

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Education – Tertiary/others

100ET – Special school at Cornwall Street, Sham Shui Po, for severely intellectually disabled children

Members are invited to recommend to Finance Committee the upgrading of **100ET** to Category A at an estimated cost of \$99.7 million in money-of-the-day prices for the construction of a special school with boarding facilities at Cornwall Street, Sham Shui Po, for severely intellectually disabled children.

PROBLEM

The Mental Health Association of Hong Kong - Pak Tin Children's Centre (the School) in Shek Kip Mei is currently operating in a substandard building with facilities far below current standards. There is no room for in-situ expansion of the existing special school to improve its learning and teaching environment.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Education and Manpower (SEM), proposes to upgrade **100ET** to Category A at an estimated cost of \$99.7 million in money-of-the-day (MOD) prices for the construction of a new school premises for severely intellectually disabled children at Cornwall Street, Sham Shui Po, to re-provision the School.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of the project comprises the demolition of an existing building on the project site at Cornwall Street and the construction of a special school with 96 day-time school places and 60 boarding places. The new school premises will include the following facilities –

- (a) School section
 - (i) 12 classrooms;
 - (ii) seven special rooms, including a multi-media activity room and an art and craft room;
 - (iii) two small group teaching rooms;
 - (iv) five therapy rooms;
 - (v) two interview rooms;
 - (vi) a staff room and a staff common room;
 - (vii) a student activity centre;
 - (viii) a conference room;
 - (ix) a library;
 - (x) a social worker's room;
 - (xi) an assembly hall-cum-gymnasium;
 - (xii) a basketball court at lower ground level;
 - (xiii) a 20-metre running track¹;
 - (xiv) a green corner² on roof top; and

/(xv)

¹ Running track is not a standard provision in special schools but is provided in this school to promote sport for the students. The track is shorter than usual because of the health condition of the students and the site constraint.

² A 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.

- (xv) other ancillary facilities, including a medical inspection room, a lift and relevant facilities for the disabled.
- (b) Boarding section³
 - (i) bedrooms and study areas to accommodate 60 boarders;
 - (ii) a dining / multi-purpose room;
 - (iii) a television / common room;
 - (iv) an office for house parents and programme workers;
 - (v) a nurse's duty room/sick bay; and
 - (vi) other ancillary facilities including a kitchen, a laundry and relevant facilities for the disabled.

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The project 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. We plan to start the demolition works in March 2007 and construction works in October 2007 for completion in July 2009.

JUSTIFICATION

4. The School is an aided special school for severely intellectually disabled children. At present, the school is providing a total of 80 day-time school places (namely six primary classes (eight pupils each) and four secondary classes (eight pupils each)) and 50 boarding places, with an enrolment rate of 100% for both the school and boarding places in the 2006/07 school year. The existing school section has a net operational floor area (NOFA) of only 556 m²

/and

³ A 60-place boarding section will be provided. This can help severely intellectually disabled children learn how to live independently and to develop adaptive social behaviour and communication skills. SEM will consider providing boarding facilities whenever appropriate, upon request by and agreement with the school sponsor. Other than **100ET**, eight other similar special schools in Hong Kong also have boarding facilities catering for the needs of their students.

and 421 m² for the boarding section, which fall short of the required provision⁴ by about 71% and 43% respectively. Some essential facilities such as multi-media activity room, art and craft room, interview room, student activity centre and medical inspection room are also lacking.

5. At present, the project site is occupied by the Kowloon Kitchen building formerly operated by the Social Welfare Department. The building is now vacant. We need to demolish the existing building to make room for the construction of the proposed special school. Upon completion of the project, the new school premises will be able to accommodate six primary classes (eight pupils each) and six secondary classes (eight pupils each), with a capacity for 96 students, in order to re-provision its existing facilities including 10 classrooms and to provide two extra classrooms to cater for the implementation of the New Senior Secondary Academic Structure⁵. Besides, upgraded facilities including multi-media activity room, art and craft room, interview room and student activity centre will also be provided. With an increase in the number of students accommodated in the school under the New Academic Structure, the boarding section will be expanded correspondingly to provide 60 places catering to the demand of those students with limited mobility or in fragile physical conditions.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be \$99.7 million in MOD prices (see paragraph 7 below), made up as follows –

	\$ million
(a) Demolition	1.7
(b) Piling	11.4
(c) Building	44.5
(d) Building services	16.2

/\$ million

⁴ The approved schedule of accommodation for a 12-classroom special school for severely intellectually disabled children with 60 boarding places is 1 914 m² in NOFA for the school section and 737 m² in NOFA for the boarding section.

⁵ We are currently making necessary preparations for pursuing improvement projects for other special schools to meet the teaching and learning needs for the implementation of the New Senior Secondary Academic Structure.

(e)	Drainage	2.0	
(f)	External works	3.6	
(g)	Furniture and equipment (F&E) ⁶	4.6	
(h)	Consultants' fees for –	4.4	
	(i) Contract administration	1.2	
	(ii) Site supervision	3.2	
(i)	Contingencies	7.8	
	Sub-total	96.2	(in September 2006 prices)
(j)	Provision for price adjustment	3.5	
	Total	99.7	(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 **100ET** is about 8 320 m² (comprising 6 340 m² for the school section and 1 980 m² for the boarding section). The estimated construction unit cost, represented by the building and the building services costs, is \$7,296 per m² of CFA in September 2006 prices. We consider this unit 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 2006)	Price adjustment factor	\$ million (MOD)
2007 – 08	10.0	1.01250	10.1

/Year

⁶ Based on an indicative F&E reference list prepared by the Education and Manpower Bureau (EMB) for new special schools for severely intellectually disabled children, EMB will deduct the F&E cost of those serviceable items to be redeployed to the new school premises.

Year	\$ million (Sept 2006)	Price adjustment factor	\$ million (MOD)
2008 – 09	37.0	1.02769	38.0
2009 – 10	38.0	1.04310	39.6
2010 – 11	6.0	1.05875	6.4
2011 – 12	5.2	1.08257	5.6
	96.2		99.7

8. 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 2007 to 2012. 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 contracts will not provide for price adjustment because the contract periods will not exceed 21 months.

9. The annual recurrent expenditure of the school was \$25 million in the 2005/06 school year. Upon reprovisioning, the annual recurrent expenditure is estimated to be \$29 million.

PUBLIC CONSULTATION

10. We consulted the Sham Shui Po District Council on 22 September 2005. Members of the Council supported the project and urged for expedition of the project to improve the learning environment of the special school which is significantly sub-standard in terms of facilities. The school sponsor has been involved throughout the planning and design stages. We have also consulted the parents of existing students and they support reprovisioning of the School to the new site as early as possible.

11. We briefed the Education Panel on the development of the New Senior Secondary Academic Structure for special schools in July 2006. In particular, we have reported that we would examine special schools' proposals on conversion works and/or additional facilities for the implementation of the New Academic Structure. We also updated the Legislative Council Subcommittee to

/Study

Study Issues Relating to the Provision of Boarding Places, Senior Education and Employment Opportunities for Children with Special Education Needs on the progress of the implementation of the New Academic Structure for special schools in November 2006. LegCo Members urged for the provision of sufficient classrooms, facilities and boarding facilities to support the implementation of the New Academic Structure for children with special education needs.

ENVIRONMENTAL IMPLICATIONS

12. We engaged a consultant to conduct a Preliminary Environmental Review (PER) for **100ET** in March 2005. The PER recommended the provision of a boundary wall at the suitable location and installation of insulated windows and air-conditioning for rooms exposed to traffic noise exceeding the limits recommended in the Hong Kong Planning Standards and Guidelines. The recommended mitigation measures are as follows –

Mitigation measures	Estimated cost \$ million (in Sept 2006 prices)
(a) a 3-metre high boundary wall along the northern side of the site;	0.5
(b) insulated windows and air-conditioning for four bedrooms from the 2/F to 3/F at the northern façade of the dormitory block;	0.4
(c) insulated windows and air-conditioning for two staff sleep-in rooms on the 2/F at the eastern façade of the dormitory block.	0.1

We have included the costs of the above mitigation measures as part of the building services and the external works in the project estimate.

13. There are currently two small underground fuel tanks underneath the Kowloon Kitchen building. These obsolete fuel tanks, which were used to store fuel for an emergency generator, will be removed upon demolition of the building. We engaged a consultant in March 2005 to conduct a contamination assessment for the fuel tanks. Inspection of trial pits dug adjacent to the tanks has revealed no fuel leakage, and the possibility of land contamination is considered to be low.

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. We completed a preliminary asbestos survey and identified on site some potential asbestos-containing materials which can be handled through due care in the demolition process. In addition, we will require our contractor to implement further precautionary measures related to the handling and disposal of asbestos, if additional asbestos is encountered.

15. We have considered in the planning and design stages to reduce the generation of construction and demolition (C&D) materials where possible. 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, use metal site hoardings and signboards so that these materials can be recycled or reused in other projects), in order to minimize the disposal of C&D materials to public fill reception facilities⁷. We will encourage the contractor to maximize the use of recycled or recyclable C&D materials, 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 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. We estimate that the project will generate about 9 200 tonnes of C&D materials. Of these, we will reuse about 4 100 tonnes (44.6%) on site and deliver 4 200 tonnes (45.6%) to public fill reception facilities for subsequent reuse.

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⁷ 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.

In addition, we will dispose of 900 tonnes (9.8%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be \$225,900 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne⁸ at landfills).

LAND ACQUISITION

18. The project does not require any land acquisition.

BACKGROUND INFORMATION

19. We upgraded **100ET** to Category B in October 2003. We engaged a term contractor to carry out site investigation in March 2005; and engaged consultants to conduct topographical survey in January 2005, carry out the PER and fuel tank contamination assessment in March 2005, undertake the building design in June 2005 and prepare tender documents in September 2005. The total cost of this work is \$2.7 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". The term contractor has completed the site investigation. The consultants have completed the PER, the fuel tank contamination assessment, the topographical survey and the building design, and are finalising the tender documents.

20. The proposed works will involve removal of 21 living trees, including six to be felled and 15 to be replanted within the project site. All trees to be removed are not important trees⁹. We will incorporate planting proposals as part of the project, including estimated quantities of 240 new trees and 2 749 shrubs.

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⁸ 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.

⁹ "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.

21. We estimate that the proposed works will create about 112 jobs (99 for labourers and another 13 for professional/technical staff) providing a total employment of 1 920 man-months.

Education and Manpower Bureau
January 2007



石硤尾配水庫遊樂場
(底下為配水庫)
SHEK KIP MEI
SERVICE RESERVOIR
PLAYGROUND
(RESERVOIR BELOW)



石硤尾配水庫遊樂場
(底下為配水庫)
SHEK KIP MEI
SERVICE RESERVOIR PLAYGROUND
(RESERVOIR BELOW)



位置圖 LOCATION PLAN 比例 SCALE 1:5000

道路 ROAD

高架道路
ELEVATED ROAD

綠化地帶
GREEN BELT

A 3M HIGH BOUNDARY WALL ALONG THE NORTHERN SIDE OF THE SITE
在工地向北一面建造一幢3米高的圍牆

INSULATED WINDOWS AND AIR-CONDITIONING FOR 4 BEDROOMS FROM 2/F TO 3/F AT THE NORTHERN FACADE OF THE DORMITORY BLOCK
在宿舍大樓向北一面2樓和3樓的4間睡房裝置隔音窗和空調

歌和老街
CORNWALL STREET

行人入口
PEDESTRIAN ENTRANCE

車輛出入口
VEHICULAR INGRESS/EGRESS

擬建老人院
PROPOSED ELDERLY CENTRE

工地面積: 4780平方米
SITE AREA: 4780m²

天台綠化小園地
GREEN CORNER ON ROOFTOP

EMERGENCY VEHICULAR ACCESS
緊急車輛通道

香港扶幼會則仁中心
SOCIETY OF BOYS' CENTRES
THE CHAK YAN CENTRE

公共衛生檢測中心
PUBLIC HEALTH LABORATORY CENTRE

INSULATED WINDOWS AND AIR-CONDITIONING FOR 2 STAFF SLEEP-IN ROOMS ON THE 2/F AT THE EASTERN FACADE OF THE DORMITORY BLOCK
在宿舍大樓向東一面2樓的2間教職員休息室裝置隔音窗和空調

石硤尾消防局
SHEK KIP MEI FIRE STATION

聖公會李嘉誠護理安老院
SKH LI KA SHING CARE AND ATTENTION HOME FOR THE ELDERLY

南昌街
NAM CHEONG STREET

title 100ET
深水埗歌和老街的1所嚴重智障兒童特殊學校
SPECIAL SCHOOL AT CORNWALL STREET, SHAM SHUI PO, FOR SEVERELY INTELLECTUALLY DISABLED CHILDREN

drawn by	LINDA LI	date	11.06
approved	JENNY CHAN	date	11.06
office	ARCHITECTURAL BRANCH		

drawing no.	AB/5823/XA101	scale	1:1000
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從東北面望向校舍的構思圖
 VIEW OF THE SCHOOL PREMISES FROM NORTH-EASTERN DIRECTION (ARTIST'S IMPRESSION)



從東南面望向校舍的構思圖
 VIEW OF THE SCHOOL PREMISES FROM SOUTH-EASTERN DIRECTION (ARTIST'S IMPRESSION)

title 100ET 深水埗歌和老街的1所 嚴重智障兒童特殊學校 SPECIAL SCHOOL AT CORNWALL STREET, SHAM SHUI PO, FOR SEVERELY INTELLECTUALLY DISABLED CHILDREN	drawn by LINDA LI	date 11.06	drawing no. AB/5823/XA102	scale N.T.S.
	approved JENNY CHAN	date 11.06	 ARCHITECTURAL SERVICES DEPARTMENT	
	office ARCHITECTURAL BRANCH			

100ET – Special school at Cornwall Street, Sham Shui Po, for severely intellectually disabled children

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	20.7	38	1.6	1.8
		Technical	48.6	14	1.6	1.4
					Total	4.4

* 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 2006, MPS point 38 = \$54,255 per month and 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 **100ET**. The assignment will only be executed subject to Finance Committee's approval to upgrade **100ET** 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.