

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Education Subventions

23EA – Reprovisioning of The Church of Christ in China Kei Tsz Primary School at Tsz Wan Shan Road, Wong Tai Sin

Members are invited to recommend to Finance Committee the upgrading of **23EA** to Category A at an estimated cost of \$89.7 million in money-of-the-day prices for the reprovisioning of The Church of Christ in China Kei Tsz Primary School at Tsz Wan Shan Road, Wong Tai Sin.

PROBLEM

We need to reprovision The Church of Christ in China Kei Tsz Primary School (the School) in Wong Tai Sin.

PROPOSAL

2. The Secretary for Education and Manpower (SEM), on the advice of the Director of Architectural Services (D Arch S), proposes to upgrade **23EA** to Category A at an estimated cost of \$89.7 million in money-of-the-day (MOD) prices for the reprovisioning of the School and the adjacent Tsz Wan Shan Road Playground (the Playground) in Wong Tai Sin.

3. As the area of the existing school site is only about 1 380 square metres, there is limited scope for in-situ redevelopment. To meet present day standards, we plan to reprovise the School to an adjacent site of about 2 500 square metres currently occupied by the Playground under the management of the Leisure and Cultural Services Department. Upon completion of the new school premises, the school sponsor will demolish the existing school premises for reprovise the Playground.

PROJECT SCOPE AND NATURE

4. The project scope comprises the demolition of the Playground, construction of a new 24-classroom primary school premises, the demolition of the existing school premises and the reprovise of the Playground. The proposed school will have the following facilities –

- (a) 24 classrooms;
- (b) six special rooms, including a computer-assisted learning room, a general studies room and a language room;
- (c) four small group teaching rooms;
- (d) a guidance activity room;
- (e) two interview rooms;
- (f) a staff room;
- (g) a staff common room;
- (h) a student activity centre;
- (i) a conference room;
- (j) a library;
- (k) an assembly hall (which can be used for a wide range of physical activities such as badminton, gymnastics and table-tennis);
- (l) a multi-purpose area;
- (m) two basketball courts (one at ground level and another one at the rooftop of the classroom block);

- (n) a green corner¹; and
- (o) ancillary accommodation, including a lift and relevant facilities for the handicapped.

5. The reprovisioned Playground will be provided with the following facilities to meet the current standard –

- (a) two basketball courts;
- (b) a children's play area; and
- (c) a landscape garden with arbours and sitting-out area.

—————
—————
The proposed school will meet the planning target of providing two square metres 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. The school sponsor plans to start the demolition of the Playground and the construction works of the new school premises in July 2004 for completion in February 2006, demolish the old school premises in March 2006 and start the reprovisioning works of the Playground in July 2006 for completion in October 2006.

JUSTIFICATION

6. The School is a 24-classroom whole-day primary school with an enrolment rate of over 98% in the 2003/04 school year. The existing school premises, built in 1968 on a small site of about 1 380 square metres in size, fall short of the current standard. Certain essential facilities for effective teaching and learning, such as the general studies room, student activity centre, library and assembly hall are not provided. The current open space provision of 0.9 square metres per student also falls short of the latest standard of two square metres per student.

/7.

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.

7. Due to the site constraints, SEM considers that more thorough improvement should be provided to the School through reprovisioning and therefore has not included it under the School Improvement Programme². As the existing premises also requires frequent repairs in recent years, reprovisioning is considered to be the most cost-effective way to provide a quality teaching and learning environment for the teachers and students of the School.

8. As the new school premises are for the reprovisioning of an existing whole-day primary school within the Wong Tai Sin District, 23EA will not increase the supply of primary school places in the district.

9. The Playground is popular among students of nearby schools and residents of housing estates in the vicinity. At present, there are two basketball courts and a children's play area in the Playground. We intend to provide the same facilities in the reprovisioned Playground.

FINANCIAL IMPLICATIONS

10. The school sponsor estimates the capital cost of the project to be \$89.7 million in MOD prices (see paragraph 11 below). D Arch S has examined and endorsed the cost estimate, made up as follows –

	\$ million		
	School portion	Playground portion	Total
(a) Demolition	–	–	2.0
(i) The Playground	–	–	0.1
(ii) The existing school premises	–	–	1.9
(b) Site formation	5.7	–	5.7
(c) Foundation	6.5	–	6.5
(d) Building	42.3	–	42.3
(e) Building services	13.1	0.3	13.4

/(f)

² The School Improvement Programme involves some 850 existing schools to provide additional space and upgraded facilities to support teaching and learning. The majority of the improvement works will be completed by the end of the 2004/05 school year.

	\$ million			
	School portion	Playground portion	Total	
(f) Drainage and external works	5.8	2.0	7.8	
(g) Furniture and equipment (F&E) ³	3.4	–	3.4	
(h) Consultants' fees for –	3.1	0.3	3.4	
(i) Contract administration	1.3	0.1	1.4	
(ii) Site supervision	1.6	0.1	1.7	
(iii) Out-of-pocket expenses	0.2	0.1	0.3	
(i) Contingencies	8.0	0.5	8.5	
Sub-total			93.0	(in September 2003 prices)
(j) Provision for price adjustment			(3.3)	
Total			89.7	(in MOD prices)

The school sponsor proposes 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 the new school premises under **23EA** is about 9 580 square metres. The estimated construction unit cost of the new school premises, represented by the building and building services costs, is \$5,783 per square metre of CFA in September 2003 prices. D Arch S considers this comparable to similar school projects built by the Government. A comparison of the reference cost of a 24-classroom primary school based on an uncomplicated site with no unusual environment or geotechnical constraints with the estimated cost of the new school premises is at Enclosure 4.

11. Subject to approval, the school sponsor will phase the expenditure as follows –

/2004

³ Based on an indicative list of F&E items required by the School. The actual amount will be determined on the basis of a survey on the serviceability of the existing F&E.

Year	\$ million (Sept 2003)	Price adjustment factor	\$ million (MOD)
2004 – 05	58.8	0.97150	57.1
2005 – 06	29.9	0.95450	28.5
2006 – 07	3.3	0.95450	3.1
2007 – 08	1.0	0.96643	1.0
	<hr/> 93.0 <hr/>		<hr/> 89.7 <hr/>

12. 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 2004 to 2008. The school sponsor will deliver the construction works of the new school premises (including the demolition of the Playground), the demolition works of the old school premises and the reprovisioning works of the Playground through three fixed-price lump-sum contracts because the contract periods will be less than 21 months each and the school sponsor can clearly define the scope of works in advance, leaving little room for uncertainty.

13. The cost of F&E, estimated to be \$3.4 million, will be borne by the Government as the new school premises will be used to reprovision an existing aided primary school. This is in line with the existing policy.

14. The annual recurrent expenditure of the School was \$19.6 million in the 2002/03 school year. Upon reprovisioning to the new premises, the annual recurrent expenditure is estimated to be the same, as the mode of operation and the number of classes will remain unchanged.

PUBLIC CONSULTATION

15. We consulted the Wong Tai Sin District Council on 24 June 2003. Members of the Council supported the reprovisioning of the School and the Playground.

16. We consulted the Legislative Council Panel on Education on 30 January 2004 on the planning and provision of public sector school places and

/the

the various projects to be implemented in the School Building Programme in the next few years. The Panel on Education thoroughly discussed the Administration's policy and noted its plan to proceed with seeking funding approval from the Public Works Subcommittee for projects in the following three categories –

- (a) whole-day primary schools;
- (b) reprovisioning and redevelopment projects; and
- (c) schools, including direct subsidy scheme and private independent schools, which have already been allocated to sponsoring bodies.

Members supported projects under categories (a) and (b). In respect of proposals under category (c), members asked that full background and justification, including the supply and demand balance of school places on both a territory-wide and district basis, be provided to facilitate consideration on a case-by-case basis.

ENVIRONMENTAL IMPLICATIONS

17. The school sponsor engaged a consultant to conduct a Preliminary Environmental Review (PER) for **23EA** in November 2003. The PER recommended the provision 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 2003 prices)
Insulated windows and air-conditioning for –	
(a) 15 classrooms from the 1/F to 5/F at the southern facade of the new classroom block	1.2
(b) four special rooms and four classrooms from the 2/F to 5/F at the southern facade of the new classroom/special room block	0.6

The school sponsor has included the cost of the above mitigation measures as part of the building services works in the project estimate. The reprovisioned Playground will not cause any long-term environmental impact.

18. During construction, the school sponsor will control noise, dust and site run-off nuisances to within established standard 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 sites, and the provision of wheel-washing facilities.

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

20. The school sponsor will require its 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. The school sponsor will ensure that the day-to-day operations on sites comply with the approved WMP. The school sponsor 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 school sponsor will require its contractor to separate public fill from C&D waste for disposal at appropriate facilities. The school sponsor will record the disposal, reuse and recycling of C&D materials for monitoring purposes. The school sponsor estimates that the project will generate about 21 190 cubic metres (m³) of C&D materials. Of these, the school sponsor will reuse about 2 250 m³ (10.6%) on site, 15 900 m³ (75%) as fill in public filling areas⁴, recycle 1 790 m³ (8.5%) at recycling facilities and dispose of 1 250 m³ (5.9%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$156,250 for this project (based on a notional unit cost⁵ of \$125/m³).

/LAND

⁴ 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 license issued by the Director of Civil Engineering.

⁵ 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 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.

LAND ACQUISITION

21. The project does not require land acquisition.

BACKGROUND INFORMATION

22. We upgraded **23EA** to Category B in February 2003. The school sponsor engaged consultants to undertake the topographical survey and detailed design in September 2003, PER in November 2003, and site investigation in February 2004 for the project. We will charge the estimated cost of \$3.2 million to block allocation **Subhead 8100QX** "Alterations, additions, repairs and improvements to education subvented buildings". The consultants engaged by the school sponsor have completed all the services except for the tender documents which are being finalised.

23. During the construction period of the new school premises, students of the School will continue to use the existing school premises. The whole construction site will be hoarded to provide a one-hour fire-rated protection between the existing school premises and the construction site. In addition, there will be separate entrances for the construction site and the existing school premises. These measures will help ensure the safety of students. To minimise disturbance to students, the school sponsor will use raft foundation instead of piling operation which is more noisy. Precautionary measures will also be implemented such as sufficient hoarding with lighting system, catchfan, scaffolding and screen cover, shoring and temporary support to ensure safety to public. Water spray shall be applied to suppress dust generated during the demolition and construction works.

24. The proposed construction of the new school premises and the reprovisioned Playground will involve the removal of about 11 trees which will be felled. They are not important trees⁶. We will incorporate planting proposals as part of the project, including estimated quantities of 24 trees.

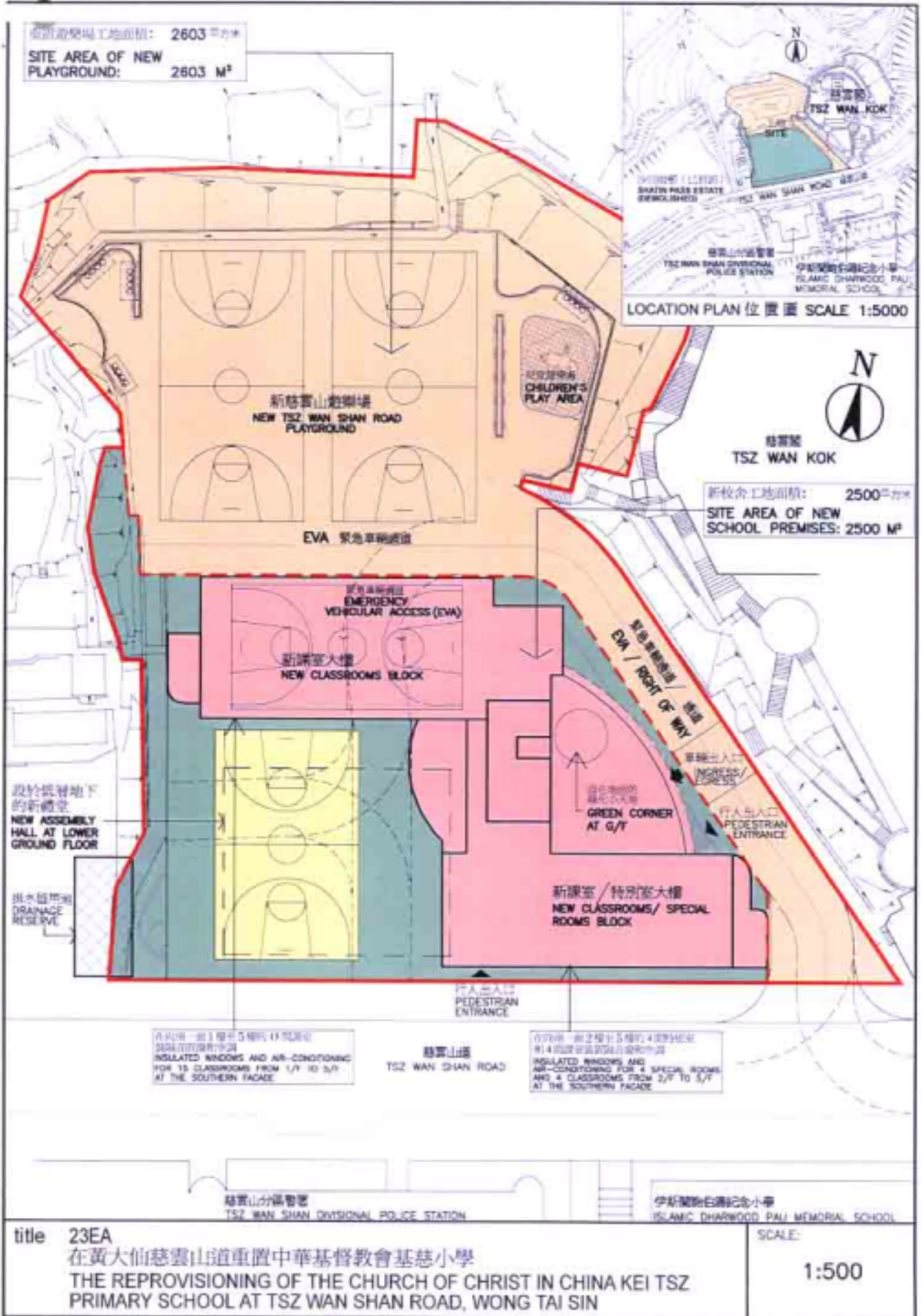
/25.

⁶ Important trees include trees on the Register of Old and Valuable Trees, and any other trees which meet one or more of the following criteria –

- (a) trees over 100 years old;
- (b) tree of cultural, historical or memorable significance;
- (c) trees of precious or rare species;
- (d) trees of outstanding form; or
- (e) trees with trunk diameter exceeding one metre (measured at one metre above ground level).

25. We estimate that the proposed works will create about 95 jobs (85 for labourers and another ten for professional/technical staff) providing a total employment of 1 650 man-months.

Education and Manpower Bureau
May 2004





VIEW OF THE NEW SCHOOL PREMISES FROM SOUTHWESTERN DIRECTION (ARTIST'S IMPRESSION)
從西南面望向新校舍的構思圖



VIEW OF THE NEW SCHOOL PREMISES FROM SOUTHEASTERN DIRECTION (ARTIST'S IMPRESSION)
從東南面望向新校舍的構思圖

title 23EA
在黃大仙慈雲山道重置中華基督教會基慈小學
THE REPROVISIONING OF THE CHURCH OF CHRIST IN CHINA KEI TSZ
PRIMARY SCHOOL AT TSZ WAN SHAN ROAD, WONG TAI SIN

SCALE:

N.T.S.

23EA – Reprovisioning of The Church of Christ in China Kei Tsz Primary School at Tsz Wan Shan Road, Wong Tai Sin

Breakdown of estimate for consultants' fees

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a)	Consultants' staff costs					
(i)	Contract administration ^(Note 2)	Professional	–	–	–	1.0
		Technical	–	–	–	0.4
(ii)	Site supervision ^(Note 3)	Technical	57.1	14	1.6	1.7
					Sub-total	<hr/> 3.1 <hr/>
(b)	Out-of-pocket expenses ^(Note 4)					
	Lithography and other direct expenses					0.3
					Sub-total	<hr/> 0.3 <hr/>
					Total	<hr/> 3.4 <hr/>

* 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 2004, MPS point 14 = \$18,603 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 **23EA**. The assignment will only be executed subject to Finance Committee's approval to upgrade **23EA** to Category A.
3. We will only know the actual man-months and actual costs for site supervision after completion of the works.
4. Out-of-pocket expenses are the actual costs incurred. The consultants are not entitled to any additional payment for overheads or profit in respect of these items.

Enclosure 4 to PWSC(2004-05)18

A comparison of the reference cost of a 24-classroom primary school project with the estimated cost of the new school premises under 23EA

		\$ million (in Sept 2003 prices)		
		Reference cost*	23EA	
(a)	Site formation	–	5.7	(See note A)
(b)	Piling/Foundation	7.3	6.5	(See note B)
(c)	Building	40.3	42.3	(See note C)
(d)	Building services	10.8	13.1	(See note D)
(e)	Drainage and external works	8.2	5.8	(See note E)
(f)	Furniture and equipment (F&E)	–	3.4	(See note F)
(g)	Consultants' fees	–	3.1	(See note G)
(h)	Contingencies	6.7	8.0	
Total		73.3	87.9	
(i)	Construction floor area	9 129 m ²	9 580 m ²	
(j)	Construction unit cost {[(c) + (d)] ÷ (i)}	\$5,598/m ²	\$5,783/m ²	

*** Assumptions for reference cost**

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

3. Piling cost is based on the use of 101 steel H-piles at an average depth of 30 metres, assuming that percussive piling is permissible. 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 “green-field” site).
5. No consultancy services are required.
6. F&E costs are excluded as they are usually borne by the sponsoring bodies of the new schools.
7. The reference cost for comparison purpose is subject to review regularly. D Arch S will review, and revise if necessary, the reference cost which should be adopted for future projects.

Notes

- A. Site formation works is required to form the platform level for the construction of the new school premises.
- B. The piling/foundation cost is lower because according to the ground conditions, raft foundation design which is less expensive than piling operation is suitable.
- C. The building cost is higher due to the larger supporting/circulation areas required for non-standard design to cope with the sloping site profile.
- D. The building services cost is higher because of the provision of air-conditioning as a noise mitigation measure.
- E. The drainage and external works cost is lower because the site area of 2 500 square metres is smaller than a standard 24-classroom primary school.
- F. The cost of F&E, estimated to be \$3.4 million, will be borne by the Government as the new school premises will be used to re-provision an existing primary school.
- G. Consultants’ fees are required for contract administration, site supervision and out-of-pocket expenses.