

## **ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE**

### **HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT**

#### **Medical Subventions**

#### **60MM – Improvement of facilities in the Specialist Outpatient Block of Pamela Youde Nethersole Eastern Hospital**

Members are invited to recommend to Finance Committee the upgrading of **60MM** to Category A at an estimated cost of \$59.0 million in money-of-the-day prices to improve the facilities in the Specialist Outpatient Block of Pamela Youde Nethersole Eastern Hospital.

#### **PROBLEM**

The existing supporting facilities<sup>1</sup> in the Specialist Outpatient (SOP) Block of Pamela Youde Nethersole Eastern Hospital (PYNEH) are inadequate to cope with the increasing demand from patients.

#### **PROPOSAL**

2. The Director of Architectural Services (D Arch S), with the support of the Secretary for Health, Welfare and Food, proposes to upgrade **60MM** to Category A at an estimated cost of \$59.0 million in money-of-the-day (MOD) prices to improve the supporting facilities in the SOP Block of PYNEH.

**/PROJECT ....**

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<sup>1</sup> These include lift service, X-ray facilities, patient registration services, air-conditioning system and toilet facilities.

## PROJECT SCOPE AND NATURE

3. The scope of **60MM** comprises -
- (a) construction of an additional lift tower annexed to the SOP Block for the provision of two passenger lifts;
  - (b) installation of two dumb-waiters;
  - (c) provision of satellite X-ray facilities;
  - (d) conversion of the upper entry level of the SOP Block into office accommodation for use as a central patient registration office; and
  - (e) improvements to the existing air-conditioning system and the provision of eight additional public toilets.

4. A site plan is at Enclosure 1 and views of the SOP Block (artist's impression) are at Enclosure 2. We plan to commence the construction works in December 2005 for completion in July 2007.

## JUSTIFICATION

5. The SOP Block of PYNEH is a six-storey building with a gross floor area of about 12 000 square metres (m<sup>2</sup>). It houses the SOP Department providing outpatient services for the specialties of medicine, surgery, orthopaedics and traumatology, obstetrics and gynaecology, paediatrics, eye, ear, nose and throat. Since the SOP Department came into operation in 1994, the annual outpatient attendances have increased significantly and have reached 510 000 in 2004. This has exceeded the planned patient throughput of the SOP Department by 200%.

6. The existing supporting facilities of the SOP Block are inadequate to cope with the demand arising from the ever-increasing number of outpatient attendance. We therefore propose to carry out improvement works as detailed in the ensuing paragraphs.

/Lift .....

**Lift service**

7. At present, there are only two lifts in the SOP Block with a capacity of ten to 12 persons each. This is hardly sufficient to cater for a daily traffic of about 2 000 hospital staff together with patients and their accompanying relatives / friends. During peak hours, the waiting time for lift service is as long as ten minutes. As the majority of the outpatients are the elderly, the fire escape staircases of the building cannot help relieve the situation. We therefore propose to enhance the existing lift service by providing two additional passenger lifts in a new lift tower annexed to the SOP Block. To ensure that the lifts can serve the passenger traffic exclusively, we also propose to add two dumb-waiters for the transportation of materials and medical records. This segregation of transportation of medical records from passenger traffic helps to alleviate the high demand on the two existing passenger lifts and further reduce the waiting time for lift service to about four to five minutes during peak hours.

**X-ray facilities**

8. At present, the SOP Block does not have its own X-ray service and has to rely on the X-ray Department in the Main Block of PYNEH. Outpatients attending the SOP Department and requiring X-ray service have to take ten to 15 minutes to travel a long way from the SOP Block to the Main Block. This arrangement is not satisfactory. The shared use of the X-ray Department by inpatients of the Main Block and outpatients of the SOP Block has also led to overcrowding in the waiting areas of the X-ray Department and a long queuing time of about 30 to 45 minutes from registration to examination. Furthermore, since priority is given to outpatients, who account for about 50% of the workload of the X-ray Department, X-ray services for inpatients have been seriously affected. The X-ray Department is currently facing an average daily backlog of about 20 requests or about 20% of its inpatient workload. After the operating hours of the X-ray Department, urgent cases in the daily backlog will be performed in the X-ray Unit of the Accident and Emergency Department of PYNEH, while non-urgent cases will be conducted in the X-ray Department first round on the following day as elective cases. This has unnecessarily lengthened the hospitalisation period of those patients requiring radio-diagnostic examination before discharge.

9. To improve the situation, we propose to provide satellite X-ray facilities<sup>2</sup> in the SOP Block to serve the outpatients who will then enjoy one-stop

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<sup>2</sup> Satellite X-ray facilities provide routine radiology examinations. Outpatients requiring more complex radiology examinations will need to go to the X-ray Department in the Main Block.

services in the SOP Block. With this improvement, the estimated waiting time for outpatients in the new satellite X-ray facilities in the SOP Block will be about ten to 15 minutes, and about 15 to 25 minutes for inpatients in the X-ray Department in the Main Block. The provision of satellite X-ray facilities will also enhance the efficiency in plain film services and enable direct communication between radiographers and referring clinicians, thereby increasing the patient throughput in the SOP Department. We can further enhance the services of the SOP Department through the introduction of computed / digital radiography and local area image network facilities in the close vicinity. On the other hand, the X-ray Department in the Main Block will be able to serve mostly inpatients. We expect that the response time for inpatients, and hence their length of stay in hospital, will be shortened and there should be few backlogs in future.

### **Patient registration service**

10. Individual clinics in the SOP Department are currently handling registration of their own patients. Due to limited space available, patients queuing up for registration have created congestion problems in individual clinics, thus hindering their efficient operation. To improve the situation and to economise on manpower resources, we propose to convert the upper entry level<sup>3</sup> of the SOP Block into office accommodation for setting up a central registration office to serve the entire SOP Department. The central registration office will centralise part of the reception functions currently carried out by the registration counter of each clinic so as to alleviate the latter's congestion. This office will also process attendance, registration and payment for consultation whereas registration counters in individual clinics will continue to handle follow-up appointments and collection of drug charges after consultation.

### **Air-conditioning system and toilet facilities**

11. The existing air-conditioning system of the SOP Block is inadequate to cope with the current patient load. The deficiencies lie in the inadequate capacity for cooling the crowded clinics, uneven ventilation and absence of temperature control at individual zones / locations. Besides, the existing provision of public toilet facilities is grossly inadequate to meet the daily SOP attendance which has increased from about 600 in 1994-95 to about 1 900 in 2004. Consequently, the heavy utilisation has rendered proper cleansing difficult. To maintain a reasonable environment in the SOP Department, we propose to improve the existing air-conditioning system and increase the chiller capacity, and to provide eight additional public toilets to meet the heavy demand.

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<sup>3</sup> The upper entry level of the SOP Block is at the top level of the building as well as the ground level of the hospital compound. The lower entry level is accessed from Cheung Man Road.

**FINANCIAL IMPLICATIONS**

12. We estimate the capital cost of **60MM** to be \$59.0 million in MOD prices (see paragraph 13 below), made up as follows –

		<b>\$ Million</b>	
(a)	Site and geotechnical works	4.1	
(b)	Substructure works	3.7	
(c)	Building	18.9	
(d)	Building services	13.4	
(e)	Drainage	1.3	
(f)	External works	3.2	
(g)	Furniture and equipment (F&E) <sup>4</sup>	4.6	
(h)	Consultant's fees	4.2	
	(i) Contract administration	1.5	
	(ii) Site supervision	2.7	
(i)	Contingencies	5.3	
	Sub-total	58.7	(in September 2004 prices)
(j)	Provisions for price adjustment	0.3	
	<b>Total</b>	59.0	(in MOD prices)

We propose to engage a consultant to undertake contract administration and site supervision of the project. A breakdown of the estimate for the consultant's fees is at Enclosure 3. The construction floor area (CFA) of the project is about 2 680 m<sup>2</sup>. The estimated construction unit cost, represented by the building and the building services costs, is \$12,052 per m<sup>2</sup> of CFA in September 2004 prices. We consider this unit cost reasonable as compared with similar projects implemented by the Government.

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<sup>4</sup> Based on an indicative list of F&E items and their estimated prices.

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

<b>Year</b>	<b>\$ million (Sept 2004)</b>	<b>Price adjustment factor</b>	<b>\$ million (MOD)</b>
2005 – 06	1.0	1.00450	1.0
2006 – 07	20.0	1.00576	20.1
2007 – 08	25.0	1.00576	25.1
2008 – 09	7.0	1.00576	7.0
2009 – 10	5.7	1.00953	5.8
	58.7		59.0

14. 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 2005 to 2010. We intend to award the contract on a lump-sum basis because we can clearly define the scope of the works in advance, leaving little room for uncertainty. The contract will not provide for price adjustments because the contract period will not exceed 21 months.

15. HA has assessed the requirements for F&E for this project, and estimates the F&E costs to be \$4.6 million. The proposed F&E provision, which represents 12.5% of the total construction cost<sup>5</sup> of the project, is broadly comparable to that for projects of similar nature and scope. A list of major F&E items (costing \$1 million or above per item) to be procured for the project is at Enclosure 4.

16. We estimate the annual recurrent expenditure arising from the project to be \$0.9 million.

**/PUBLIC .....**

<sup>5</sup> Represented by the building, building services, drainage and external works costs.

## **PUBLIC CONSULTATION**

17. We consulted the Legislative Council Panel on Health Services at its meeting on 17 May 2005. Members generally supported the proposed project.

## **ENVIRONMENTAL IMPLICATIONS**

18. This is not a designated project under the Environmental Impact Assessment Ordinance. The project will not cause long term environmental impact. 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.

19. 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 project 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.

20. We 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. 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.

21. We estimate that the project will generate about 680 cubic metres (m<sup>3</sup>) of C&D materials. Of these, we will reuse about 100 m<sup>3</sup> (14.7%) on site, about

/480 m<sup>3</sup> .....

480 m<sup>3</sup> (70.6%) as fill in public filling areas<sup>6</sup>, and dispose of about 100 m<sup>3</sup> (14.7%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$12,500 for this project (based on a notional unit cost<sup>7</sup> of \$125/m<sup>3</sup>).

## LAND ACQUISITION

22. The project does not require land acquisition.

## BACKGROUND INFORMATION

23. We upgraded **60MM** to Category B in October 2003. In March 2005, we engaged a consultant and a term contractor to carry out topographical survey and site investigation respectively. We also engaged a consultant in April 2005 to undertake detailed design and another consultant in May 2005 to prepare tender documents. The total cost for the above survey and works is \$2.6 million. We charged these amounts to block allocation **Subhead 8100MX** "Hospital Authority – improvement works, feasibility studies, investigations and pre-contract consultancy services for building projects". The consultants and the term contractor have completed the topographical survey, the site investigation and the detailed design. The other consultant is finalizing the tender documents.

24. The proposed improvement works will involve removal of ten trees, all of which are to be felled. All trees to be removed are not important trees<sup>8</sup>. We will incorporate planting proposals as part of the project, including estimated quantity of 12 trees.

/25. ....

<sup>6</sup> 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 and Development.

<sup>7</sup> 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 per m<sup>3</sup>), 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.

<sup>8</sup> Important trees refer to trees on the Register of Old and Valuable Trees, and any other trees which meet one or more of the following criteria –

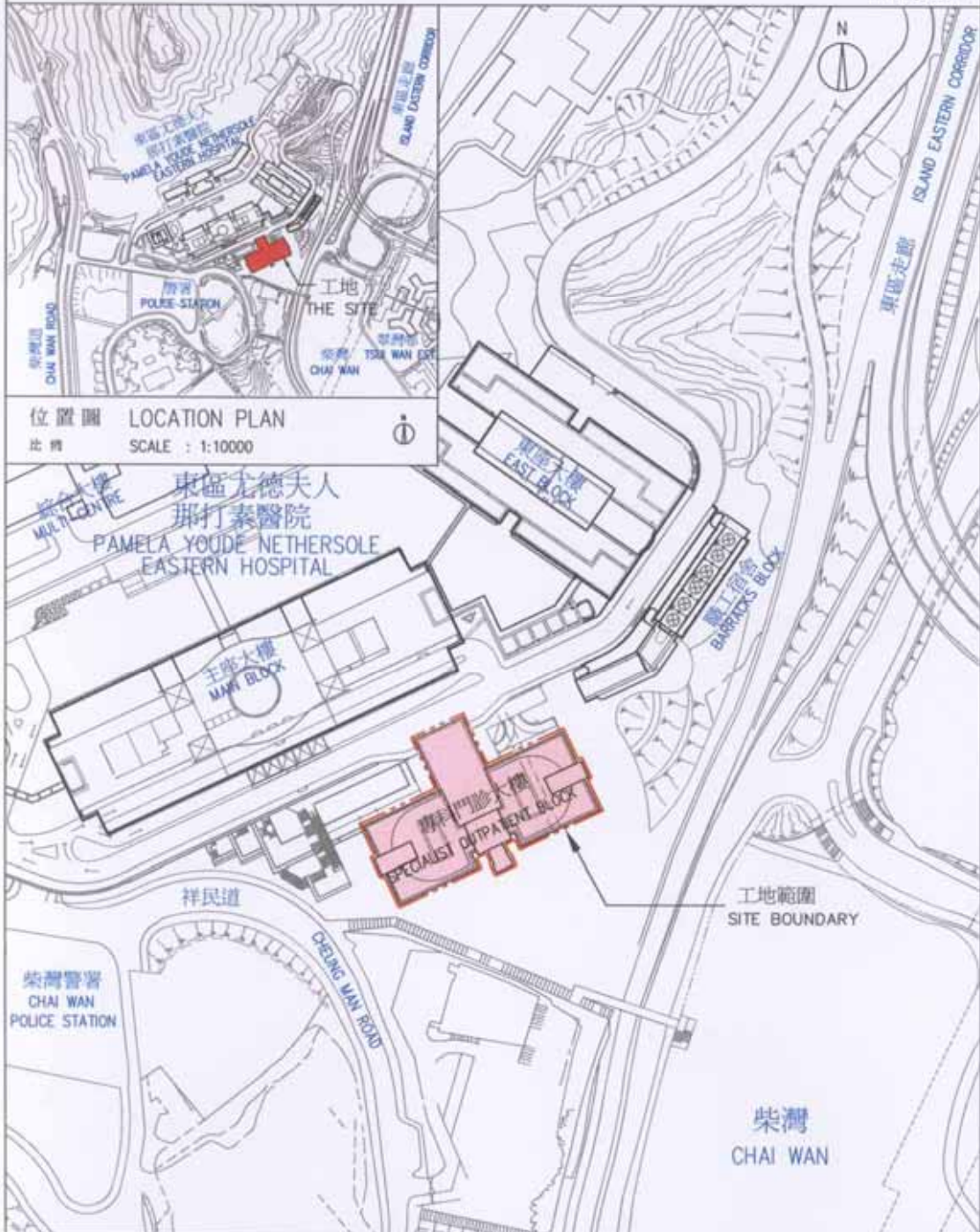
- (a) trees over 100 years old;
- (b) trees of cultural, historical or memorable significance;
- (c) trees of precious or rare species;
- (d) trees of outstanding form; or
- (e) trees with trunk diameter exceeding one metre (measured at one metre above ground level).



25. We estimate that the project will create about 75 jobs (65 for labourers and another ten for professional/technical staff) providing a total employment of 1 100 man-months.

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Health, Welfare and Food Bureau  
June 2005



位置圖 LOCATION PLAN  
比例 SCALE : 1:10000


8060MM 東區尤德夫人那打素醫院 專科門診大樓改善工程 IMPROVEMENT OF FACILITIES IN THE SPECIALIST OUTPATIENT BLOCK OF PAMELA YOUDE NETHERSOLE EASTERN HOSPITAL	drawn by 繪圖 K.W. LEUNG	date 日期 25-02-05	drawing no. 圖號 6252-P01	scale 比例 1:2000
	approved 覆核 K.K. LAM	date 日期 25-02-05	 ARCHITECTURAL SERVICES DEPARTMENT 建築署	
office 辦事處 PROJECT MANAGEMENT BRANCH 工程策劃管理處				



專科門診大樓南面立面圖 (改善工程前)  
South Elevation of the Specialist Outpatient Block (Before Improvement)



專科門診大樓南面立面圖 (模擬圖 - 改善工程後)  
South Elevation of the Specialist Outpatient Block (Artist's Impression - After Improvement)

8060MM 東區尤德夫人那打素醫院 專科門診大樓改善工程 IMPROVEMENT OF FACILITIES IN THE SPECIALIST OUTPATIENT BLOCK OF PAMELA YOUDE NETHERSOLE EASTERN HOSPITAL	drawn by 繪圖 K.W. LEUNG	date 日期 25-02-05	drawing no. 圖號 6252-P02	scale 比例 N.T.S.
	approved 覆核 K.K. LAM	date 日期 25-02-05		
office 辦事處 PROJECT MANAGEMENT BRANCH 工程策劃管理處			 ARCHITECTURAL SERVICES DEPARTMENT 建築署	

**60MM – Improvement of Facilities in the Specialist Outpatient  
Block of Pamela Youde Nethersole Eastern Hospital**

**Breakdown of estimate for consultant’s fees**

<b>Consultant’s staff cost</b>			<b>Estimated man-months</b>	<b>Average MPS* salary point</b>	<b>Multiplier (Note 1)</b>	<b>Estimated fee (\$million)</b>
(a)	Contract administration (Note 2)	Professional Technical	- -	- -	- -	1.0 0.5
(b)	Site supervision (Note 3)	Professional Technical	17.3 41.6	38 14	1.6 1.6	1.5 1.2
					Total	----- 4.2 -----

\*MPS = Master Pay Scale

Note

- (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. (As at 1 January 2005, MPS point 38 = \$54,255 per month and MPS point 14 = \$18,010 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 **60MM**. The assignment will only be executed subject to Finance Committee’s approval to upgrade **60MM** to Category A.
- (3) We will only know the actual man-months and actual costs after completion of the construction works.

**60MM – Improvement of Facilities in the Specialist Outpatient  
Block of Pamela Youde Nethersole Eastern Hospital**

**Furniture and equipment items with unit cost of \$1 million or more**

<b>Item description</b>	<b>Qty</b>	<b>Unit cost (\$ million)</b>	<b>Total cost (\$ million)</b>
Electric mobile shelving system	1	1.400	1.400
Medical records transfer system	1	2.000	2.000