

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 711 - HOUSING

Public Safety - Fire services

170BF - Fire station-cum-ambulance depot in Area 112, Tin Shui Wai

Members are invited to recommend to Finance Committee the upgrading of **170BF** to Category A at an estimated cost of \$86.1 million in money-of-the-day prices for the construction of a 5-bay fire station-cum-ambulance depot in Area 112, Tin Shui Wai.

PROBLEM

When the population of the Tin Shui Wai Reserve Zone reaches about 79 000 in 2002, emergency vehicles from the existing Tin Shui Wai Sub-divisional Fire Station and Ambulance Depot at Tin Ho Road are not able to respond to emergencies in the northern part of the Reserve Zone within the approved graded response time limits for fire services¹ and for ambulance services².

PROPOSAL

2. The Director of Architectural Services (D Arch S), with the support of the Secretary for Housing and Secretary for Security, proposes to upgrade **170BF** to Category A at an estimated cost of \$86.1 million in money-of-the-day (MOD) prices for the construction of a 5-bay fire station-cum-ambulance depot in Area 112, Tin Shui Wai.

/PROJECT

¹ According to the current approved fire-fighting policy, fire calls in congested built-up, less congested built-up, dispersed risk, highly dispersed risk and remote areas should be met with a response time of 6, 6, 9, 15 and 23 minutes respectively.

² The emergency ambulance service has adopted a 12-minute response time (including a 2-minute activation time and a 10-minute travel time) as its performance target.

PROJECT SCOPE AND NATURE

3. The project comprises the construction of a 4-storey fire station-cum-ambulance depot on a site of about 2 966 square metres. This new depot will have -

- (a) a 5-bay appliance room;
- (b) offices with a gross floor area (GFA) of about 170 square metres;
- (c) an exercise room;
- (d) a lecture room;
- (e) storage areas for storage of foam concentrate, hoses, etc.;
- (f) barracks for on-duty operational fire services and ambulance staff;
- (g) a drying room;
- (h) a canteen;
- (i) an open drill yard with gross area of about 800 square metres; and
- (j) a fuel filling facility.

A site plan is attached at the Enclosure for Members' reference. We plan to start the construction works in May 2001 for completion by November 2002.

JUSTIFICATION

4. This project is to provide adequate fire and emergency ambulance services for the Tin Shui Wai Reserve Zone which comprises, among other developments, a 213-hectare residential and commercial area. The Reserve Zone will be categorised as a "congested built-up area"³ by 2002 when planned population intake rises to about 79 000. The population will rise to about

/129 000

³ The target response time for a "congested built-up area" is 6 minutes for fire service and 12 minutes for emergency ambulance service.

129 000 in 2009. At present, this zone is categorised as a “highly dispersed risk area”⁴ and is served by the existing Tin Shui Wai Sub-divisional Fire Station and Ambulance Depot located at Tin Ho Road at a distance of about four kilometres south of the zone. Fire appliances and ambulances turning out from this station/depot take about 12 minutes in both cases to reach the northern part of the zone. This falls short of the approved 6-minute graded response time for fire service and the 12-minute response time for emergency ambulance service required when the area becomes a “congested built-up area”. Pressure will further build up as the area becomes more developed and the demand for emergency services increases. Consequently, we need to provide a fire station-cum-ambulance depot in Area 112 of the Reserve Zone by 2002 to tie in with the population intake and new town developments. Delay in implementing the project could compromise public safety and adversely affect the standard of emergency services.

FINANCIAL IMPLICATIONS

5. We estimate the capital cost of the project to be \$86.1 million in MOD prices (see paragraph 6 below), made up as follows -

	\$ million
(a) Site formation	1.0
(b) Piling	5.1
(c) Building	34.5
(d) Building services	9.3
(e) Drainage and external works	14.8
(f) Furniture and equipment	10.4
(g) Electrical and Mechanical Services Trading Fund (EMSTF) ⁵ charges for project management/contract administration	0.1

/(h)

⁴ The target response time for a “highly dispersed risk area” is 15 minutes for fire service and 12 minutes for emergency ambulance service.

⁵ Since the establishment of EMSTF on 1 August 1996 under the Trading Funds Ordinance, government departments are charged for design and technical consultancy services for electrical and mechanical installations provided by EMSTF. Services rendered in this project include project management for contract administration for the provision of electrical and mechanical facilities for construction. The figure above is based on estimate prepared by D Arch S. The actual cost for the service charges is subject to further discussion between the Government and EMSTF.

(h) Contingencies	6.5	
	81.7	(in September 2000 prices)
(i) Provision for price adjustment	4.4	
	86.1	(in MOD prices)

The construction floor area of **170BF** is 3 707 square metres. The construction unit cost, represented by building and building services costs, is \$11,815 per square metre in September 2000 prices. The construction unit cost is comparable to that for other fire stations recently built by the Government.

6. Subject to approval, we will phase the expenditure as follows -

Year	\$ million (Sept 2000)	Price adjustment factor	\$ million (MOD)
2001 - 02	15.0	1.02550	15.4
2002 - 03	59.2	1.05627	62.5
2003 - 04	6.0	1.08795	6.5
2004 - 05	1.5	1.12059	1.7
	81.7		86.1

7. We derived the MOD estimates on the basis of Government's latest forecast of trend labour and construction prices for the period 2001 to 2005. We will tender the works under a fixed-price lump-sum contract because the construction period will be less than 21 months and we can clearly define the scope of works in advance, leaving little room for uncertainty.

8. We estimate that the annually recurrent expenditure arising from this project to be \$19 million.

/PUBLIC

PUBLIC CONSULTATION

9. We consulted the Town Planning and Development Committee of the former Yuen Long Provisional District Board in May 1999. Members of the Committee supported the project.

ENVIRONMENTAL IMPLICATIONS

10. We completed a Preliminary Environmental Review (PER) for the project in February 1999 and concluded that the project would have no long term environmental impact with the noise sensitive buildings, if any, to be erected at least 28 metres and 16 metres from the northern and eastern boundary of the depot respectively, or the prohibition of locating noise sensitive facades in the aforesaid setback zone. The Director of Environmental Protection vetted the PER and agreed that an Environmental Impact Assessment would not be necessary. We have also liaised with the Director of Lands and Director of Planning for implementation of the measures.

11. During construction, we will control noise, dust and site run-off nuisances 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, as well as frequent cleaning and watering of the site. The Director of Fire Services will implement mitigation measures to minimise noise nuisance during the operation of the fire station-cum-ambulance depot. These measures include the use of volume adjustable devices controlling the sound level of the public address system, sirens of fire appliances and ambulances and wig-wag signals. These facilities will only be used when necessary.

12. We estimate that some 4 500 cubic metres of public fill will be delivered to public filling areas and about 1 500 cubic metres of construction and demolition (C&D) materials will be disposed of at landfills. Ways of minimising the generation of C&D materials were considered at the planning and design stage. We will require the contractor to implement necessary measures to minimise the generation of C&D materials and to reuse and recycle C&D materials. We will control the disposal of C&D materials to the designated public filling facilities and/or landfills through a trip ticket system, and record the disposal, reuse and recycling of C&D materials for monitoring purposes.

LAND ACQUISITION

13. The project does not require any land acquisition.

/BACKGROUND

BACKGROUND INFORMATION

14. We upgraded **170BF** to Category B in November 1999.

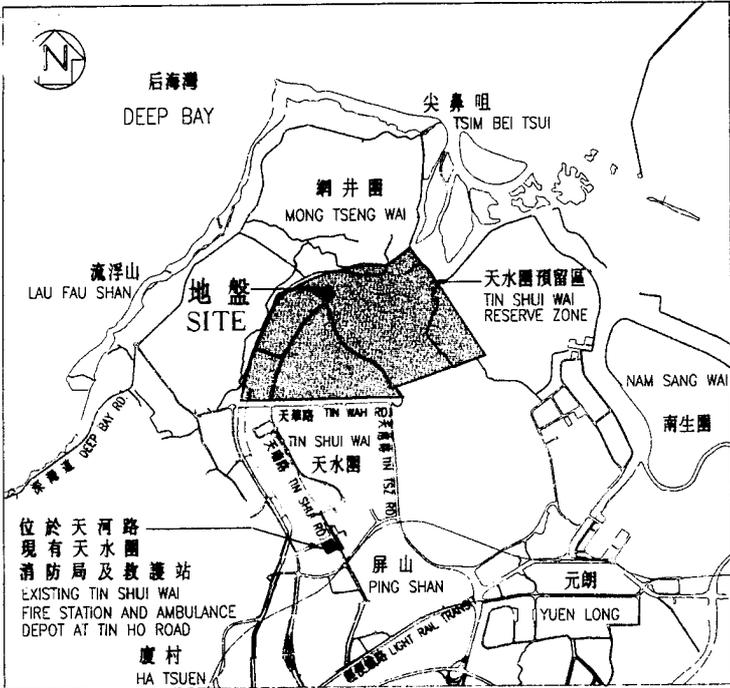
15. For operational and security reasons, fire stations and ambulance depots have to be located on the ground floor and lower levels of a building with an exclusive drill yard, and vehicular and pedestrian access completely segregated from that provided for the non-Fire Services Department (FSD) development above the building. In the circumstances, the inclusion of joint users will inevitably lead to the enlargement of footprint and the area of a project site.

16. In line with Government's policy of optimising site development, Government Property Administrator (GPA) has made two attempts, namely, in 1997, prior to the inclusion of the project in Category C of the Public Works Programme, and in 1998, to identify compatible joint users within the proposed building. The only two potential joint users identified required not only separate access but also large open space on the ground floor. Enlargement of the site was, however, not possible as adjoining land from the surrounding Comprehensive Development Area (CDA) was already earmarked for providing 1 330 flats and associated Government/Institution/Community (GIC) facilities. Given the aforesaid operational constraints and the fact that Tin Shui Wai is a new town where necessary GIC facilities have to be provided as part of the overall planning for the area, no suitable joint users could be accommodated within the project site. Since the proposed site area is the minimum necessary to accommodate FSD's operational needs, GPA has concluded that the development represents the optimum use of the site.

17. In November 1998, we engaged consultants to carry out topographical survey and PER and employed a term contractor to carry out ground investigation at a total cost of \$427,916. We charged this amount to block allocation **Subhead B100HX** "Minor housing development related works, studies and investigations for items in Category D of the Public Works Programme". The consultants and the term contractor have completed the PER, topographical survey and ground investigation respectively. D Arch S has completed the detailed design of the project and is preparing the tender documents using in-house staff resources.

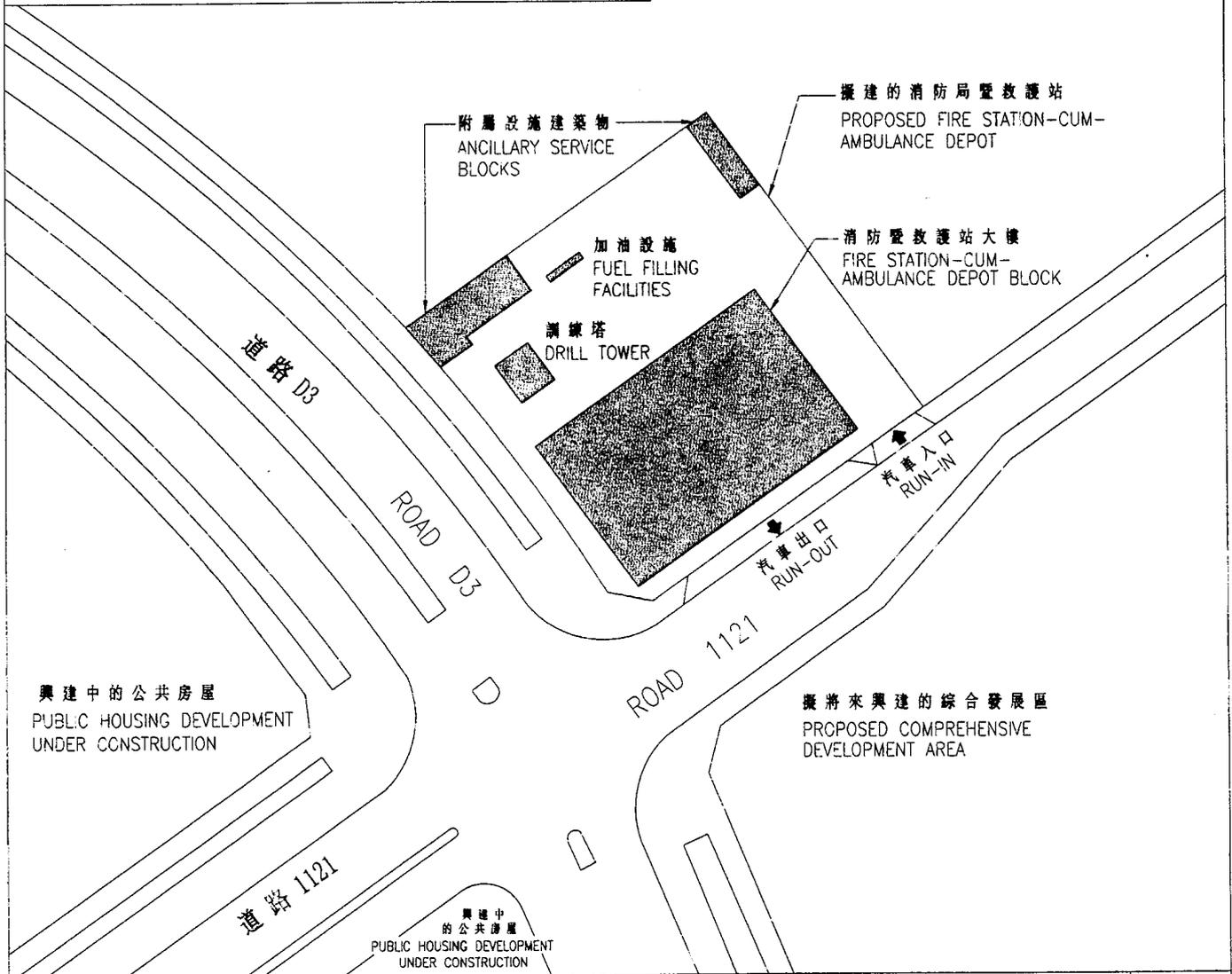
18. We estimate that the proposed works will create some 100 jobs totalling 1 605 man-months comprising one professional staff, four technical staff and 95 labourers during the construction period.

附件
ENCLOSURE TO PWSC
(2000-01) 52



位置圖 LOCATION PLAN 比例 SCALE 1:75000

擬將來興建的綜合發展區
PROPOSED COMPREHENSIVE DEVELOPMENT AREA



title
天水圍第112區
消防局暨救護站
FIRE STATION-CUM-AMBULANCE
DEPOT IN AREA 112, TIN SHUI WAI

drawn by H.M. LAM	date 25.9.2000
approved V. CHEUNG	date 25.9.2000
office ARCHITECTURAL BRANCH	

drawing no. AB/5570/XB101	scale 1:1000
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ARCHITECTURAL
SERVICES
DEPARTMENT