

For discussion  
on 2 June 1999

PWSC(1999-2000)37

## ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

### HEAD 703 - BUILDINGS

#### Education - Primary

**262EP - A 24-classroom primary school in public housing estate,  
Aldrich Bay, phase 4**

Members are invited to recommend to Finance Committee the upgrading of **262EP** to Category A at an estimated cost of \$107.3 million in money-of-the-day prices for the construction of a 24-classroom primary school in the public housing estate in Aldrich Bay, phase 4.

### PROBLEM

There are not enough primary schools in Eastern District for the implementation of the policy on whole-day primary schooling.

### PROPOSAL

2. The Director of Architectural Services (D Arch S), with the support of the Secretary for Education and Manpower, proposes to upgrade **262EP** to Category A at an estimated cost of \$107.3 million in money-of-the-day (MOD) prices for the construction of a primary school in the public housing estate in Aldrich Bay, phase 4.

/PROJECT ..

## PROJECT SCOPE AND NATURE

3. The proposed primary school is a standard design 24-classroom school buildings. It will have –

- (a) 24 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 cum games area;
- (k) a multi-purpose area;
- (l) two basketball courts (one at the ground level and one on the roof of the assembly hall block); 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

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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>.

5. Eastern District currently has 27 public sector primary schools providing 562 classrooms. D of E forecasts that an additional 66 classrooms will be required to meet the increase in demand for school places by the commencement of the school year 2002/03. To meet this new demand, two primary school projects **226EP** and **246EP**<sup>2</sup> providing 60 classrooms have already been upgraded to Category A and are scheduled for completion in the school year 2000/01. **262EP** will enable an existing bi-sessional primary school in the district to convert into whole-day operation.

6. To tie in with the overall public housing development programme in Aldrich Bay, phase 4, 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 \$107.3 million in MOD prices (see paragraph 8 below), made up as follows-

	<b>\$ million</b>
(a) Piling	11.0
(b) Building	48.5

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<sup>1</sup> At the PWSC meeting on 26 May 1999, Members endorsed the upgrading of **247EP** to Category A at an estimated cost of \$207.1 million in MOD prices for the construction of two 24-classroom primary schools. Finance Committee will consider the recommendation on 4 June 1999.

<sup>2</sup> Finance Committee approved at its meeting on 30 October 1998 the upgrading of **226EP** and **246EP** to Category A.

/(c) \_..

(c) Building services	11.8	
(d) Drainage and external works	12.5	
(e) Furniture and equipment	4.0	
(f) Contingencies	8.4	
(g) 2% Housing Authority on-cost	1.9	
	Sub-total	98.1 (at December 1998 prices)
(h) Provision for price adjustment	9.2	
	Total	107.3 (in MOD prices)

The construction floor area of **262EP** is 9 129 square metres. The construction unit cost, represented by building and building services costs, is \$6,605 per square metre at December 1998 prices. D Arch S considers this construction unit cost reasonable. A comparison of the standard cost of a 24-classroom primary school with the project estimate for 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	9.8	1.02625	10.1
2000 - 2001	27.6	1.06217	29.3
2001 - 2002	42.2	1.09934	46.4
2002 - 2003	10.5	1.13782	11.9

/2003 - 2004 \_..

2003 - 2004	3.0	1.17765	3.5
2004 - 2005	5.0	1.21886	6.1
	98.1		107.3

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 building works, will be included in the respective housing estate development contracts for Aldrich Bay, phase 4. 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 programmed contract period for the building works for the housing development will exceed 21 months.

10. We estimate the additional annually recurrent expenditure for the school to be \$16.0 million.

**PUBLIC CONSULTATION**

11. We consulted the Community Building Committee of the Eastern Provisional District Board in May 1999. Members of the Board supported the project.

**ENVIRONMENTAL IMPLICATIONS**

12. We have conducted a Preliminary Environmental Review (PER) in accordance with the Class Assessment Document for Standard Schools<sup>3</sup>. We will implement the required mitigation measures in accordance with the PER by providing acoustic insulation and air-conditioning to three classrooms from the 4/F to 6/F at the eastern facade of the classroom block, four special rooms on the 2/F

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<sup>3</sup> 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.



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and 3/F at the southern facade of the special room block so as to keep the road traffic noise impact of the proposed school building within the limits stipulated in the Hong Kong Planning Standards and Guidelines. We have included \$0.3 million in the project estimate for implementing the above mitigation measures.

13. 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**

14. The project does not require land acquisition.

### **BACKGROUND INFORMATION**

15. We upgraded **262EP** to Category B in May 1999. D of H has completed site investigations for the project and is in the process of preparing the detailed working drawings and tender documents using in-house staff resources. We plan to start the construction works of the school in July 1999 for completion in May 2002 in conjunction with the Aldrich Bay phase 4 housing development.

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Education and Manpower Bureau  
May 1999

(PWSC0130/WIN5)

**A comparison of the standard cost of a 24-classroom primary school project  
with the estimated cost of 262EP**

	<b>Standard Cost*</b>	<b>262EP</b>	
<b>\$ million (at Dec 1998 prices)</b>			
(a) Piling	8.6	11.0	(See note A)
(b) Building	48.5	48.5	
(c) Building services	11.5	11.8	(See note B)
(d) Drainage and external works	7.5	12.5	(See note C)
(e) Furniture and equipment	-	4.0	(See note D)
(f) Contingencies	7.6	8.4	
(g) 2% Housing Authority on-cost	-	1.9	(See note E)
	_____	_____	
Total	83.7	98.1	
	_____	_____	
(h) Construction floor area	9 129m <sup>2</sup>	9 129m <sup>2</sup>	
(i) Construction unit cost {[(b)+(c)] ÷ (h)}	\$6,572/m <sup>2</sup>	\$6,605/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**

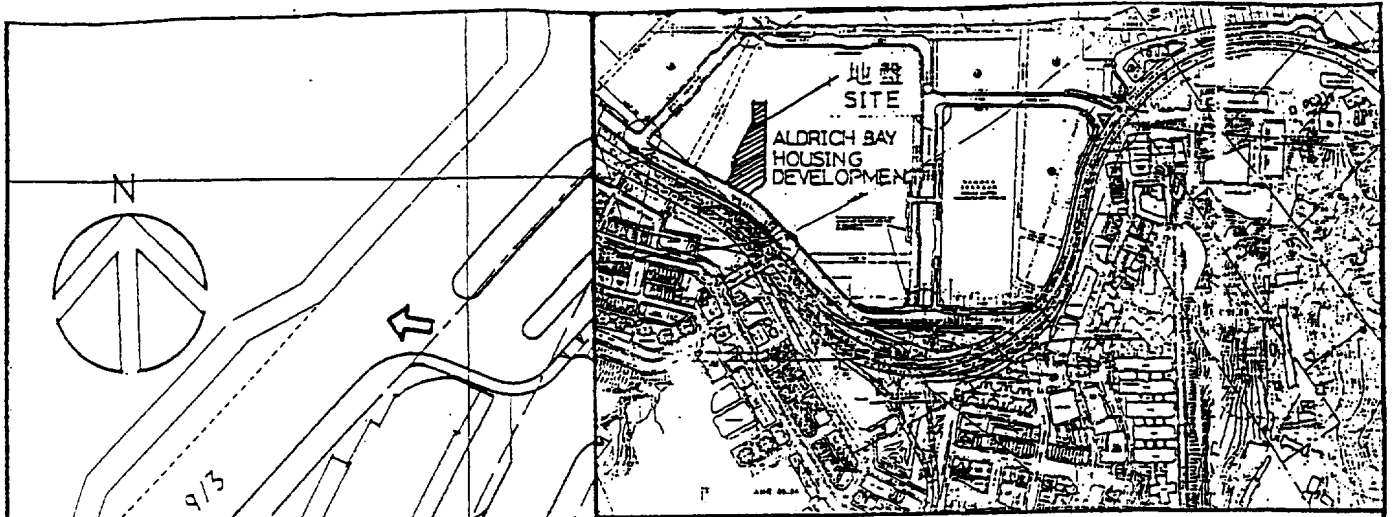
**provision of insulated windows, air-conditioning and solid boundary walls to mitigate noise impacts on the school.**

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 101 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 24-classroom primary school site area of 4 700 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 of an aided school.
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.

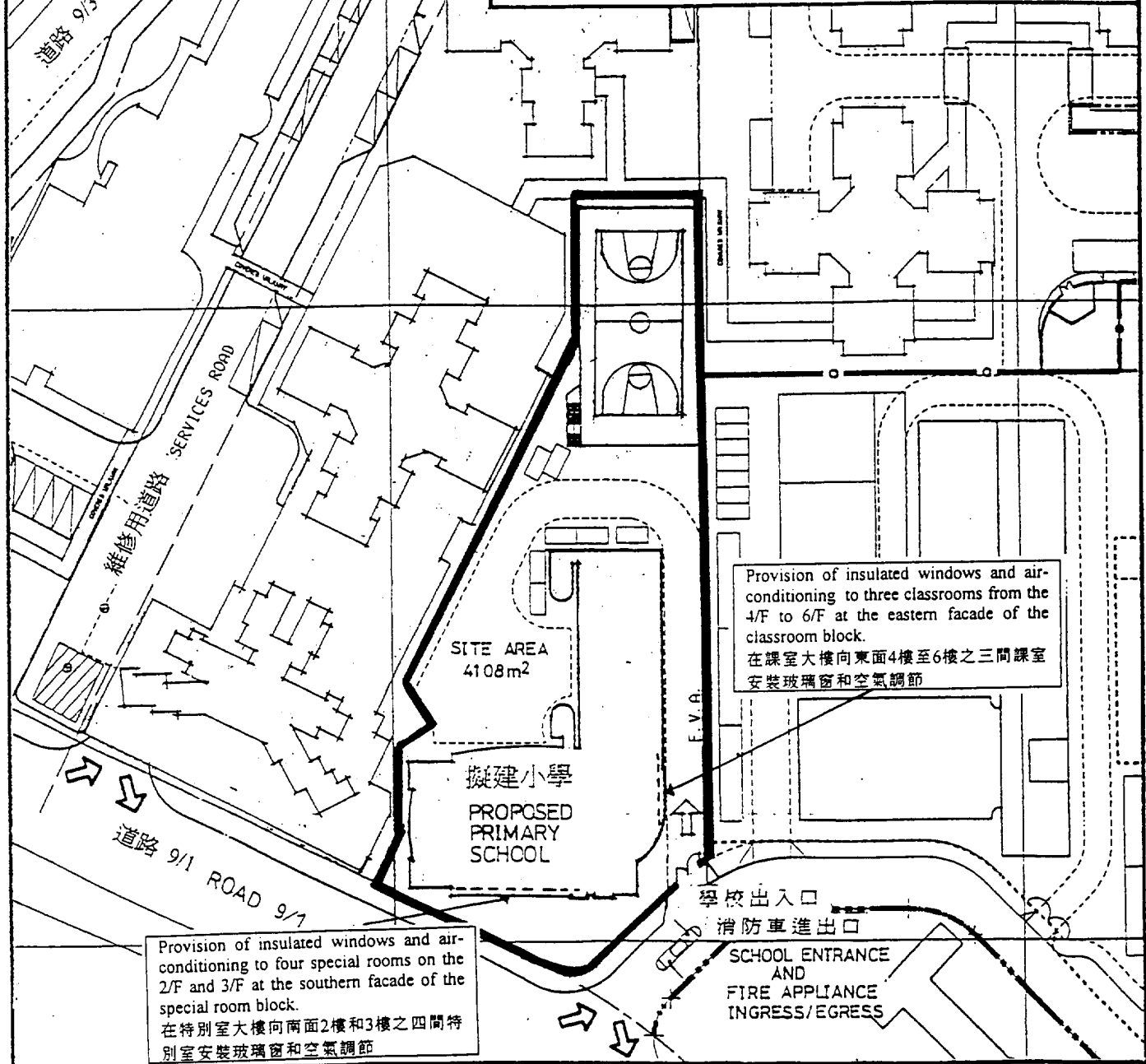
#### Notes

- A. The piling cost is higher because of the use of 130 numbers of steel H-piles at an average depth of 42 metres as the school is located on reclaimed land with deep bed rock levels at 42 metres.**
- B. The building services cost is higher because of the provision of air-conditioning as a noise mitigation measure.**
- C. The school is to be built as part of the phase 4 of the public housing development at Aldrich Bay. 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 this phase of the housing development.**

- D. The cost of furniture and equipment, estimated to be \$4 million, will be borne by the Government as the school will be allocated to an existing bi-sessional school for conversion to whole-day operation.**
  
- E. There is a standard arrangement to reserve 2% on-costs, for administrative and supervisory works, for projects entrusted to the Housing Authority.**



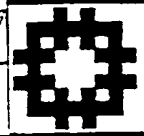
KEY PLAN 1:10000 位置圖



Provision of insulated windows and air-conditioning to three classrooms from the 4/F to 6/F at the eastern facade of the classroom block.  
 在課室大樓向東面4樓至6樓之三間課室安裝玻璃窗和空氣調節

Provision of insulated windows and air-conditioning to four special rooms on the 2/F and 3/F at the southern facade of the special room block.  
 在特別室大樓向兩面2樓和3樓之四間特別室安裝玻璃窗和空氣調節

Title : 262EP 愛秩序灣第四期公共屋村一所小學 Primary school in public housing estate, Aldrich Bay, phase 4	NAME AND DESIGNATION	INITIAL	DATE	SCALE	1:1000
	CKD A.HSIEH A/90		11/2/99	DRG NO.	HK11/4/PS/A/SK-08
	DRAWN	K.S.WCNG TOA/104			



WORKS GROUP HOUSING DEPARTMENT

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