

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Education – Primary

346EP – Extension to Sheng Kung Hui Mung Yan Primary School at King Fung Path, Tuen Mun

Members are invited to recommend to Finance Committee the upgrading of **346EP** to Category A at an estimated cost of \$75.3 million in money-of-the-day prices for the construction of an extension to Sheng Kung Hui Mung Yan Primary School at King Fung Path, Tuen Mun.

PROBLEM

We need to provide additional classrooms for the in-situ whole-day conversion of Sheng Kung Hui Mung Yan Primary School (the School), a bi-sessional primary school in Tuen Mun.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Education (SED), proposes to upgrade **346EP** to Category A at an estimated cost of \$75.3 million in money-of-the-day (MOD) prices for the construction of an extension to Sheng Kung Hui Mung Yan Primary School at King Fung Path, Tuen Mun to enable it to convert from a 24-classroom bi-sessional school into a 36-classroom whole-day school.

/PROJECT

PROJECT SCOPE AND NATURE

3. The proposed scope of works under **346EP** includes —
- (a) demolition of an existing one-storey building at the open ground located at the south-eastern part of the school premises. The two small group teaching rooms and transformer room in the one-storey building will be reprovisioned in the existing school building and in the northern part of the site respectively;
 - (b) construction of a seven-storey new extension block on the cleared site to accommodate the following —
 - (I) new facilities
 - (i) 12 additional classrooms¹;
 - (ii) three special rooms including a computer-assisted learning room;
 - (iii) a multi-purpose area;
 - (iv) a green corner²;
 - (v) ancillary accommodation, including a lift and relevant facilities for the handicapped;
 - (II) facilities relocated from existing school building³
 - (i) a staff room;
 - (ii) an assembly hall (which can be used for a wide range of physical activities such as badminton, gymnastics and table-tennis);
- /(c)

¹ There are already 24 classrooms in the existing school. With these additional 12 classrooms, the School will have a total of 36 classrooms.

² The 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.

³ The existing staff rooms and assembly hall do not meet the Schedule of Accommodation of the standard 36-classroom primary school.

- (c) conversion of the substandard facilities, including assembly hall, staff room and library, in the existing school building into the following facilities —
- (i) two special rooms;
 - (ii) two small group teaching rooms;
 - (iii) a guidance activity room;
 - (iv) a conference room; and
 - (v) a library.

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The primary school, upon completion of the new extension block and of the conversion works in the existing school building, will have all the facilities provided for a standard 36-classroom primary school and 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 school premises (artist's impression) are at Enclosure 2. We plan to start the construction works of the new transformer room in May 2008, followed by the demolition works, construction works and conversion works of the school buildings in November 2008 for completion in July 2010.

JUSTIFICATION

4. It is Government's policy to implement whole-day primary schooling for all primary school students. In the 2007/08 school year, about 96% of primary school places are in whole-day mode.

5. Upon completion, **346EP** will provide 12 additional classrooms to the existing 24-classroom Sheng Kung Hui Mung Yan Primary School premises. The School currently operates a total of 42 classes in its a.m. and p.m. sessions. It is operating six classes at Primary One and plans to maintain this structure for all levels upon its conversion to whole-day operation in-situ, therefore requiring a total of 36 classrooms for operating 36 whole-day classes. We have also taken the opportunity to upgrade the existing facilities of the School up to the prevailing standard. The project will not affect the overall projected supply of primary school places in Tuen Mun District.

6. We will only be able to arrive at a realistic assessment by mid-2008 whether additional classrooms would be required in the school net in which this project is located to support small class teaching in public sector primary schools with effect from the 2009/10 school year. Since the expanded school premises will already provide 36 classrooms which are considered to be the optimal scale for a standard primary school, any new demand for classrooms should have little impact, if any, on this particular school. The school sponsoring body also agrees that the Government should proceed with this project at its present scope of works and school design without further delay.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$75.3 million in MOD prices (see paragraph 8 below), made up as follows –

	\$ million
(a) Demolition and reprovisioning of transformer room and two small group teaching rooms	1.5
(b) Foundation	3.5
(c) Building	31.0
(d) Building services	11.5
(e) Drainage	3.0
(f) External works	5.0
(g) Conversion works to existing building	4.5
(h) Furniture and equipment ⁴	1.3
	/(i)

⁴ Based on the standard furniture and equipment reference list prepared by the Education Bureau for a new 36-classroom primary 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.

		\$ million	
(i)	Consultants' fees for –	5.2	
	(i) Contract administration	1.2	
	(ii) Site supervision	4.0	
(j)	Contingencies	6.5	
	Sub-total	73.0	(in September 2007 prices)
(k)	Provision for price adjustment	2.3	
	Total	75.3	(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 consultants' fees by man-months is at Enclosure 3. The construction floor area (CFA) of the new extension block of the School is 4 400 m². The estimated construction unit cost, represented by the building and the building services costs of the new block, is \$9,659 per m² of CFA in September 2007 prices. We consider this comparable to similar school improvement projects undertaken by the Government.

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

Year	\$ million (Sept 2007)	Price adjustment factor	\$ million (MOD)
2008 – 09	2.0	1.00750	2.0
2009 – 10	20.0	1.01758	20.4
2010 – 11	27.0	1.02775	27.8
2011 – 12	12.8	1.03803	13.3
2012 – 13	11.2	1.05619	11.8
	73.0		75.3

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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 deliver the demolition and construction works through two separate lump sum contracts 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 \$1.3 million, will be borne by the Government. This is in line with the existing policy.

11. We estimate the annual recurrent expenditure for **346EP** to be \$29.6 million.

PUBLIC CONSULTATION

12. We consulted the Legislative Council Panel on Education on 24 October 2005 on our review of the School Building Programme. Members supported our recommendation to construct an extension in-situ to enable Sheng Kung Hui Mung Yan Primary School to turn whole-day operation.

ENVIRONMENTAL IMPLICATIONS

13. We engaged a consultant to conduct a Preliminary Environmental Review (PER) for **346EP** in October 2007. The PER recommended installation of insulated windows and air-conditioning for rooms in the new extension block exposed to traffic noise exceeding the limits recommended in the Hong Kong Planning Standards and Guidelines. The recommended mitigation measures include the provision of insulated windows and air-conditioning for one special room on 3/F and 12 classrooms on 2/F, 4/F and 5/F at the south-eastern façade of the new extension block at a cost of \$1.4 million. With such mitigation measures in place, the project would not have long term environmental impacts. We have included the cost of the above mitigation measures as part of the building services in the project estimate.

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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 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.

15. 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. use of excavated materials for filling within the site) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste to public fill reception facilities⁵. We will encourage the contractor to maximize the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimize the generation of construction waste.

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 4 650 tonnes of construction waste. Of these, we will reuse about 1 600 tonnes (34.4%) of inert construction waste on site and deliver 2 000 tonnes (43.0%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 1 050 tonnes (22.6%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill

/reception

⁵ 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.

reception facilities and landfill sites is estimated to be \$185,250 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne⁶ 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; and
- (c) automatic on/off switching of lighting and ventilation fan inside the lift.

19. For greening features, the roof of extension and terraces will be landscaped for environmental and amenity benefits.

20. The total estimated additional cost for adoption of the energy efficient and greening features is around \$989,000, which has been incorporated into the cost estimate for this project. There will be about 8% energy savings in the annual energy consumption.

HERITAGE IMPLICATIONS

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

/LAND

⁶ 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.

LAND ACQUISITION

22. The project does not require any land acquisition.

BACKGROUND INFORMATION

23. We upgraded **346EP** to Category B in January 2007. 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 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.

24. The proposed works will involve removal of 56 trees including felling of 23 trees and replanting of 33 trees within the project site. All trees to be removed are not important trees⁷. We will incorporate planting proposals as part of the project, including estimated quantities of 33 trees and 1 500 shrubs.

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⁷ “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.

25. We estimate that the proposed works will create about 87 jobs (76 for labourers and another 11 for professional/technical staff) providing a total employment of 1 485 man-months.

Education Bureau
February 2008




位置圖 LOCATION PLAN

SCALE 1 : 4000



INSULATED WINDOWS AND AIR CONDITIONING FOR 1 SPECIAL ROOM ON 3/F AND 12 CLASSROOMS AT 2/F, 4/F & 5/F AT THE SOUTH-EASTERN FACADE OF THE NEW EXTENSION BLOCK
 新擴建大樓向東南面3樓的1間特別室及2樓、4樓和5樓的12間課室
 裝置隔音窗和空調

Project Title 346 EP 屯門景峰徑聖公會蒙恩小學擴建計劃 EXTENSION TO SHENG KUNG HUI MUNG YAN PRIMARY SCHOOL AT KING FUNG PATH, TUEN MUN	Drawn by D. KWOK	Date JAN 08	Drawing No. AB/7093/XA101	Scale 1: 1000
	Approved by N. CHOW	Date JAN 08	 ARCHITECTURAL SERVICES DEPARTMENT	
	Office ARCHITECTURAL BRANCH			



VIEW OF THE SCHOOL PREMISES FROM SOUTHERN DIRECTION (ARTIST'S IMPRESSION)
從南面望向校舍的構思圖



VIEW OF THE SCHOOL PREMISES FROM NORTHERN DIRECTION (ARTIST'S IMPRESSION)
從北面望向校舍的構思圖

Project Title **346 EP**

屯門景峰徑聖公會蒙恩小學擴建計劃
EXTENSION TO SHENG KUNG HUI
MUNG YAN PRIMARY SCHOOL
AT KING FUNG PATH, TUEN MUN

Drawn by

D. KWOK

Date

JAN 08

Drawing No.

AB/7093/XA102

Scale

N.T.S.

Approved by

N. CHOW

Date

JAN 08

Office

ARCHITECTURAL BRANCH



ARCHITECTURAL
SERVICES
DEPARTMENT

**346EP – Extension to Sheng Kung Hui Mung Yan Primary School
at King Fung Path, Tuen Mun**

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	–	–	–	0.9
	Technical	–	–	–	0.3
(b)	Site supervision (Note 3)				
	Professional	12.1	38	1.6	1.1
	Technical	96.2	14	1.6	2.9
				Total	<u>5.2</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 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 **346EP**. The assignment will only be executed subject to Finance Committee's approval to upgrade **346EP** 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.