

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Education – Others

105ET – Extension to Jockey Club Elaine Field School, the Spastics Association of Hong Kong in Area 9, Tai Po

Members are invited to recommend to Finance Committee the upgrading of **105ET** to Category A at an estimated cost of \$84.1 million in money-of-the-day prices for the construction of an extension block for Jockey Club Elaine Field School, the Spastics Association of Hong Kong.

PROBLEM

We need to provide additional classrooms and boarding places for Jockey Club Elaine Field School, the Spastics Association of Hong Kong in Area 9, Tai Po for implementation of the New Senior Secondary (NSS) academic structure for special schools.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Education, proposes to upgrade **105ET** to Category A at an estimated cost of \$84.1 million in money-of-the-day (MOD) prices for construction of an extension block for Jockey Club Elaine Field School, the Spastics Association of Hong Kong (the School) in Area 9, Tai Po to implement the NSS academic structure.

/PROJECT

PROJECT SCOPE AND NATURE

3. The proposed scope of works under **105ET** includes —
- (a) construction of a new extension block for the School to accommodate the following —
- (I) School section
- (i) eight additional classrooms¹;
 - (ii) two small group teaching rooms;
 - (iii) an optional subject room;
 - (iv) two elective subject rooms;
 - (v) two speech therapy rooms;
 - (vi) a physiotherapy room;
 - (vii) an occupational therapy room;
 - (viii) a staff room;
 - (ix) an assembly hall cum gymnasium; and
 - (x) other ancillary facilities, including loading/unloading bay, a lift and relevant facilities for the disabled.
- (II) Boarding section
- (i) bedrooms and study areas to accommodate 60 boarders;
 - (ii) a dining / multi-purpose room;
 - (iii) a television / common room;
 - /(iv)

¹ There are already 10 classrooms in the existing school. With eight additional classrooms, the School will have a total of 18 classrooms.

- (iv) an office for house parents and programme workers;
 - (v) a nurse's duty room with sick bay; and
 - (vi) other ancillary facilities including a kitchen, a laundry and relevant facilities for the disabled.
- (b) modification of existing campus to facilitate the link with the proposed extension block.

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The school, upon completion of the new extension block, will have all the facilities required by an 18-classroom special school operating primary cum secondary classes with a 60-place boarding section. It will also meet the planning target of providing two square metres (m²) of open space per student. A site plan is at Enclosure 1 and views of the school premises (artist's impression) are at Enclosure 2. We plan to start the construction works in November 2008 for completion in July 2010.

JUSTIFICATION

4. It is Government's policy to implement the NSS academic structure in all schools including special schools to provide six years of secondary education to all students. The school is a ten-classroom aided special school for students with physical disability. It currently operates six primary classes and four secondary classes. There is a need to provide additional classrooms and related facilities for the implementation of the NSS academic structure.

5. Upon completion of the new extension block, the School will be able to operate six primary classes, four junior secondary classes²; and three senior secondary classes for the implementation of the NSS academic structure for special schools. It will also be provided with five additional classrooms to

/accommodate

² Since the learning of the physically disabled students of normal intelligence is frequently and regularly disrupted by therapies and hospitalisation, one more year of junior secondary education is provided to better prepare them for the three-year senior secondary education.

accommodate the teaching of physical disability students with intellectual disability from primary to senior secondary levels. There will also be improvement in the provision of other essential facilities, namely the provision of one optional subject room, two elective subject rooms and a 60-place boarding section with the necessary ancillary facilities which are currently not available in the School.

6. The boarding service is provided for students with long term boarding needs. Currently, boarding facilities are provided to students with physical disability and who would need special care which could not be readily provided by their families. The objective is to help the students learn how to live independently and to develop their adaptive social behaviour and communication skills, apart from meeting their long term boarding needs.

7. In the review of boarding facilities to students with physical disability, we have examined the demand and supply as well as the geographical distribution of the residential areas of the existing boarders. In the 2007/08 school year, a total of 170 boarding places are provided in two special schools for students with physical disability and all of them are filled. For these 170 boarding places, 80 are in Hong Kong Island and 90 in Kowloon and there are no boarding places in the New Territories. We anticipate a rising demand for boarding places in the near future arising from the increase in the number of students to be accommodated at any one time as a result of the extension in the years of studies under the NSS academic structure for special schools. The demand for boarding is expected to increase from 170 places to 220 places by the year 2011/12. There is scope for expanding and re-distributing the boarding services to schools in the New Territories to minimise the need for students with physical disability and originating from the New Territories having to study and board in schools far away from their families. Against this background, we propose to set up two boarding sections, one in New Territories East (covered in the current project) and the other in New Territories West, to cater for the boarding needs of students with physical disability in those regions. Parents' representatives of the seven schools for students with physical disability welcomed the proposal of setting up the proposed boarding sections in the New Territories.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the project to be \$84.1 million in MOD prices (see paragraph 9 below), made up as follows –

/(a)

		\$ million	
(a)	Foundation	6.8	
(b)	Building	34.5	
(c)	Building services	11.1	
(d)	Drainage	1.9	
(e)	External works	5.6	
(f)	Modification works to existing building	1.6	
(g)	Furniture and equipment ³	3.5	
(h)	Consultants' fees for –	5.1	
	(i) Contract administration	1.5	
	(ii) Site supervision	3.6	
(i)	Contingencies	6.0	
	Sub-total	76.1	(in September 2007 prices)
(j)	Provision for price adjustment	8.0	
	Total	84.1	(in MOD prices)

We propose 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 extension block of the School is 4 190 m². The estimated construction unit

/cost

³ The amount is based on the indicative furniture and equipment reference lists prepared by the Education Bureau for new special schools for children with physically disability and new special schools for children with severe intellectual disability.

cost, represented by the building and the building services costs of the new block, is \$10,883 per m² of CFA in September 2007 prices. We consider this comparable to similar school improvement projects undertaken by the Government.

9. Subject to approval, we will phase the expenditure as follows –

Year	\$ million (Sept 2007)	Price adjustment factor	\$ million (MOD)
2008 – 09	1.3	1.02575	1.3
2009 – 10	26.4	1.06293	28.1
2010 – 11	28.9	1.10545	31.9
2011 – 12	10.3	1.14967	11.8
2012 – 13	9.2	1.19566	11.0
	76.1		84.1

10. We have derived the MOD estimates 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 2008 to 2013. We intend to award the contract on a lump-sum basis because we can clearly define the scope of the works in advance. The contract will not provide for price adjustment because the contract period will not exceed 21 months.

11. The annual recurrent expenditure of the School was \$18.3 million in the 2006/07 school year. Upon completion of the extension block, the annual recurrent expenditure is estimated to be \$48.3 million, mainly attributable to implementation of the NSS academic structure and the operation of boarding facilities.

/PUBLIC

PUBLIC CONSULTATION

12. We consulted the Tai Po District Council in March 2008. Members of the Council supported the project to improve the learning environment of the special school which is significantly substandard in terms of facilities. The parents of the students supported the construction of an extension block and looked forward to its early completion.

13. We briefed the Legislative Council Panel on Education on the development of the NSS academic structure for special schools in July 2006. In particular, we have reported that we would examine special schools' proposals on conversion works and/or additional facilities for the implementation of the new academic structure. Members urged for the provision of sufficient classrooms, facilities and boarding facilities to support the implementation of the NSS academic structure for children with special education needs. We also updated the Legislative Council Subcommittee to Study Issues Relating to the Provision of Boarding Places, Senior Education and Employment Opportunities for Children with Special Education Needs on the progress of the implementation of the NSS academic structure for special schools in November 2006.

ENVIRONMENTAL IMPLICATIONS

14. We engaged a consultant to conduct a Preliminary Environmental Review (PER) for **105ET** in October 2007. The PER recommended erection of a boundary wall and installation of insulated windows 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 2007 prices)
(a) boundary wall with bottom 0.5m of solid construction along the southern and western boundary of the site	0.2
(b) insulated windows for rooms on the 1/F at the southern and western façade of the new extension block	0.1

/With

With such mitigation measures in place, the project would not have long term environmental impacts. We have included the costs of the above mitigation measures as part of the building and external works in the project estimate.

15. During construction, we will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the contract. 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.

16. We have considered measures in the planning and design stages to reduce the generation of construction waste where possible (e.g. using metal site hoardings and signboards so that these materials can be recycled or reused in other projects). In addition, we will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the site) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste to public fill reception facilities⁴. We will encourage the contractor to maximize the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimize the generation of construction waste.

17. We will also require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

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⁴ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

18. We estimate that the project will generate in total about 8 550 tonnes of construction waste. Of these, we will reuse about 4 500 tonnes (52.6%) of inert construction waste on site and deliver 3 150 tonnes (36.8%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 900 tonnes (10.6%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$197,550 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne⁵ at landfills).

ENERGY CONSERVATION MEASURES

19. This project has adopted various forms of energy efficient features including –

- (a) T5 energy efficient fluorescent tubes with electronic ballast and lighting control by daylight sensor will be adopted in all offices and rooms at the perimeter of the building;
- (b) heat recovery fresh air pre-conditioners for air-conditioned rooms;
- (c) automatic on/off switching of lighting and ventilation fan inside the lift; and
- (d) light emitting diode (LED) type exit signs.

20. For renewable energy technologies, we will use solar water heating and will install photovoltaic panels to provide renewable energy for environmental benefits.

21. For greening features, we will provide landscape in the appropriate area on the main roof and terraces for environmental and amenity benefits.

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

22. For recycled features, we will install rainwater recycling system for irrigation purpose.

23. The total estimated additional cost for adoption of the above features is around \$1.1 million, which has been included in the cost estimate for the project. There will be about 9% energy savings in the annual energy consumption.

HERITAGE IMPLICATIONS

24. This project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interests and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

25. The project does not require any land acquisition.

BACKGROUND INFORMATION

26. We upgraded **105ET** to Category B in December 2006. We engaged an architectural consultant in July 2007 to undertake the detailed design, PER and topographical survey. We appointed a term contractor to carry out site investigation and also engaged a quantity surveying consultant to prepare tender documents in November 2007. The total cost of the above consultancy services and works is about \$3.0 million. We charged this amount to block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". The architectural consultant and term contractor have completed the detailed design, PER, topographical survey and site investigation. The quantity surveying consultant is finalising the tender documents.

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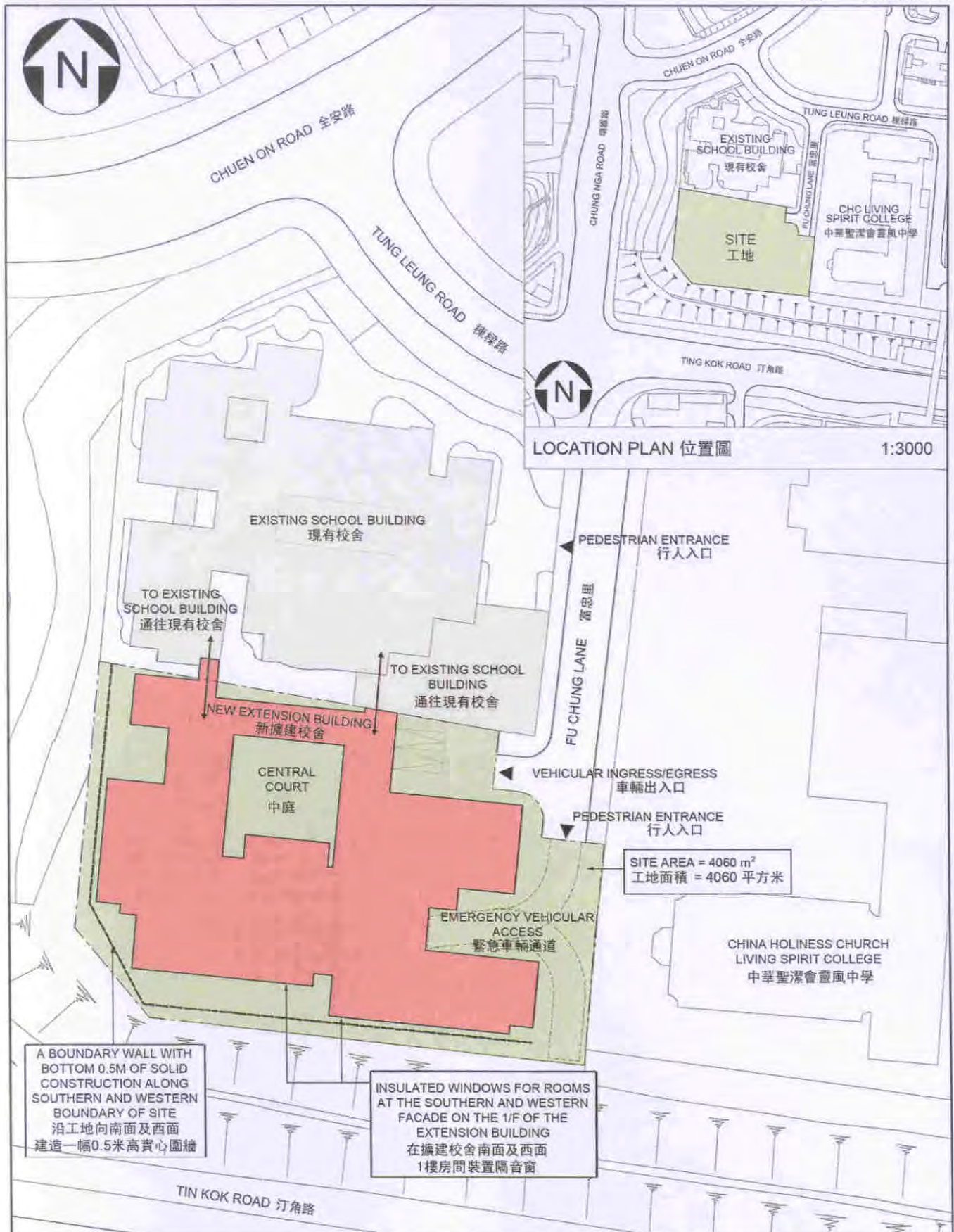
27. The proposed works will involve removal of 13 trees including ten trees to be felled and three trees to be replanted. All trees to be removed are not important trees⁶. We will incorporate planting proposals as part of the project, including estimated quantities of 33 trees and 90 shrubs.

28. We estimate that the proposed works will create about 74 jobs (63 for labourers and another 11 for professional/technical staff) providing a total employment of 1 380 man-months.

Education Bureau
May 2008

⁶ “Important trees” refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 metres.



LOCATION PLAN 位置圖

1:3000

A BOUNDARY WALL WITH BOTTOM 0.5M OF SOLID CONSTRUCTION ALONG SOUTHERN AND WESTERN BOUNDARY OF SITE
沿工地向南面及西面建造一幅0.5米高實心圍牆

INSULATED WINDOWS FOR ROOMS AT THE SOUTHERN AND WESTERN FACADE ON THE 1/F OF THE EXTENSION BUILDING
在擴建校舍南面及西面1樓房間裝置隔音窗

TITLE 105ET
EXTENSION TO JOCKEY CLUB ELAINE FIELD SCHOOL, THE SPASTICS ASSOCIATION OF HONG KONG IN AREA 9, TAI PO
大埔第9區香港痲痺協會 賽馬會田綺玲學校擴建計劃

DRAWN BY
KWAN SIU LUN, MARIUS 關兆倫
DATE
09.05.2008

APPROVED
BILLY TAM 譚漢華
DATE
09.05.2008

OFFICE
PROJECT MANAGEMENT BRANCH
工程策劃處

DRAWING NO.
AB / 7162 / EF / PP101

SCALE
1:800



ARCHITECTURAL SERVICES DEPARTMENT 建築署



AERIAL VIEW OF EXTENSION BUILDING FROM SOUTHERN DIRECTION (ARTIST'S IMPRESSION)
從南面高處望向擴建校舍的構思圖



VIEW OF CENTRAL COURT OF EXTENSION BUILDING (ARTIST'S IMPRESSION)
擴建校舍中庭的構思圖

TITLE 105ET EXTENSION TO JOCKEY CLUB ELAINE FIELD SCHOOL, THE SPASTICS ASSOCIATION OF HONG KONG IN AREA 9, TAI PO 大埔第9區香港痲痺協會 賽馬會田綺玲學校擴建計劃	DRAWN BY KWAN SIU LUN, MARIUS 關兆倫	DATE 09.05.2008	DRAWING NO. AB / 7162 / EF / PP102	SCALE N.T.S.
	APPROVED BILLY TAM 譚漢華	DATE 09.05.2008	 ARCHITECTURAL SERVICES DEPARTMENT 建築署	
	OFFICE PROJECT MANAGEMENT BRANCH 工程策劃處			

105ET – Extension to Jockey Club Elaine Field School, the Spastics Association of Hong Kong in Area 9, Tai Po

Breakdown of the estimate for consultants' fees

Consultants' staff costs		Estimated man- months	Average MPS* salary point	Multiplier <small>(Note 1)</small>	Estimated fee (\$ million)
(a) Contract administration <small>(Note 2)</small>	Professional	–	–	–	1.1
	Technical	–	–	–	0.4
(b) Site supervision <small>(Note 3)</small>	Professional	10.0	38	1.6	0.9
	Technical	90.0	14	1.6	2.7
				Total	5.1

* 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 April 2007, MPS point 38 = \$56,945 per month and MPS point 14 = \$18,840 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 **105ET**. The assignment will only be executed subject to Finance Committee's approval to upgrade **105ET** to Category A.
3. The consultants' staff cost for site supervision is based on the estimate prepared by the Director of Architectural Services. We will only know the actual man-months and actual costs after completion of the construction works.