For discussion **PWSC(2002-03)22**
on 8 May 2002

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS
Education – Tertiary/other
94ET – Special school for physically handicapped children at Fung Shing Street, Ngau Chi Wan

Members are invited to recommend to Finance Committee the upgrading of **94ET** to Category A at an estimated cost of $68.9 million in money-of-the-day prices for the construction of a special school for physically handicapped children at Fung Shing Street, Ngau Chi Wan.

PROBLEM

The Margaret Trench Red Cross School at Sandy Bay Road is currently operating with substandard accommodation and facilities. There is no room for expansion to improve the teaching and learning environment.

PROPOSAL

2. The Director of Architectural Services (D Arch S), with the support of the Secretary for Education and Manpower, proposes to upgrade **94ET** to Category A at an estimated cost of $68.9 million in money-of-the-day (MOD) prices for the construction of a new special school for physically handicapped (PH) children at Fung Shing Street, Ngau Chi Wan, to reprovision the existing one at Sandy Bay Road, Pok Fu Lam.

/PROJECT …..

PROJECT SCOPE AND NATURE

3. The scope of the project comprises the construction of a special school, with 100 places for PH children, at Fung Shing Street, Ngau Chi Wan. The new school will include the following facilities –

(a) ten classrooms;

(b) two remedial teaching rooms;

(c) two interview rooms;

(d) eight special rooms (including a computer room);

(e) five therapy rooms;

(f) a staff room;

(g) a staff common room;

(h) a library;

(i) a student activity centre;

(j) a multi-purpose area;

(k) an assembly hall;

(l) a basketball court;

(m) a green corner[1]; and

(n) other ancillary facilities including a lift and relevant facilities for the handicapped.

The project will meet the planning target of providing two square metres of open space per student. A site plan is at Enclosure 1. We plan to start construction works for **94ET** in July 2002 for completion in December 2003.

/**JUSTIFICATION** …..

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[1] 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 green house, a weather station and planting beds.

JUSTIFICATION

4. The Margaret Trench Red Cross School at Sandy Bay Road, Pok Fu Lam was originally designed as a primary school for PH children. In order to meet the needs of students for secondary education, the school has started to operate junior secondary classes since September 1994. The school is currently operating four primary classes and two secondary classes, providing a total of 60 places for PH children. The incomplete class structure is considered to be educationally undesirable. Moreover, the existing accommodation and facilities are inadequate to meet the educational needs of the school operating the existing number of classes. The school is approximately 686 square metres in net operational floor area, which falls short of the standard provision[2] by about 70%. Certain basic standard facilities such as Activities of Daily Living Room[3], library, home economics room and student activity centre are not available. In addition, some facilities such as the computer room, the occupational therapy room, the physiotherapy room, the speech therapy room and the assembly area are grossly undersized. Given the lack of space at the existing premises for expansion, the school should be reprovisioned elsewhere and upgraded to current standards to facilitate the provision of quality education. The new school will operate with a complete class structure of seven primary classes and three secondary classes, accommodating 100 students.

5. Provision of places for PH students is planned on a territory-wide basis. In deciding the location for reprovisioning an existing special school, the Director of Education (D of E) will also take into account the demand for such school places in different regions. The aim is to achieve a more even distribution of school places among different regions as far as possible. There is at the moment a shortfall of places for PH students in the Kowloon region and a slight surplus in the Hong Kong region. Taking into account the demand for places in both regions, we propose to reprovision the Margaret Trench Red Cross School from Hong Kong Island to Kowloon. Subsequent to the reprovisioning of the school, the demand in the Hong Kong Island region can still be fully met by an existing PH school in the same region whereas the shortfall in Kowloon region will be greatly reduced to 30 places.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of this project to be $68.9 million in MOD prices (see paragraph 7 below), made up as follows –

/(a) …..

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[2] The approved schedule of accommodation for the special school for PH children of the same class structure is 2 370 square metres in net operational floor area.

[3] The Activities of Daily Living Room is a special room for training of daily living skills.

			$ million	
(a)	Site formation		1.3	
(b)	Piling		3.5	
(c)	Building		34.1	
(d)	Building services		10.7	
(e)	Drainage and external works		9.3	
(f)	Furniture and equipment[4]		3.0	
(g)	Consultants' fees –		1.9	
	(i) Contract administration	0.7		
	(ii) Site supervision	1.2		
(h)	Contingencies		6.1	
	Sub-total		69.9	(in September 2001 prices)
(i)	Provision for price adjustment		(1.0)	
	Total		68.9	(in MOD prices)

A breakdown of the estimate for consultants' fees by man-months is at Enclosure 2. The construction floor area (CFA) of **94ET** is about 5 653 square metres. The estimated construction unit cost, represented by the building and building services costs, is $7,925 per square metre of CFA in September 2001 prices. The estimated construction unit cost is comparable to that for other similar projects built by the Government.

/7. …..

[4] Based on the estimated furniture and equipment requirement in accordance with the schedule of accommodation for the special school for PH children.

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

Year	$ million (Sept 2001)	Price adjustment factor	$ million (MOD)
2002 – 03	18.0	0.98625	17.8
2003 – 04	41.0	0.98378	40.3
2004 – 05	8.1	0.98378	8.0
2005 – 06	1.8	0.98378	1.8
2006 – 07	1.0	0.98378	1.0
	69.9		68.9

8. We derived the MOD estimates on the basis of the Government's latest forecast of trend labour and construction prices for the period 2002 to 2007. We will deliver the works through a fixed-price lump-sum contract because the contract period will be less than 21 months and we can clearly define the scope of works in advance, leaving little room for uncertainty.

9. We estimate the additional annual recurrent expenditure of the school to be $7.3 million.

PUBLIC CONSULTATION

10. We consulted the Community Building and Social Services Committee of the Wong Tai Sin District Council on 30 October 2001. Members of the Committee supported the project. The school sponsor has been involved throughout the planning and design stages. Parents support the reprovisioning of the school to the new site. Parents of current students have been informed that their children could continue with their studies in the new school at Fung Shing Street, Ngau Chi Wan, or could be transferred to an adjacent school for PH children, John F. Kennedy Centre, if they wish.

/ENVIRONMENTAL …..

ENVIRONMENTAL IMPLICATIONS

11. We engaged a consultant to conduct a Preliminary Environmental Review (PER) for the project in June 2001. The PER concluded that the project would not have long-term environmental impact. However, it revealed a possible problem of landfill gas emission on the proposed school site. Subsequently, the consultant conducted a qualitative risk assessment to examine the problem in January 2002[5]. The assessment concluded that with the implementation of suitable mitigation measures in the building design, potential emission associated with landfill gas will be reduced to within established standard. The assessment was vetted and agreed by the Director of Environmental Protection. The estimated cost for implementing such measures is $590,000. We have included the cost of these protective measures as part of the building works in the project estimate.

12. During construction, we will keep noise, dust and site runoff 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.

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

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[5] The school site is within 250 metres of a former landfill site. It is therefore within the landfill consultation zone and a qualitative risk assessment was required.

14. D Arch S 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. D Arch S will ensure that the day-to-day operations on site comply with the approved WMP. D Arch S will control the disposal of public fill and C&D waste to designated public filling facilities and landfills respectively through a trip-ticket system. The contractor will be required to separate public fill from C&D waste for disposal at appropriate facilities. D Arch S will record the disposal, reuse and recycling of C&D materials for monitoring purposes. We estimate that the project will generate about 2 200 cubic metres (m^3) of C&D materials. Of these, we will reuse about 1 400 m^3 (63.6%) on site, 450 m^3 (20.5%) as fill in public filling areas[6], and dispose of 350 m^3 (15.9%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be $43,750 for this project (based on a notional unit cost[7] of $125/$m^3$).

LAND ACQUISITION

15. The project does not require land acquisition.

BACKGROUND INFORMATION

16. We upgraded **94ET** to Category B in August 2001. We engaged a consultant to carry out a PER and qualitative risk assessment in June 2001 and January 2002 respectively, and employed a term contractor to carry out a topographical survey and site investigation in April and June 2001 respectively at a total cost of $708,000. We also engaged a consultant to carry out the design and prepare tender documents for the building services at a total cost of $462,000. We charged these amounts to block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". The consultant and the term contractor have completed the PER, qualitative risk assessment, topographical survey and site investigation. D Arch S has completed the detailed architectural and structural designs of the project with in-house staff resources. The consultant has completed the design and tender documents for the building services.

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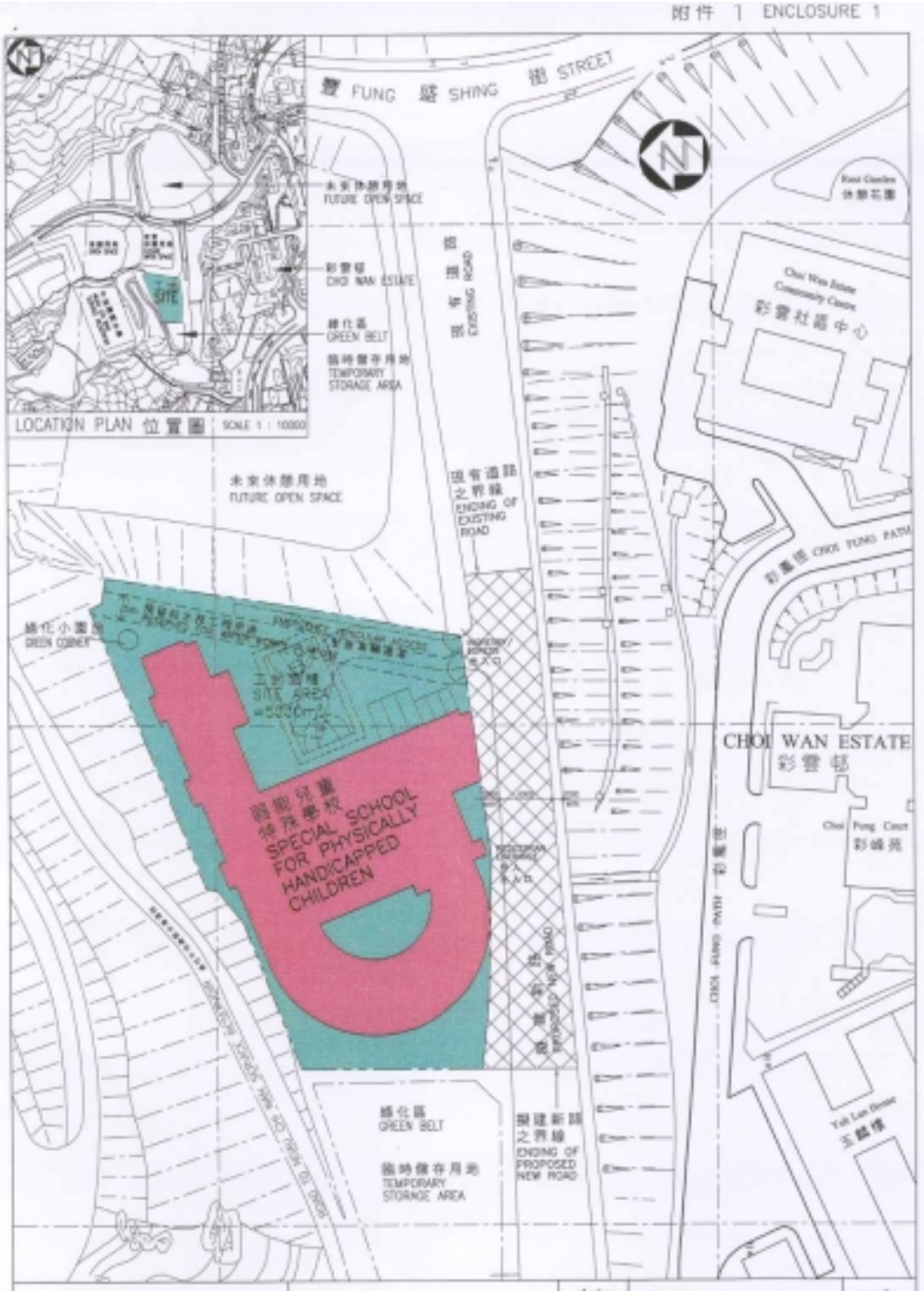
[6] A public filling area is a designated part of a development project that accepts public fill for reclamation purposes. Disposal of public fill in a public filling area requires a licence issued by the Director of Civil Engineering.

[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 $90 per/$m^3$), nor the cost to provide new landfills (which are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

17. We estimate that the proposed works under **94ET** will create some 115 jobs with a total of 1 790 man-months comprising three professional staff, seven technical staff and 105 labourers.

Education and Manpower Bureau
April 2002

附件 1 ENCLOSURE 1



title 94ET 牛池灣豐盛街的1所弱能兒童特殊學校 SPECIAL SCHOOL FOR PHYSICALLY HANDICAPPED CHILDREN AT FUNG SHING STREET, NGAU CHI WAN	drawn by K.M. YAM	date 7.2.2002	drawing no. AB/6352/XC101c	scale 1:1000
	approved S.K. SAY	date 7.2.2002	ARCHITECTURAL SERVICES DEPARTMENT	
	office ARCHITECTURAL BRANCH			

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94ET – Special school for physically handicapped children at Fung Shing Street, Ngau Chi Wan

Breakdown of estimate for consultants' fees

Consultants' staff cost		Estimated man-months	Average MPS* salary point	Multiplier	Estimated fee ($million)
(a) Contract administration	Professional	2.9	38	2.4	0.4
	Technical	6.5	14	2.4	0.3
				Sub-total	0.7
(b) Site supervision by resident site staff of the consultants	Technical	37.0	14	1.7	1.2
				Sub-total	1.2
				Total	1.9

*MPS = Master Pay Scale

Notes

(1) A multiplier of 2.4 is applied to the average MPS point to estimate the full staff costs including the consultants' overheads and profit, as the staff will be employed in the consultants' offices. A multiplier of 1.7 is applied in the case of site staff supplied by the consultants. (At 1 April 2001, MPS point 38 is $60,395 per month and MPS point 14 is $19,510 per month.)

(2) The figures given above are based on estimates prepared by the Director of Architectural Services. We will only know the actual man-months and actual fees when we have selected the consultants through the usual competitive bidding system.