

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 - BUILDING

Education - Primary

263EP - Primary school in area 27, Tin Shui Wai

Members are invited to recommend to Finance Committee the upgrading of **263EP** to Category A at an estimated cost of \$105.4 million in money-of-the-day prices for the construction of a 30-classroom primary school in area 27, Tin Shui Wai, Yuen Long.

PROBLEM

There are not enough primary schools in Yuen Long District to meet the increase in demand for school places.

PROPOSAL

2. The Director of Architectural Services (D Arch S), with the support of the Secretary for Education and Manpower, proposes to upgrade **263EP** to Category A at an estimated cost of \$105.4 million in money-of-the-day (MOD) prices for the construction of a primary school in area 27, Tin Shui Wai, Yuen Long.

PROJECT SCOPE AND NATURE

3. The proposed primary school is a standard design 30-classroom school building. It will have -

- (a) 30 classrooms;
- (b) six special rooms, including a computer-assisted learning room and a language room;
- (c) four remedial teaching rooms;
- (d) a guidance activity/interview room;
- (e) two interview rooms;
- (f) two staff rooms and a staff common room;
- (g) a student activity centre;
- (h) a conference room;
- (i) a library;
- (j) an assembly hall (which, together with the roof of the block, can also be used for a wide range of physical activities such as badminton, gymnastics and table-tennis);
- (k) a multi-purpose area;
- (l) two basketball courts; and
- (m) ancillary accommodation including a lift and relevant facilities for the handicapped.

JUSTIFICATIONS

4 To meet the increase in demand for primary school places and to help achieve the policy target of enabling 60% of pupils in public sector schools to study on a whole-day basis by the commencement of the school year 2002/03, the Director of Education (D of E) has been making plans to construct an additional 73 primary schools for completion by August 2002. To date, five of

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these schools have been completed, 41 school projects have been upgraded to Category A and are at various stages of construction and two projects are pending upgrading to Category A¹. Another two projects, **233EP** and **264EP**, will also be considered by Members at this meeting (see papers PWSC(1999-2000)48 and PWSC(1999-2000)50).

5. Yuen Long District currently has 45 public sector primary schools providing 674 classrooms. D of E forecasts that an additional 508 classrooms will be required to meet the increase in demand for school places by the school year 2002/03. Eleven primary schools providing 330 classrooms have already been upgraded to Category A and planned for completion in the school year 2001/02. **263EP**, together with **264EP**, will further reduce the shortfall by 60 classrooms to 118 classrooms. The remaining shortfall will be met by other school projects which are currently being planned.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be \$105.4 million in MOD prices (see paragraph 7 below), made up as follows -

	\$ million	
(a) Piling	13.0	
(b) Building	52.4	
(c) Building services	15.2	
(d) Drainage and external works	8.0	
(e) Contingencies	8.9	
	97.5	(at December 1998 prices)

/(f) .. |

¹ At the PWSC meetings on 26 May 1999 and 2 June 1999, Members endorsed the upgrading of **247EP** – Two 24-classroom primary schools at Kowloon Tong and **262EP** – A 24-classroom primary in public housing estate, Aldrich Bay, phase 4 to Category A at estimated costs of \$207.1 million and \$107.3 million in MOD prices respectively. Finance Committee will consider the recommendations on 11 June 1999 and 25 June 1999 respectively.

	\$ million	
(f) Provision for price adjustment	7.9	
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Total	105.4	(in MOD prices)
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The construction floor area of **263EP** is 10 727 square metres. The construction unit cost, represented by building and building services costs, is \$6,302 per square metre at December 1998 prices. D Arch S considers this construction unit cost reasonable. A comparison of the standard cost of a primary school with the project estimate of this school is at the Enclosure.

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

Year	\$ million (Dec 1998)	Price adjustment factor	\$ million (MOD)
1999 – 2000	4.0	1.02625	4.1
2000 – 2001	47.0	1.06217	49.9
2001 – 2002	37.6	1.09934	41.3
2002 – 2003	8.9	1.13782	10.1
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	97.5		105.4
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8. We derived the MOD estimates on the basis of Government's latest forecast of trend labour and construction prices for the period 1999 to 2003. We will tender the works under fixed-price lump-sum contract because we can clearly define the scope of works in advance, leaving little room for uncertainty.

9. The cost of furniture and equipment, estimated to be \$4.2 million, will be borne by the school sponsor as the school will be allocated to meet

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increase in demand for school places. We estimate the additional annually recurrent expenditure for the school to be \$19.5 million.

PUBLIC CONSULTATION

10. We consulted the Yuen Long Provisional District Board in May 1999. Members supported the project.

ENVIRONMENTAL IMPLICATIONS

11. We have conducted a Preliminary Environmental Review (PER) in accordance with the Class Assessment Document for Standard Schools². We have designed the school and will implement the required mitigation measures in accordance with the findings of the Class Assessment Document. We will provide acoustic insulation and air-conditioning to 30 classrooms from the 1/F to the 6/F and four remedial teaching rooms from the 2/F to the 5/F at the south-western facade of the classroom block. We have included a total of \$3.6 million in the project estimate for implementing the above measures.

12. We will control noise, dust and site run-off nuisances during the construction through the implementation of appropriate mitigation measures in the relevant contracts.

LAND ACQUISITION

13. The project does not require any land acquisition.

BACKGROUND INFORMATION

14. We upgraded **263EP** to Category B in May 1999. D Arch S has

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² This is a technical standards document used to assess the environmental impact of standard school projects. It has been developed and endorsed by an interdepartmental working group chaired by the Director of Environmental Protection.

completed site investigations for the project and is in the process of completing the detailed working drawings and tender documents using in-house staff resources. He plans to start the construction works in November 1999 for completion in June 2001.

Education and Manpower Bureau
June 1999

(PWSC0163/WIN6)

**A comparison of the standard cost of a 30-classroom primary school project
with the estimated cost of 263EP**

	Standard cost*	263EP	
\$ million			
(at Dec 1998 prices)			
(a) Piling	9.5	13.0	(See note A)
(b) Building	52.0	52.4	(See note B)
(c) Building services	12.0	15.2	(See note C)
(d) Drainage and external works	9.0	8.0	(See note D)
(e) Contingencies	8.3	8.9	
Total	90.8	97.5	
(f) Construction floor area	10 727m ²	10 727m ²	
(g) Construction unit cost {[(b)+(c)]÷÷(f)}	\$5,966/m ²	\$6,302/m ²	

* Assumptions for standard cost

1. The estimation is based on the assumption that the school site is uncomplicated and without abnormal environmental restrictions. No allowance is reserved for specific environmental restrictions such as the provision of insulated windows, air-conditioning and solid 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 the handing-over of the project site for school construction.

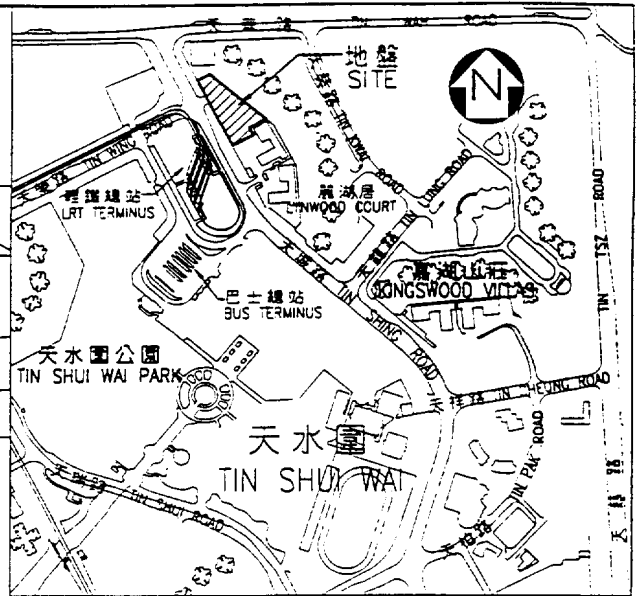
3. Piling cost is based on the use of 112 numbers of steel H-piles at an average depth of 30 metres. It also includes costs for pile caps, strap beams and testing. No allowance is reserved for the effect of negative skin friction due to fill on reclaimed land.
4. Cost for drainage and external works is for a standard 30-classroom primary school site area of 6 200 square metres built on an average level site without complicated geotechnical conditions, utility diversions, etc. (i.e. a greenfield site).
5. No consultancy services are required.
6. Furniture and equipment costs are excluded as they are usually borne by the sponsoring body.
7. The standard cost for comparison purpose is subject to review regularly. We will review, and revise if necessary, the standard cost which should be adopted for future projects.

Notes

- A. The piling cost is higher because underground cavities and conditions of the site are unsuitable for driven piles and require the use of 22 numbers of 2.5 metre diameter bored piles at average depth of 38 metres.
- B. The building cost is slightly higher because of the provision of insulated windows as a noise mitigation measure.
- C. The building services cost is higher because of the provision of air-conditioning as a noise mitigation measure.
- D. The drainage and external works cost is lower because the site area of 5 235 square metres is smaller than standard (6 200 square metres).



天華路 TIN WAH ROAD



位置圖 LOCATION PLAN SCALE : N.T.S.

(248EP)
天水圍第三十一區
建築中之小學
PRIMARY SCHOOL IN PROGRESS
IN AREA 31, TIN SHUI WAI

麗湖居
LYNWOOD COURT

嘉湖山莊
KINGSWOOD VILLAS

天榮路 TIN WING ROAD

車輛入口
VEHICLE INGRESS

TIN SHING ROAD

擬建小學 (三十間課室)
PROPOSED PRIMARY SCHOOL (30 CLASSROOMS)
SITE AREA = 5235m² approx.

行人入口
PEDESTRIAN ENTRANCE

PROVISION OF INSULATED WINDOWS AND AIR-CONDITIONING TO 30 CLASSROOMS FROM 1/F TO 6/F AND 4 REMEDIAL TEACHING ROOMS FROM 2/F TO 5/F AT THE SOUTH-WESTERN FACADE OF THE CLASSROOM BLOCK.

在課室大樓向西兩面由1樓至6樓之三十間課室及2樓至5樓之四間輔導教學室安裝隔音玻璃窗和空氣調節

輕鐵總站
LIGHT RAIL TRAIN TERMINUS

CAO Ref. PPF(S)5986\XB102 -- 1:1000

Title : 263EP
天水圍第27區一所小學
Primary school in area 27,
Tin Shui Wai

drawn by 李潤章 (TOMMY LEE)
黃文堂 (M.F. WONG)

date 16.3.99

approved 陳伯雄 (DANIEL CHAN)

date 16.3.99

office ARCHITECTURAL BRANCH

drawing no. AB/5986/XB102

scale 1:1000



ARCHITECTURAL SERVICES DEPARTMENT