For discussion **PWSC(2004-05)1**
on 21 April 2004

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS
Public Safety – Fire services
125BF – Kowloon Tong fire station-cum-ambulance depot with Kowloon Fire Command Headquarters

Members are invited to recommend to Finance Committee the upgrading of **125BF** to Category A at an estimated cost of $100.9 million in money-of-the-day prices for the construction of Kowloon Tong fire station-cum-ambulance depot with Kowloon Fire Command Headquarters at Baptist University Road, Kowloon Tong.

PROBLEM

There are insufficient fire services and ambulance facilities in Lok Fu, Beacon Hill and Kowloon Tong areas. We need to provide a fire station-cum-ambulance depot in Kowloon Tong to improve the existing fire and emergency ambulance services and cope with future demand. The opportunity is taken to rationalise office accommodation for Fire Services Department (FSD) and to maximise site utilisation.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Security, proposes to upgrade **125BF** to Category A at an estimated cost of $100.9 million in money-of-the-day (MOD) prices for the construction of Kowloon Tong fire station-cum-ambulance depot with Kowloon Fire Command Headquarters at Baptist University Road, Kowloon Tong.

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PROJECT SCOPE AND NATURE

3. The scope of **125BF** comprises the construction of a six-storey building with a construction floor area (CFA) of about 4 850 square metres (m^2), on a site of about 2 876 m^2, for the following facilities –

(a) Fire station-cum-ambulance depot

- four floors (with a CFA of about 3 926 m^2) for a fire station-cum-ambulance depot comprising a four-bay appliance room, offices of a net operational floor area (NOFA)[1] of about 156 m^2 for station and depot personnel, an exercise room, storage areas for equipment and general stores, barracks for on-duty operational fire and ambulance staff, a locker-cum-changing room, a drying room, toilets and ablutions and a canteen. In addition, the fire station-cum-ambulance depot also includes ancillary facilities such as electrical and mechanical plant rooms, an open drill yard of an area of about 913 m^2, and fuel filling and car washing facilities; and

(b) Kowloon Fire Command Headquarters

- two floors (with a CFA of about 924 m^2) for Kowloon Fire Command Headquarters comprising staff offices of an NOFA of about 105 m^2, a conference room, a library, an interview room, a common room, a storeroom, officers' standby rooms, a pantry and an auditorium[2] of about 280 m^2 with a seating capacity of about 200. In addition, the Headquarters also includes 16 carparking spaces.

A site plan is at Enclosure 1 and the perspective drawings of the proposed building are at Enclosure 2. We plan to start the construction works in December 2004 for completion in December 2006.

/JUSTIFICATION .....

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1 NOFA is a standard term used to describe the floor area actually allocated to the users for carrying out the intended activities. Unlike CFA which takes into account all areas within the building structure envelop, NOFA does not include areas for toilets, bathrooms and showers, lift lobbies, stair halls, public/shared corridors, stairwells, escalators and lift shafts, pipe/services ducts, refuse chutes and refuse rooms, balconies, verandahs, open decks and flat roofs, loading/unloading areas, mechanical plant rooms, etc.

2 There is currently no auditorium in other fire services facilities. The auditorium will be used regularly for in-house training sessions, operational briefings and exercises for FSD, holding of fire safety talks for members of the public, training of Fire Safety Ambassadors, etc. Such activities are now held in canteens and lecture rooms of fire stations with inadequate capacity and facilities.

JUSTIFICATION

Kowloon Tong fire station-cum-ambulance depot

4. In recent years, a number of large-scale residential developments, educational institutes and student hostels have been built in Beacon Hill and Kowloon Tong. It is projected that the demand for fire and emergency ambulance services in Lok Fu, Beacon Hill and Kowloon Tong areas will increase with the growth in population from 54 600 in 2002 to 60 100 in 2008 and following the redevelopment of some existing low and medium-rise buildings in these areas.

5. There is currently no fire station within Lok Fu, Beacon Hill and Kowloon Tong areas. These areas are classified as "less congested built-up areas" in terms of fire risk category, under which building fire calls should be met with a response time of six minutes according to current fire-fighting policy[3]. At present, fire services for these areas are provided by Ma Tau Chung Fire Station, Shek Kip Mei Fire Station and Wong Tai Sin Fire Station, which are each about three kilometres away. Due to the distant locations of these three fire stations, fire appliances normally take about eight minutes to reach the centre of Kowloon Tong area. This exceeds the approved six-minute graded response time for "less congested built-up areas". From 2001 to 2003, the number of building fire calls in these areas ranged from 452 to 575 and FSD's response time performance in the same period was 84.35% to 87.32%, which fell short of the pledged standard of 92.5%. In 2003, FSD was only able to meet 85.84% of the 452 building fire calls from these areas within the graded response time of six minutes. To ensure adequate fire services coverage for these areas, we need to provide the proposed fire station at Baptist University Road.

6. There is also no ambulance depot within the areas of Lok Fu, Beacon Hill and Kowloon Tong. At present, these areas are serviced by ambulances deployed at Ma Tau Chung Ambulance Depot, Pak Tin Ambulance Depot and Wong Tai Sin Ambulance Depot. Of the 49 395 and 51 776 emergency ambulance calls from the Kowloon Tong and surrounding areas in 2001 and 2002 respectively, FSD was only able to meet 89.14% and 89.87% of

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[3] According to the current fire-fighting policy, fire calls should be met within a response time of six minutes in congested built-up and less congested built-up areas, nine minutes for dispersed risk area, 15 minutes for highly dispersed risk area and 23 minutes for remote area.

them within the 12-minute target response time[4], as against its performance pledge of 92.5%. In 2003, 92.24% of the 48 891 emergency ambulance calls were met within the target response time but the improvement in performance was mainly due to the drop in demand by 5.6%[5] over 2002. From 1999 to 2002, there was an average annual growth of 5.7% in demand for emergency ambulance calls from the areas concerned. Taking into account the population and demographic distribution, it is projected that future demand will grow at a similar rate. To ensure adequate provision of emergency ambulance service in the areas concerned and to cope with the anticipated increase in demand for service, we need to provide the proposed ambulance depot in time.

7. With the provision of the proposed fire station-cum-ambulance depot, FSD will be able to deploy more resources to service the areas and improve its emergency coverage.

Kowloon Fire Command Headquarters

8. Because of a lack of office accommodation at the Fire Services Headquarters Building at Tsim Sha Tsui East, the Kowloon Fire Command Headquarters was relocated from the Fire Services Headquarters Building to temporary offices in Wong Tai Sin Fire Station with limited space provision[6] in 2001. To optimise site utilisation, we plan to take this opportunity to relocate the Kowloon Fire Command Headquarters to this new building to relieve the overcrowding situation and improve overall operational efficiency. Moreover, the strategic location of the new site, which is in the central part of the Kowloon Peninsula, will improve this Headquarters' operational and administrative coverage. Upon the commissioning of the new building, the space to be vacated by the Kowloon Fire Command Headquarters will be reverted to its original use as a standard fire station.

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4 The emergency ambulance service has adopted a 12-minute response time as its performance target.

5 The drop in demand for emergency ambulance service was largely attributable to the outbreak of the Severe Acute Respiratory Syndrome.

6 The Kowloon Fire Command Headquarters with an establishment of 14 is currently occupying about 190 m^2 in Wong Tai Sin Fire Station. While the staff establishment of the Headquarters will remain the same upon commissioning of the proposed building, its entitlements should be 612.2 m^2, comprising staff offices of 105.1 m^2, an auditorium of 280 m^2 and other ancillary facilities of 227.1 m^2 according to the Government's space standard.

FINANCIAL IMPLICATIONS

9. We estimate the total capital cost of the project to be $100.9 million in MOD prices (see paragraph 10 below), made up as follows –

			$ million	
(a)	Site works		1.4	
(b)	Piling		10.4	
(c)	Building		44.1	
(d)	Building services		18.4	
(e)	Drainage and external works		7.1	
(f)	Furniture and equipment[7]		11.1	
(g)	Consultants' fees for -		4.9	
	(i) Contract administration	1.3		
	(ii) Quantity surveying services	0.3		
	(iii) Site supervision	3.3		
(h)	Contingencies		8.1	
		Sub-total	105.5	(in September 2003 prices)
(i)	Provision for price adjustment		(4.6)	
		Total	100.9	(in MOD prices)

D Arch S proposes to engage consultants to provide contract administration, quantity surveying services and site supervision for the project. A breakdown of

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[7] Calculation of the estimated cost of furniture and equipment is based on an indicative list of items required, including fire appliances, audio and visual equipment for auditorium, standard office furniture and equipment items, remote control call-out system, physical fitness training equipment, telephone and fax and closed circuit television surveillance system.

the estimate for consultants' fees by man-months is at Enclosure 3. The CFA of he project is about 4 850 m^2. The estimated construction unit cost, represented by the building and building services costs, is $12,887 per m^2 of CFA in September 2003 prices. D Arch S considers this unit cost comparable to that of other similar projects built by the Government.

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

Year	$ million (Sep 2003)	Price adjustment factor	$ million (MOD)
2004 – 05	3.0	0.97150	2.9
2005 – 06	35.0	0.95450	33.4
2006 – 07	55.0	0.95450	52.5
2007 – 08	8.5	0.96643	8.2
2008 – 09	4.0	0.98455	3.9
	105.5		100.9

11. 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 2009. We will tender the proposed works under a fixed-price lump-sum contract because the contract period will be less than 21 months and we can clearly define the scope of works in advance, leaving little room for uncertainty.

12. We estimate the additional annual recurrent expenditure arising from this project to be $24.6 million.

PUBLIC CONSULTATION

13. We consulted the former Kowloon City District Board on our proposal to develop a fire station-cum-ambulance depot with offices on 3 December 1998 and 28 January 1999. The District Board raised no objection to the proposal.

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14. To maximise site utilisation, we at one stage reached an agreement with the former Education Department to expand the scope of the project by jointly developing the proposed Fire Services facilities with a school to make use of an adjacent vacant site. The joint development proposal was discussed and supported by the Kowloon City District Council on 21 March 2002.

15. The joint development proposal was subsequently dropped because the school sponsor changed their development and expansion plan. We informed the Kowloon City District Council of these developments and the reversion to our original plan of developing a fire station-cum-ambulance depot with Kowloon Fire Command Headquarters by circulation of an information paper on 23 May 2003. The District Council has not raised any objection.

16. To address local residents' concerns about the possible noise nuisances arising from the fire station-cum-ambulance depot, FSD arranged a briefing session on 7 October 2002 to explain to local residents the daily operation of the proposed Fire Services facilities and the noise mitigation measures to be implemented. The attendees were satisfied with the Government's efforts to minimise the possible noise nuisances.

17. We circulated an information paper on the proposed project to the Legislative Council Panel on Security on 24 February 2004. We have not received any comments from Members of the Security Panel.

ENVIRONMENTAL IMPLICATIONS

18. We completed a Preliminary Environment Review (PER) for the project in October 1997. The PER concluded that the project would not give rise to long-term adverse environmental impact. The Director of Environmental Protection vetted the PER and agreed that an Environmental Impact Assessment would not be necessary.

19. 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 relevant 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. During the operation of the fire station-cum-ambulance depot, the Director of Fire Services will implement mitigation measures to minimise noise nuisances. These measures include the

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use of volume adjustable devices to control the sound level of the public address system, the wig-wag signals and sirens of fire appliances and ambulances. These facilities will only be used when necessary.

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

21. We will require the contractor to submit a waste management plan (WMP) for approval. The WMP will include mitigation measures to avoid, reduce, reuse and recycle C&D materials. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill and C&D waste to designated public filling facilities and landfills respectively through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

22. We estimate that the project will generate about 5 600 cubic metres (m^3) of C&D materials. Of these, we will reuse about 100 m^3 (1.8%) on site, 4 700 m^3 (83.9%) as fill in public filling areas[8], and dispose of 800 m^3 (14.3%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be $100,000 for this project (based on a notional unit cost[9] of $125/$m^3$).

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8 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 licence issued by the Director of Civil Engineering.

9 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 $90/$m^3$), 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

23. The project does not require any land acquisition.

BACKGROUND INFORMATION

24. We upgraded **125BF** to Category B in October 1996. We have employed a term contractor to carry out ground investigations and a consultant to carry out topographical surveys at a total cost of $100,000. We have also employed other consultants to carry out pre-contract design works and preparation of tender documents at a total cost of $2.1 million. We have charged these amounts to block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". The term contractor and the consultant have completed the ground investigations and topographical surveys respectively. The other consultants have completed the pre-contract design works and are finalising the tender documents.

25. For operational and security reasons, fire stations and ambulance depots have to be located on the ground floor and lower levels of a building with an exclusive drill yard, and vehicular and pedestrian access completely segregated from that provided to any non-FSD development above the building. In line with Government's policy of optimising site development potential, we examined the possibility of incorporating additional users into the development but were not able to identify other compatible joint users due to the stringent site requirement of the proposed facilities. We have also attempted to identify a more suitable site within the catchment area but the Director of Planning has advised that no better alternatives are available. We consider that the development represents the optimum use of the site given the circumstances.

26. The proposed construction of **125BF** will involve removal of 128 trees, including 123 trees to be felled, two trees to be transplanted elsewhere, and three trees to be replanted within the project site. All trees to be removed are not important trees[10]. We will incorporate planting proposals as part of the project, including estimated quantities of 65 trees, 1 600 shrubs, 1 780 groundcovers and 10 climbers.

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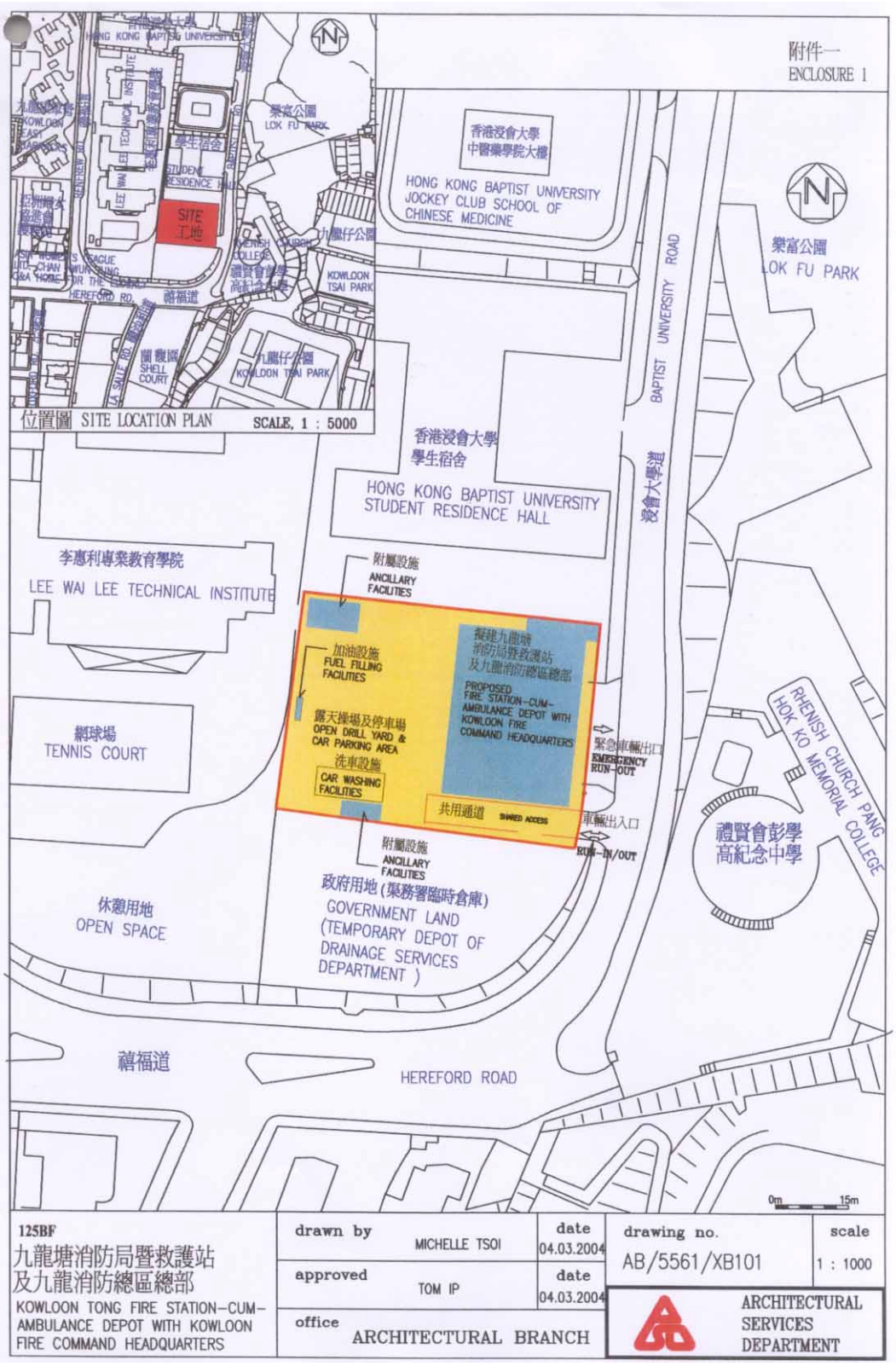
[10] Important trees include trees on the Register of Old and Valuable Trees, and any other trees which meet one or more of the following criteria –
(a) trees over 100 years old;
(b) trees of cultural, historical or memorable significance;
(c) trees of precious or rare species;
(d) trees of outstanding form; or
(e) trees with trunk diameter exceeding one metre (measured at one metre above ground level).

27. We estimate that the proposed works will create about 80 jobs (70 for labourers and another 10 for professional/technical staff) providing a total employment of 1 500 man-months.

Security Bureau
April 2004


附件一
ENCLOSURE 1
位置圖 SITE LOCATION PLAN SCALE, 1 : 5000
SITE 工地
香港浸會大學
中醫藥學院大樓
HONG KONG BAPTIST UNIVERSITY JOCKEY CLUB SCHOOL OF CHINESE MEDICINE
樂富公園
LOK FU PARK
BAPTIST UNIVERSITY ROAD
浸會大學道
香港浸會大學
學生宿舍
HONG KONG BAPTIST UNIVERSITY STUDENT RESIDENCE HALL
李惠利專業教育學院
LEE WAI LEE TECHNICAL INSTITUTE
附屬設施
ANCILLARY FACILITIES
加油設施
FUEL FILLING FACILITIES
擬建九龍塘消防局暨救護站及九龍消防總區總部
PROPOSED FIRE STATION-CUM-AMBULANCE DEPOT WITH KOWLOON FIRE COMMAND HEADQUARTERS
露天操場及停車場
OPEN DRILL YARD & CAR PARKING AREA
洗車設施
CAR WASHING FACILITIES
共用通道 SHARED ACCESS
緊急車輛出口
EMERGENCY RUN-OUT
車輛出入口
RUN-IN/OUT
網球場
TENNIS COURT
RHENISH CHURCH PANG HOK KO MEMORIAL COLLEGE
禮賢會彭學高紀念中學
休憩用地
OPEN SPACE
政府用地(渠務署臨時倉庫)
GOVERNMENT LAND (TEMPORARY DEPOT OF DRAINAGE SERVICES DEPARTMENT)
禧福道
HEREFORD ROAD
0m 15m
125BF
九龍塘消防局暨救護站
及九龍消防總區總部
KOWLOON TONG FIRE STATION-CUM-AMBULANCE DEPOT WITH KOWLOON FIRE COMMAND HEADQUARTERS
drawn by MICHELLE TSOI
date 04.03.2004
approved TOM IP
date 04.03.2004
office ARCHITECTURAL BRANCH
drawing no. AB/5561/XB101
scale 1 : 1000
ARCHITECTURAL SERVICES DEPARTMENT

附件二
ENCLOSURE 2

從東南面望向建築物的構思圖
VIEW OF BUILDING FROM THE SOUTH EAST (ARTIST'S IMPRESSION)

從東北面望向建築物的構思圖
VIEW OF BUILDING FROM THE NORTH EAST (ARTIST'S IMPRESSION)

125BF 九龍塘消防局暨救護站及九龍消防總區總部 KOWLOON TONG FIRE STATION-CUM-AMBULANCE DEPOT WITH KOWLOON FIRE COMMAND HEADQUARTERS	drawn by MICHELLE TSOI	date 11.03.2004	drawing no. AB/5561/XB102	scale N.T.S.
	approved TOM IP	date 11.03.2004		
	office ARCHITECTURAL BRANCH		ARCHITECTURAL SERVICES DEPARTMENT	

125BF - Kowloon Tong fire station-cum-ambulance depot with Kowloon Fire Command Headquarters

Breakdown of the estimate for consultants' fees

Consultants' staff costs		Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee ($million)
Contract administration (Note 2)	Professional	-	-	-	1.0
	Technical	-	-	-	0.3
Quantity surveying services (Note 3)	Professional	-	-	-	0.2
	Technical	-	-	-	0.1
Site supervision (Note 4)	Professional	9	38	1.6	0.8
	Technical	84	14	1.6	2.5
				Total	4.9

* 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 consultant. (At 1.1.2004, MPS point 38 = $55,993 per month and MPS point 14 = $18,603 per month)

(2) The consultant's staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **125BF**. The assignment will only be executed subject to Finance Committee's approval to upgrade **125BF** to Category A.

(3) The consultant's staff cost for quantity surveying services is calculated in accordance with the existing consultancy agreement for the provision of quantity surveying services for **125BF**. The assignment will only be executed subject to Finance Committee's approval to upgrade **125BF** to Category A.

(4) The consultant's staff cost for site supervision is based on the estimates prepared by the Director of Architectural Services. We will only know the actual man-months and actual costs after completion of the construction works.