- (e) two interview rooms;
- (f) a staff room;
- (g) a staff common room;
- (h) a student activity centre;
- (i) a conference room;
- (j) a library;
- (k) an assembly hall (which can be used for a wide range of physical activities such as badminton, gymnastics and table-tennis);
- (l) a multi-purpose area;
- (m) a basketball court at rooftop of the classroom block;
- (n) a running track¹;
- (o) a green corner²; and
- (p) ancillary accommodation, including a medical room, a lift and relevant facilities for the handicapped.

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¹ Making optimal use of the space of the campus, a 40-metre running track will be provided.

² A green corner is a designated area inside the campus to enable students to develop an interest in horticulture and the natural environment. The green corner may include a greenhouse, a weather station and planting beds.

By sharing open space with the adjacent St. Stephen's Girls' College, which is under the same school sponsoring body, the redeveloped school premises will meet the planning target of providing two square metres (m²) of open space per student. A site plan is at Enclosure 1 and views of the new school premises (artist's impression) are at Enclosure 2. The school sponsor plans to start the demolition of the existing school premises in February 2006 and start the construction works of the new school premises in May 2006 for completion in June 2008.

JUSTIFICATION

4. The School is currently an 18-classroom whole-day primary school with an enrolment rate of 100% in the 2004/05 school year. The existing school premises, built in 1968 on a small site, falls short of the provision as stipulated in the current standard schedule of accommodation. Certain essential facilities for effective teaching and learning, such as the general studies room, language room, student activity centre and assembly hall, are lacking. The current open space provision of 1.1 m² per student also falls short of the latest planning standard.

5. The existing school premises is deteriorating and requires frequent repair in recent years. D Arch S advised that improvement works under the School Improvement Programme³ would not be feasible due to the site constraints. Redevelopment is considered to be the most cost-effective way to provide a quality teaching and learning environment for teachers and students of the School. During the construction period, students will use the premises of ex-Pokfulam Government Primary School in Pok Fu Lam.

6. Upon completion, the new school premises will provide a total of 24 classrooms (i.e. six additional classrooms) for whole-day primary schooling. We propose a scope slightly larger than the current 18-classroom setup because we consider that a 24-classroom primary school is of an optimal size for school development, taking into account the larger room for deployment of resources and students' interest and should be pursued as long as the school site permits. With this provision, we currently estimate that there would be a shortfall of 33 primary classes in the Central and Western District by the 2010/11 school year.

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³ The School Improvement Programme involves some 740 existing schools to provide additional space and upgraded facilities to support teaching and learning.

FINANCIAL IMPLICATIONS

7. The school sponsor estimates the capital cost of the project to be \$88.8 million in MOD prices (see paragraph 8 below). D Arch S has examined and endorsed the cost estimate, made up as follows –

	\$ million	
(a) Demolition	2.7	
(b) Site formation	7.2	
(c) Piling	12.5	
(d) Building	34.5	
(e) Building services	12.9	
(f) Drainage	1.6	
(g) External works	2.4	
(h) Furniture and Equipment (F&E) ⁴	3.1	
(i) Consultants' fees for –	3.7	
(i) Contract administration	2.2	
(ii) Site supervision	1.2	
(iii) Out-of-pocket expenses	0.3	
(j) Contingencies	8.1	
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Sub-total	88.7	(in September 2005 prices)
(k) Provision for price adjustment	0.1	
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Total	88.8	(in MOD prices)
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⁴ Based on an indicative list of F&E items required by the School which was compiled on the basis of a survey on serviceability of the existing F&E of the School and the standard F&E reference list prepared by the Education and Manpower Bureau for new 24-classroom primary schools.

The school sponsor proposes to engage consultants to undertake contract administration and site supervision of the project. A detailed breakdown of the estimate for consultants' fees by man-months is at Enclosure 3. The construction floor area (CFA) of the new school premises under **25EA** is about 7 551 m². The estimated construction unit cost of the new school premises, represented by the building and building services costs, is \$6,277 per m² of CFA in September 2005 prices. D Arch S considers this comparable to similar school projects built by the Government. A comparison of the reference cost of a 24-classroom primary school based on an uncomplicated site with no unusual environment or geotechnical constraints with the estimated cost of the new school premises is at Enclosure 4.

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

Year	\$ million (Sept 2005)	Price adjustment factor	\$ million (MOD)
2006 – 07	19.7	1.00125	19.7
2007 – 08	51.0	1.00125	51.1
2008 – 09	9.8	1.00125	9.8
2009 –10	8.2	1.00125	8.2
	88.7		88.8

9. 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 2006 to 2010. The school sponsor will deliver the demolition works of the existing school premises, the site formation and piling works and the construction works of the new school premises through three lump-sum contracts because the school sponsor can clearly define the scope of works in advance. The contracts will not provide for price adjustment because the contract periods will not exceed 21 months each.

10. The cost of F&E, estimated to be \$3.1 million, will be borne by the Government as the new school premises will provide space for redevelopment of the School and additional classes for whole-day schooling. This is in line with the existing policy.

11. The annual recurrent expenditure of the School was \$13.7 million in the 2004/05 school year. Upon redevelopment of the School, the annual recurrent expenditure is estimated to be \$18.7 million, with the difference being largely attributable to the anticipated increase in the number of operating classes upon completion of the new school premises.

PUBLIC CONSULTATION

12. We consulted the Food, Environment, Hygiene and Works Committee under the Central and Western District Council on 27 January 2005. Members of the Committee supported the redevelopment of the School.

13. We consulted the Legislative Council Panel on Education on 24 October 2005 on our recent review of projects under planning in the School Building Programme. The Panel supported our recommendation to proceed with six projects for redevelopment and reprovisioning purposes, including the current proposal. We also circulated to the Panel an information note on this project on 10 November 2005.

ENVIRONMENTAL IMPLICATIONS

14. The consultant employed by the school sponsor has completed and the Director of Environmental Protection has agreed to a class assessment document which sets out the mitigation measures necessary for this class of projects. With such mitigation measures in place, the project will not have long term environmental impacts. We have included in the project estimate the cost to implement all necessary measures to mitigate the environmental impacts.

15. Insulated windows and air-conditioning will be provided for rooms exposed to traffic noise above 65dB, i.e. exceeding the limits recommended in the Hong Kong Planning Standards and Guidelines. The School Sponsor has included the cost of these mitigation measures, detailed below, as part of the building services works in the project estimate –

Mitigation measures	Estimated cost \$ million (in September 2005 prices)
(a) Insulated windows and air-conditioning for –	
(i) 24 classrooms and two small group teaching rooms from 4/F to 9/F at the north-western façade	2.00
	/(ii).....

- | | | |
|------|--|------|
| (ii) | two small group teaching rooms on the 6/F at the south-eastern façade | 0.19 |
| (b) | Insulated windows for guidance activity room on the 9/F and medical room on the 4/F at the north-western façade ⁵ | 0.01 |

16. During construction, the school sponsor will control noise, dust and site run-off nuisances to within established standard 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 sites, and the provision of wheel-washing facilities.

17. At the planning and design stages, the school sponsor has considered measures to reduce the generation of construction and demolition (C&D) materials. The school sponsor has introduced more prefabricated building elements into the school design to reduce temporary formwork and construction waste. These include dry-wall partitioning and proprietary fittings and fixtures. The school sponsor will use suitable excavated materials for filling within the site to minimise off-site disposal. In addition, the school sponsor will require its contractors to use metal site hoardings and signboards so that these materials can be recycled or reused in other projects.

18. The school sponsor 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. It will ensure that the day-to-day operations on site comply with the approved WMP. It will control the disposal of public fill and C&D waste to public fill reception facilities, sorting facilities and landfills respectively through a trip-ticket system. It will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. It will record the disposal, reuse and recycling of C&D materials for monitoring purposes. The school sponsor estimates that the project will generate about 16 320 tonnes of Construction and Demolition (C&D) materials. Of these, it will reuse about 1 100 tonnes (6.8%) on site, deliver 13 230

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⁵ These rooms are provided with air-conditioning according to the schedule of accommodation of standard primary school.

tonnes (81.1%) to public fill reception facilities⁶ for subsequent reuse, and 1 330 tonnes (8.1%) to sorting facilities⁶ in order to retrieve the inert portion for reuse as public fill. In addition, it will dispose of 660 tonnes (4.0%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites, together with the cost for handling the materials at sorting facilities is estimated to be \$0.58 million for this project (based on an unit cost of \$27/tonne for disposal at public fill reception facilities, \$100/tonne at sorting facilities and \$125/tonne⁷ at landfills).

LAND ACQUISITION

19. The project does not require land acquisition.

BACKGROUND INFORMATION

20. We upgraded **25EA** to Category B in March 2004. The school sponsor engaged consultants to undertake the detailed design and tender documentation in July 2004, as well as the topographical survey and site investigation in November 2004. We will charge the estimated cost of \$2.6 million for these services to block allocation **Subhead 8100QX** "Alterations, additions, repairs and improvements to education subvented buildings". The consultants engaged by the school sponsor have carried out these services except for the tender documents which are being finalised.

21. Renovation works for ex-Pokfulam Government Primary School are being carried out at an estimated cost of \$10.9 million to bring the premises, which were constructed more than 50 years ago and vacated since 2001, up to the minimal standards required for temporary occupation by the School operating 18 classes. The works include conversion and fitting-out works for classrooms, special rooms and administrative area, renovation of existing lavatories, staircase and corridors, replacement of worn-out wiring, etc. We will charge this amount to block allocation **Subhead 8100QX**. After the School moves into its new premises, the renovated premises of the ex-Pokfulam Government Primary School may be used to meet the temporary accommodation needs of other schools.

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⁶ Sorting facilities and public fill reception facilities are specified in Schedule 3 and Schedule 4 respectively 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.

⁷ 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.

22. The proposed redevelopment of the School will not involve any tree removal or planting proposal.

23. We estimate that the proposed works will create about 80 jobs (70 for labourers and another 10 for professional/technical staff) providing a total employment of 1 350 man-months.

Education and Manpower Bureau
November 2005



從西面望向新校舍的構思圖

VIEW OF THE NEW SCHOOL PREMISES FROM WESTERN DIRECTION (ARTIST'S IMPRESSION)



從南面望向新校舍的構思圖

VIEW OF THE NEW SCHOOL PREMISES FROM SOUTHERN DIRECTION (ARTIST'S IMPRESSION)

**25EA - REDEVELOPMENT OF ST. STEPHEN'S GIRLS' PRIMARY SCHOOL
AT PARK ROAD, MID-LEVELS**

半山區柏道聖士提反女子中學附屬小學重建計劃

**25EA – Redevelopment of St. Stephen’s Girls’ Primary School at Park Road,
Mid-levels**

Breakdown of the estimate for consultants’ fees

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a)	Consultants’ staff costs					
(i)	Contract administration ^(Note 2)	Professional	–	–	–	2.2
(ii)	Site supervision ^(Note 3)	Technical	42	14	1.6	1.2
					Sub-total	3.4
(b)	Out-of-pocket expenses ^(Note 4)					
	Lithography and other direct expenses					0.3
					Sub-total	0.3
					Total	3.7

* 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 January 2005, 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 **25EA**. The assignment will only be executed subject to Finance Committee’s approval to upgrade **25EA** to Category A.
3. We will only know the actual man-months and actual costs for site supervision after completion of the works.
4. Out-of-pocket expenses are the actual costs incurred. The consultants are not entitled to any additional payment for overheads or profit in respect of these items.

Enclosure 4 to PWSC(2005-06)32

**A comparison of the reference cost of
a 24-classroom primary school project
with the estimated cost of the new school premises under 25EA**

**\$ million
(in September 2005 prices)**

		Reference cost*	25EA	
(a)	Demolition	–	2.7	(See note A)
(b)	Site formation	–	7.2	(See note B)
(c)	Piling	7.5	12.5	(See note C)
(d)	Building	41.0	34.5	(See note D)
(e)	Building services	11.4	12.9	(See note E)
(f)	Drainage	1.7	1.6	(See note F)
(g)	External works	6.8	2.4	(See note F)
(h)	Furniture and Equipment (F&E)	–	3.1	(See note G)
(i)	Consultants' fees	–	3.7	(See note H)
(j)	Contingencies	6.8	8.1	
	Total	<u>75.2</u>	<u>88.7</u>	
(k)	Construction floor area	9 129 m ²	7 551 m ²	
(l)	Construction unit cost {[(d) + (e)] ÷ (k)}	\$5,740/m ²	\$6,277/m ²	

/Assumptions.....

*** Assumptions for reference cost**

1. The estimation is based on the assumption that the school site is uncomplicated and without unusual environmental restrictions. No allowance is reserved for specific environmental restrictions such as the provision of insulated windows, air-conditioning and boundary walls to mitigate noise impacts on the school.
2. No site formation works/geotechnical works are required as they are normally carried out by other government departments under a separate engineering vote before handing over the project site for school construction.
3. Piling cost is based on the use of 101 steel H-piles at an average depth of 30 metres, assuming that percussive piling is permissible. It also includes costs for pile caps, strap beams and testing. No allowance is reserved for the effect of negative skin friction due to fill on reclaimed land.
4. Costs for drainage and external works are for a standard 24-classroom primary school site area of 4 700 square metres built on an average level site without complicated geotechnical conditions, utility diversions, etc. (i.e. a “green-field” site).
5. No consultancy services are required.
6. F&E costs are excluded as they are usually borne by the sponsoring bodies of the new schools.
7. The reference cost for comparison purpose is subject to review regularly. The Director of Architectural Services will review, and revise if necessary, the reference cost which should be adopted for future projects.

Notes

- A. Additional cost is required for demolition of the existing school premises.
- B. Site formation works is required to form the platform level for the construction of the new school premises.
- C. The piling cost is higher because of the use of 60 pre-bored steel H-piles at an average depth of 50 metres for the new school premises. This piling system is used because of the presence of a declared monument (Main Building of St. Stephen’s Girls’ College) 20 metres away from the site and an old retaining wall adjacent to the site.

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- D. The building cost is lower because of the smaller construction floor area.
- E. The building services cost is higher because of the provision of noise mitigation measures, sprinkler installation and an additional wheelchair lifting platform for the School. Owing to limited site area, sprinkler protected double-loaded corridor design is adopted for meeting fire safety requirements. The wheelchair lifting platform is required for connecting ground floor lift lobby with the entrance level.
- F. The drainage and external works costs are lower because of the relatively small site area.
- G. The cost of F&E, estimated to be \$3.1 million, will be borne by the Government as the new school premises will provide space for redevelopment of the School and additional classes for whole-day schooling.
- H. Consultants' fees are required for contract administration, site supervision and out-of-pocket expenses.