

## ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

### HEAD 703 - BUILDING

#### Education - Primary

#### **264EP - Second primary school in area 101, Tin Shui Wai**

Members are invited to recommend to Finance Committee the upgrading of **264EP** to Category A at an estimated cost of \$102.8 million in money-of-the-day prices for the construction of a 30-classroom primary school in area 101, 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 **264EP** to Category A at an estimated cost of \$102.8 million in money-of-the-day (MOD) prices for the construction of a primary school in area 101, 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) ...

- (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 build an additional 73 primary schools for completion by August 2002. To date, five of 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 A<sup>1</sup>. Another two projects, **233EP** and **263EP**, will also be considered by Members at this meeting (see papers PWSC(1999-2000)48 and PWSC(1999-2000)49).

5. Yuen Long District now 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 commencement of 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. **264EP**, together with **263EP**, 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.

6. To tie in with the overall public housing development programme in area 101, Tin Shui Wai, phase 2, we will entrust the construction of the school to the Housing Authority.

## FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$102.8 million in MOD prices (see paragraph 8 below), made up as follows -

	<b>\$ million</b>
(a) Piling	6.5
(b) Building	52.0
(c) Building services	12.0
(d) Drainage and external works	11.2

/(e) ..

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<sup>1</sup> 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.

		<b>\$ million</b>	
(e)	Contingencies	8.2	
(f)	2% Housing Authority on-cost	1.8	
	Sub-total	91.7	(at December 1998 prices)
(g)	Provision for price adjustment	11.1	
	Total	102.8	(in MOD prices)

The construction floor area of **264EP** is 10 727 square metres. The construction unit cost, represented by building and building services costs, is \$5,966 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.

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

Year	\$ million (Dec 1998)	Price adjustment factor	\$ million (MOD)
1999 - 2000	1.4	1.02625	1.4
2000 - 2001	5.0	1.06217	5.3
2001 - 2002	34.0	1.09934	37.4
2002 - 2003	42.0	1.13782	47.8
2003 - 2004	8.7	1.17765	10.2
2004 - 2005	0.6	1.21886	0.7
	91.7		102.8

/9. ..

9. We derived the MOD estimates on the basis of Government's latest forecast of trend labour and construction prices for the period 1999 to 2005. The construction of the school, including the foundation and the building works, will

be included in the respective housing estate development contracts for area 101, Tin Shui Wai. The Director of Housing (D of H) will tender the piling works under a fixed-price lump-sum contract and the building works on a lump-sum basis with provision for price fluctuation because the contract period for the building works for the housing development will be longer than 21 months.

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

### **PUBLIC CONSULTATION**

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

### **ENVIRONMENTAL IMPLICATIONS**

12. Based on the Preliminary Environment Review completed by D of H in July 1998, the Director of Environmental Protection agrees that the proposed school would not be subject to any adverse environmental impacts. 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 **264EP** to Category B in June 1999. D of H has completed site investigations for the project and is in the process of preparing completing the detailed working drawings and tender documents using in-house staff resources.

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He plans to start the construction works in December 1999 for completion in December 2002.

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Education and Manpower Bureau  
June 1999

(PWSC0162/WIN6)

**A comparison of the standard cost of a 30-classroom primary school project  
with the estimated cost of 264EP**

	<b>Standard cost*</b>	<b>264EP</b>	
<b>\$ million (at Dec 1998 prices)</b>			
(a) Piling	9.5	6.5	(See Note A)
(b) Building	52.0	52.0	
(c) Building services	12.0	12.0	
(d) Drainage and external works	9.0	11.2	(See note B)
(e) Contingencies	8.3	8.2	
(f) 2% Housing Authority on-cost	-	1.8	(See note C)
<b>Total</b>	90.8	91.7	
(g) Construction floor area	10 727m <sup>2</sup>	10 727m <sup>2</sup>	
(h) Construction unit cost {[(b)+(c)] ÷ ÷ (g)}	\$5,966/m <sup>2</sup>	\$5,966/m <sup>2</sup>	

**\* Assumptions for standard cost**

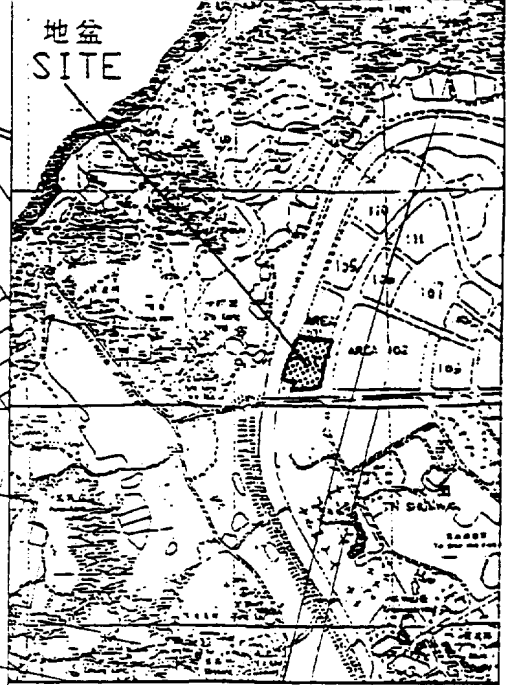
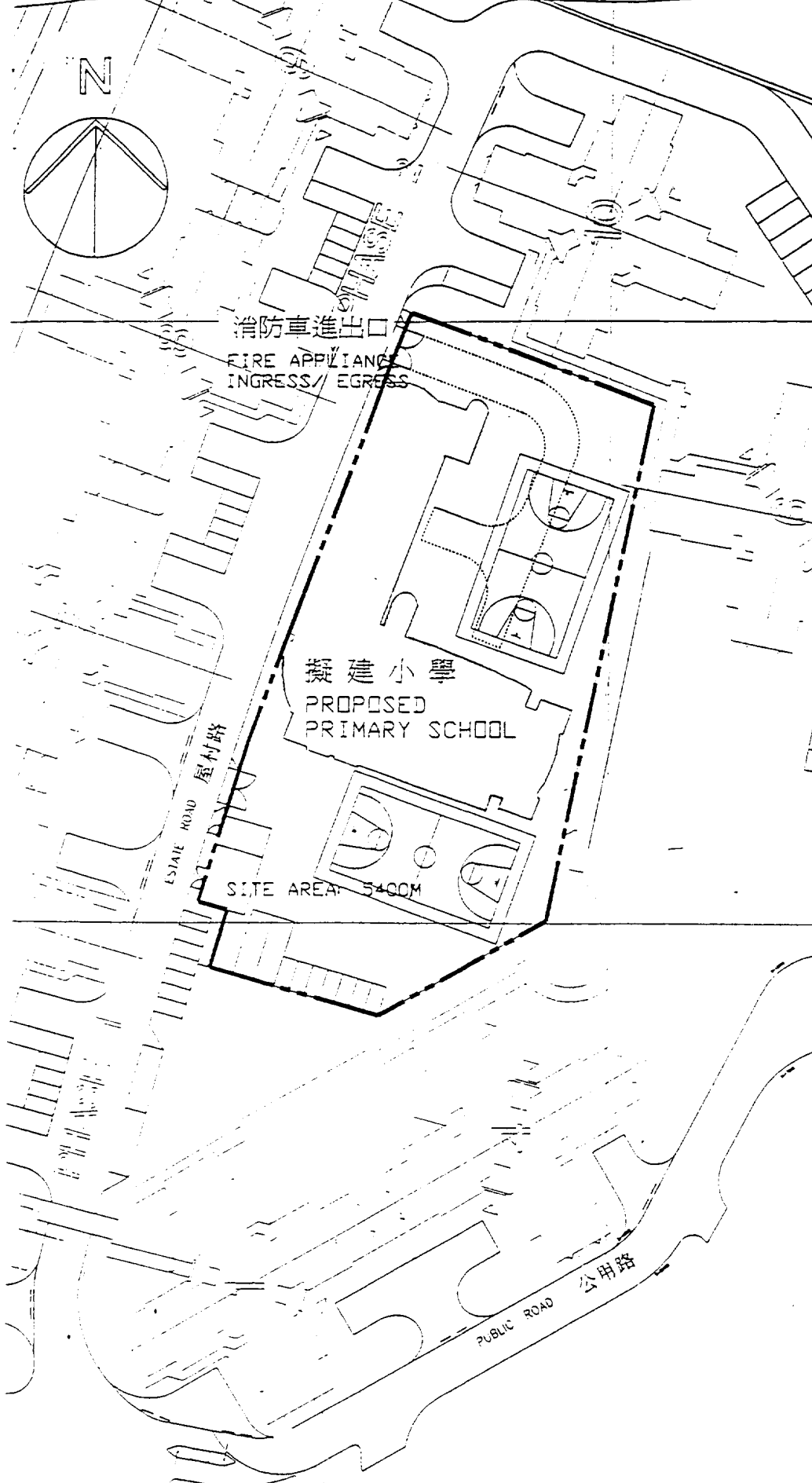
- 1. The estimation is based on the assumption that the school site is uncomplicated and without abnormal environmental restrictions. No allowance is reserved for specific environmental restrictions such as the provision of insulated windows, air-conditioning and solid boundary walls to mitigate noise impacts on the school.**

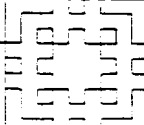
2. **No site formation works/geotechnical works are required as they are normally carried out by other government departments under a separate engineering vote before the handing-over of the project site for school construction.**
3. **Piling cost is based on the use of 112 numbers of steel H-piles at 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 lower because the site conditions allow the use of 105 numbers less expensive prestressed precast concrete pile at average depth of 37.5 metres.**
- B. **The school is to be built as part of the phase 2 of public housing estate development in area 101, Tin Shui Wai. The drainage and external works costs are estimated on the basis of the construction floor area of the school building as a proportion of the total construction floor area of the housing development.**
- C. **There is a standard arrangement to reserve 2% on-cost, for administrative and supervisory works, for projects entrusted to the Housing Authority.**





Title : 264EP 天水圍101區第二期 第二間小學 Second primary school in area 101, phase 2, Tin Shui Wai	DRAWN BY R. TAI	CT. TA	SCALE 1: 1000 DRG NO YL26/SITE/A/PR-01/P5/A
	APPROVED S. K. LUK	A/60	 CONSTRUCTION BRANCH HOUSING DEPARTMENT