

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Education Subventions

26EA – A direct subsidy scheme primary school at Nam Fung Path, Wong Chuk Hang

Members are invited to recommend to Finance Committee the upgrading of 26EA to Category A at an estimated cost of \$105.6 million in money-of-the-day prices for reprovisioning two existing primary schools to Nam Fung Path, Wong Chuk Hang.

PROBLEM

Two existing non-profit-making Direct Subsidy Scheme (DSS) primary schools (the Schools) in Central are currently operating in substandard school premises with facilities below current standards.

PROPOSAL

2. The Secretary for Education and Manpower (SEM), on the advice of the Director of Architectural Services (D Arch S), proposes to upgrade **26EA** to Category A at an estimated cost of \$105.6 million in money-of-the-day (MOD) prices for the construction of a DSS primary school at Nam Fung Path, Wong Chuk Hang to reprovision the Schools currently in MacDonnell Road and Kennedy Road.

3. The construction cost of the school premises is estimated to be \$170.6 million in MOD prices, comprising \$105.6 million of government

subvention and \$65.0 million to be borne by the school sponsor. The amount of government subvention, being no more than the cost of constructing a standard design public sector school accommodating the same number of students, will be provided to the school sponsor in the form of a capital grant for the sole purpose of building the school premises. The school sponsor will be responsible for the design and construction of the school premises to meet its own curriculum needs.

PROJECT SCOPE AND NATURE

4. The school premises will adopt a non-standard design with the following planned facilities –

- (a) 30 classrooms;
- (b) 18 special rooms, including a science laboratory, an orchestra room, a life skill room and a ceramic 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 prefect room;
- (k) a parents-teachers association room;
- (l) a library;
- (m) an assembly hall;
- (n) a multi-purpose area;
- (o) a rooftop basketball court;
- (p) a 60-metre running track¹;

/(q)

¹ Owing to the limited site area and the restricted building layout, a 100-metre running track cannot be provided.

- (q) a green corner²; and
- (r) ancillary accommodation, including a lift and relevant facilities for the handicapped.

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A comparison of the facilities proposed under **26EA** with those of a standard design 30-classroom primary school is at Enclosure 1.

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5. The school premises will meet the planning target of providing two square metres of open space per student. A site plan is at Enclosure 2 and a view of the school premises (artist's impression) is at Enclosure 3. Subject to the approval of the capital grant by Finance Committee, the school sponsor plans to start the site formation and piling works in April 2006 and superstructure works in November 2006 for completion in December 2007.

JUSTIFICATIONS

6. With the provision of nine-year free education since 1978, the majority of schools in Hong Kong have been public sector schools comprising government schools and aided schools. There is however a need to inject more diversity into our school system and give parents more choices in the selection of schools and curricula by encouraging alternatives to public sector schools, in the face of increasingly diverse attitude and values in the community, a multitude of demand in our workplace, fast changing technology and increasing globalisation. With greater flexibility in setting the school curriculum and in school operation, DSSs could provide viable alternatives to government and aided schools.

7. The proposed school project is for re-provisioning the two existing Schools at MacDonnell Road and Kennedy Road, each of which being a 12-classroom whole-day primary school with an enrolment rate of 100% in the 2005/06 school year. Both Schools are accommodated in substandard school premises. Together they offer facilities which fall short of the provision as stipulated in the current standard schedule of accommodation for a 24-classroom primary school. Certain essential facilities for effective teaching and learning, such as multi-purpose room, language room and student activity centre are lacking. As improvement works under the School Improvement Programme³ would not be feasible due to site constraints, re-provisioning is considered to be the most

/cost-effective

² A 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 greenhouse, a weather station and planting beds.

³ The School Improvement Programme provides additional space and upgraded facilities to some 740 existing schools.

cost-effective way to provide a quality teaching and learning environment for teachers and students of the Schools. We allocated the school site at Nam Fung Path, Wong Chuk Hang, to the school sponsor for reprovisioning the two non-profit making DSS primary schools in 2002.

8. The Schools are co-educational through-train schools which have changed from aided to DSS schools since 2002. The Schools are committed to nurturing their students as future leaders by instilling in them a culture of excellence, high moral values, an altruistic spirit, a passion for lifelong learning and a global perspective. The curriculum concentrates on establishing language proficiency; building a broad knowledge base; acquiring IT and life skills; participating in various extra-curricular and co-curricular activities; and offering gifted programmes. The Schools place a strong emphasis on nurturing students' gifts and talents. Furthermore, the Schools provide enrichment programmes like multi-intelligence courses, leadership training programmes for prefects, English drama with opportunities for public performance and Mathematics Olympiad, etc.

9. Upon completion, the new school premises will provide a total of 30 classrooms. We propose a scope slightly larger than the current total of 24 classrooms in order to optimize the development potential of the school site and to meet the anticipated demand. Well established in Hong Kong and renowned for the offer of quality education, the Schools are very popular among parents and students. The additional six classes will be welcomed by the community.

10. Since the proposed school will continue to recruit students from all over the territory, its relocation to Southern District will only have a marginal impact, if any, on the supply and demand balance of public sector school places in that District.

FINANCIAL IMPLICATIONS

11. The capital grant for the school premises is calculated having regard to the reference costs of standard design public sector 24-classroom and 30-classroom primary schools. The reference cost is based on an uncomplicated site with no unusual environmental or geotechnical constraints. Due to the site topography, difficult ground conditions and peculiarity of the school site at Nam Fung Path, Wong Chuk Hang, D Arch S supports providing the school sponsor with additional grants for site formation, slope upgrading, piling, water channel diversion, utilities diversions and construction of staircase from Nam Fung Road. We estimate the capital grant to be \$105.6 million in MOD prices (see paragraph 14 below), made up as follows –

/(a)

\$ million

(a) Capital grant for school construction 77.8

The cost of building a standard design 24-classroom primary school with 828 students and 30-classroom primary school with 1 035 students is \$75.2 million and \$82.6 million in September 2005 prices, as advised by D Arch S. The equivalent provision for the primary school with 900 students⁴ will be \$77.8 million.

{ Incremental cost per student is –
 (\$82.6 million – \$75.2 million)
 ÷ (1 035 – 828)
 = \$35,800 per student.

The cost of a standard design school with 900 students is –
 \$75.2 million + [(900 – 828) x
 \$35,800 per student]
 = \$77.8 million }

/(b)

4

The school will have 30 classes of 30 students each. The total number of students is 900.

	\$ million
(b) Additional grant for site specific construction works	24.8
(i) Site formation cost	3.9
The site formation works are required to form the platform level for the construction of the new school premises.	
(ii) Slope upgrading cost	4.9
The slope works are required for upgrading the existing slopes adjacent to the school site to current geotechnical standard due to safety reasons.	
(iii) Additional piling cost	9.8
Non-percussive piling system is required because if percussive steel H-piles are used, the pile bases are susceptible to damage due to hard driving and the ground-borne vibrations generated may lead to adverse effects on or damage to nearby village houses and slope features.	
(iv) Water channel diversion cost	3.0
There is an existing water channel running across the site which has to be diverted to facilitate the construction of the school building.	

	\$ million	
(v) Cost for construction of staircase from Nam Fung Road	0.6	
Provision of staircase from Nam Fung Road is required to serve as access for students from Nam Fung Road to the proposed school.		
(vi) Utilities diversions cost	0.5	
(vii) Contingency for additional grant	2.1	
(c) Additional grant for Construction Waste Disposal Charging Scheme ⁵	0.5	
(d) Consultants' fees	2.4	
For schools built by the Government, such services are arranged through the Architectural Services Department. For this case, the school sponsor is hiring its own consultants.		
	Sub-total	<u>105.5</u> (in September 2005 prices)
(e) Provision for price adjustment	0.1	
	Total	<u>105.6</u> (in MOD prices)

_____ A detailed breakdown of the estimate for consultants' fees by man-months is at Enclosure 4.

12. Taking into account both the capital grant from the Government and private funding, the school sponsor estimates the construction cost of the school to be \$170.6 million in MOD prices (see paragraph 14 below), made up as follows –

/(a)

⁵ This is a new requirement under the Waste Disposal Charging Scheme which came into operation on 1 December 2005. Disposal of construction waste will be charged at a fixed rate.

	\$ million	
(a) Site formation	6.4	
(b) Slope upgrading	4.9	
(c) Construction of staircase	0.6	
(d) Piling	30.1	
(e) Building	74.3	
(f) Building services	20.8	
(g) Drainage and utilities diversions	5.1	
(h) External works	8.5	
(i) Construction Waste Disposal Charging Scheme	0.7	
(j) Consultants' fees for –	3.2	
(i) Contract administration	1.8	
(ii) Site supervision	1.0	
(iii) Out-of-pocket expenses	0.4	
(k) Contingencies	15.8	
	<hr/>	
Sub-total	170.4	(in September 2005 prices)
(l) Provision for price adjustment	0.2	
	<hr/>	
Total	170.6	(in MOD prices)
	<hr/>	

13. As the estimated construction cost (\$170.6 million in MOD prices) is higher than the capital grant (\$105.6 million in MOD prices), the difference (\$65.0 million) will be borne by the school sponsor. The capital grant provided by the Government will be capped at \$105.6 million in MOD prices. In addition, the school sponsor will be responsible for all additional funding requirements over

/and

and above the estimated cost, whether due to higher-than-expected tender outturn or other variations, except for any additional costs attributable to the site specific construction works⁶ which are fully subvented by Government, i.e. the Government will provide additional funding required for these works over and above the estimates for the relevant items as set out in paragraph 11(b). The Government and the school sponsor will share all savings arising from lower-than-expected tender outturn (excluding the site specific construction works) pro-rata to their estimated contribution to the project (i.e. 59.6% for the Government and 40.4% for the school sponsor). For the site specific construction works under Government's subvention, the Government will retain all savings in case these arise⁷.

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

Year	\$ million (Sept 2005)		Price adjustment factor	\$ million (MOD)	
	Capital grant under 26EA	Construction cost		Capital grant under 26EA	Construction cost
2006 – 07	11.3	76.2	1.00125	11.3	76.3
2007 – 08	90.2	90.2	1.00125	90.3	90.3
2008 – 09	4.0	4.0	1.00125	4.0	4.0
	105.5	170.4		105.6	170.6

15. 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 2006 to 2009. The school sponsor will deliver the piling works and superstructure works through two lump-sum contracts because the school sponsor can clearly define the scope of works in advance. The contracts will not provide for price adjustment because the contract period will not exceed 21 months.

/16.

⁶ These include the slope upgrading works, water channel diversion works, utilities diversion works and construction of staircase from Nam Fung Road.

⁷ The school sponsor will tender the site specific works under the construction contracts. Those Government's subvented site specific construction works at footnote 6 will be demarcated from the other cost items. If the tender sum for each of these works is lower than the tender estimate, the Government will retain all savings.

16. In line with the existing policy, the cost of furniture and equipment⁸, estimated to be \$3.4 million, for the DSS school will be borne by the school sponsor. The annual recurrent expenditure of the Schools was \$19.6 million in the 2004/05 school year. Upon reprovisioning of the Schools, the annual recurrent expenditure is estimated to be \$21.9 million, with the difference being largely attributable to the anticipated increase in six operating classes upon completion of the new school premises.

PUBLIC CONSULTATION

17. We consulted the Southern District Council on **26EA** on 15 September 2005. Members of the Council supported the project.

18. We consulted the Legislative Council Panel on Education on 24 October 2005 on our recent review of projects under planning in the School Building Programme. The Panel has always been supportive of Government's policy to improve the physical conditions of existing school premises. The Panel noted our recommendation to proceed with all six redevelopment and reprovisioning projects, including the current proposal. We also circulated to the Panel an information note on this project on 26 January 2006. We have not received any adverse comment from the Panel.

ENVIRONMENTAL IMPLICATIONS

19. The consultant employed by the school sponsor has completed a class assessment document which sets out the mitigation measures for this class of projects, such as provision of air-conditioning system and well gasketed windows glazing for rooms exposed to traffic noise. The school sponsor will bear the cost for these measures. With such mitigation measures in place, the project will not have long term environmental impacts.

20. During construction, the school sponsor will control noise, dust and site run-off 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.

/21.

⁸ Based on the furniture and equipment reference list prepared by the Education and Manpower Bureau for new school adopting standard schedule of accommodation.

21. The school sponsor has considered measures to reduce the generation of construction and demolition (C&D) materials. It has introduced more prefabricated building elements into project designs to reduce temporary formwork and construction waste. These include dry-wall partitioning, proprietary fittings and fixtures. In addition, the school sponsor will require the contractor to reuse inert C&D materials, e.g. excavated soil, on site or in other suitable construction sites as far as possible in order to minimize the disposal of C&D materials to public fill reception facilities. The school sponsor will encourage the contractor to maximize the use of recycled or recyclable C&D materials as well as the use of non-timber formwork to further minimize the generation of construction waste.

22. The school sponsor 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. The school sponsor will ensure that the day-to-day operations on site comply with the approved WMP. The school sponsor will control the disposal of public fill, C&D materials and C&D waste to public fill reception facilities, sorting facilities and landfills respectively through a trip-ticket system. The school sponsor will require the 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. It estimates that the project will generate about 23 200 tonnes of C&D materials. Of these, the school sponsor will reuse about 3 000 tonnes (12.9 %) on site, deliver 18 000 tonnes (77.6 %) to public fill reception facilities⁹ for subsequent reuse, and 1 000 tonnes (4.3 %) to sorting facilities⁹ in order to retrieve the inert portion for reuse as public fill. In addition, the school sponsor will dispose of 1 200 tonnes (5.2%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites, together with the cost for handling the materials at sorting facilities is estimated to be \$0.7 million for this project (based on an unit cost of \$27/tonne for disposal at public fill reception facilities, \$100/tonne at sorting facilities and \$125/tonne¹⁰ at landfills).

/LAND

⁹ Sorting facilities and public fill reception facilities are specified in Schedule 3 and Schedule 4 respectively of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

¹⁰ 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 is likely to be more expensive) when the existing ones are filled.

LAND ACQUISITION

23. The project does not require land acquisition.

BACKGROUND INFORMATION

24. We upgraded **26EA** to Category B in January 2005. The school sponsor engaged consultants to undertake detailed design, prepare tender documentation for the project in May 2005, and to carry out the topographical and tree survey in July 2005, site investigation in August 2005 and noise assessment in October 2005. We will charge the subvented portion of \$2.4 million for these services to block allocation **Subhead 8100QX** "Alterations, additions, repairs and improvements to education subvented buildings". The school sponsor will bear the remaining non-subvented portion at a total cost of \$1.5 million. The consultants have completed these services except for the tender documents which are being finalised.

25. The proposed construction of the primary school will involve removal of 118 trees, including 82 to be felled and 36 to be transplanted elsewhere. All trees to be removed are not important trees¹¹. The school sponsor will incorporate planting proposals as part of the project, including estimated quantities of 139 trees and 2 987 shrubs.

26. We estimate that the proposed works will create about 215 jobs (195 for labourers and another 20 for professional/technical staff) providing a total employment of 3 000 man-months.

Education and Manpower Bureau
February 2006

¹¹ 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 –

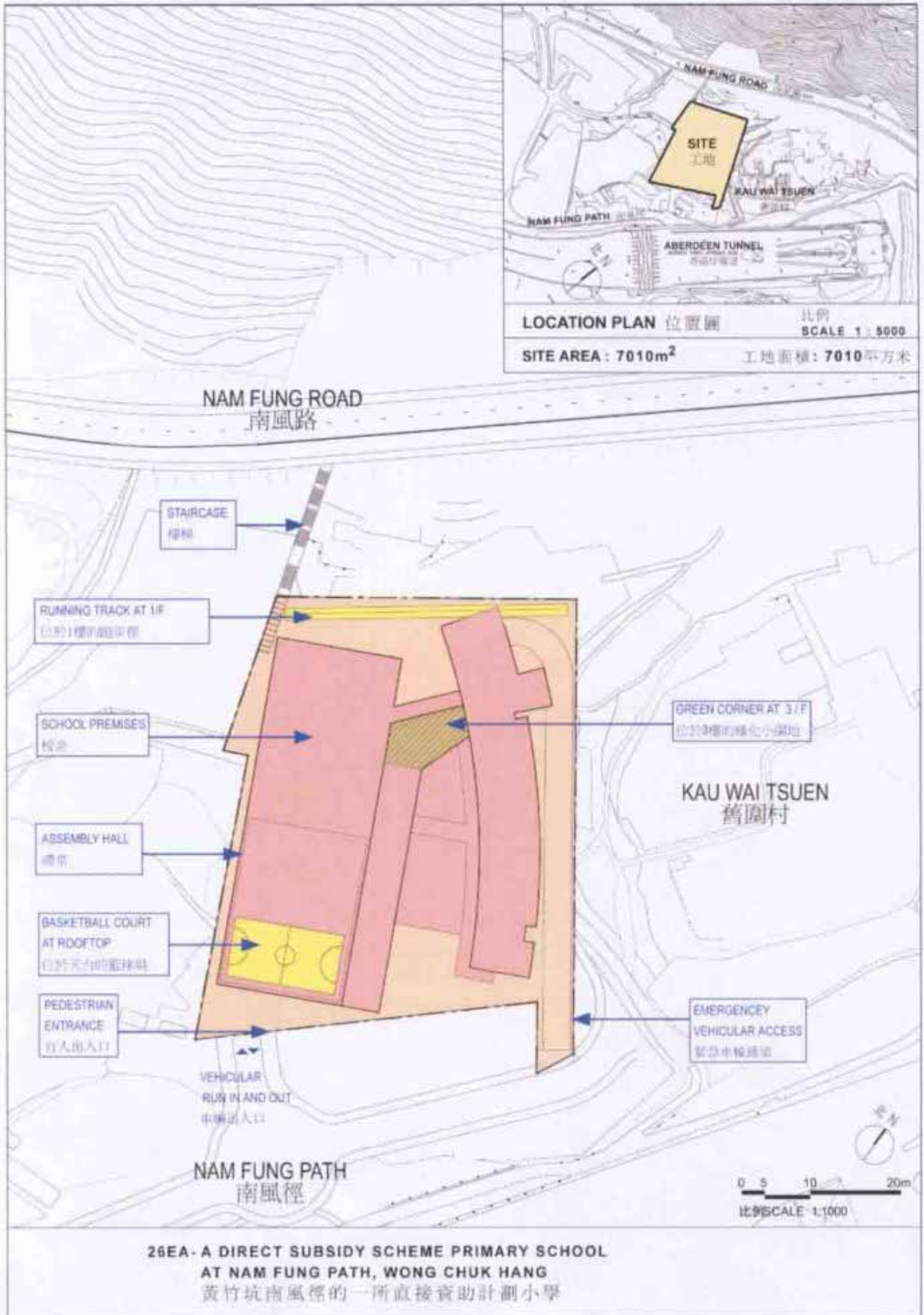
- (a) trees over 100 years old;
- (b) trees of cultural, historical or memorable significance;
- (c) trees of precious or rare species;
- (d) trees of outstanding form; or
- (e) trees with trunk diameter exceeding one metre (measured at one metre above ground level).

Enclosure 1 to PWSC(2005-06)52

**26EA – A direct subsidy scheme primary school at Nam Fung Path,
Wong Chuk Hang**

A comparison of the facilities proposed under 26EA with those of a standard design 30-classroom primary school

Facilities	26EA	Standard design primary school
Classroom	30	30
Special room	18	6
Small group teaching room	4	4
Guidance activity room	1	1
Interview room	2	2
Staff room	1	1
Staff common room	1	1
Student activity centre	1	1
Conference room	1	1
Prefect room	1	-
Parents-teachers association room	1	-
Library	1	1
Assembly hall	1	1
Multi-purpose area	1	1
Basketball court	1	2
Green corner	1	1
Ancillary accommodation, including a lift and relevant facilities for the handicapped	Available	Available



26EA - A DIRECT SUBSIDY SCHEME PRIMARY SCHOOL AT NAM FUNG PATH, WONG CHUK HANG
 黃竹坑南風徑的一所直接資助計劃小學



從東南面望向小學校舍的構思圖

VIEW OF THE PRIMARY SCHOOL PREMISES FROM SOUTH-EASTERN DIRECTION (ARTIST'S IMPRESSION)



從東面望向小學校舍的構思圖

VIEW OF THE PRIMARY SCHOOL PREMISES FROM EASTERN DIRECTION (ARTIST'S IMPRESSION)

**26EA- A DIRECT SUBSIDY SCHEME PRIMARY SCHOOL
AT NAM FUNG PATH, WONG CHUK HANG
黃竹坑南風徑的一所直接資助計劃小學**

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Breakdown of the estimate for consultants' fees

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a)	Consultants' staff costs					
	(i) Contract administration	Professional	-	-	-	1.5
	(ii) Site supervision ^(Note 2)	Technical	22	14	1.6	0.6
(b)	Out-of-pocket expenses ^(Note 3)					
	Lithography and other direct expenses					0.3
						2.4

* 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 2005, MPS point 14 = \$18,010 per month.)
2. We will only know the actual man-months and actual cost for site supervision after completion of the construction works.
3. 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.