

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Medical Subventions

69MM – Relocation of Siu Lam Hospital to Block B of Castle Peak Hospital

Members are invited to recommend to Finance Committee the upgrading of **69MM** to Category A at an estimated cost of \$320.3 million in money-of-the-day prices for the relocation of Siu Lam Hospital to Block B of Castle Peak Hospital.

PROBLEM

The physical condition of Siu Lam Hospital (SLH) has seriously deteriorated and its facilities and space provisions are out-dated in terms of current standards. There is an urgent need to improve the facilities of SLH to meet prevailing standards.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Food and Health, proposes to upgrade **69MM** to Category A at an estimated cost of \$320.3 million in money-of-the-day (MOD) prices for the relocation of SLH to Block B of Castle Peak Hospital (CPH).

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of **69MM** comprises —
- (a) renovation of ten wards at Block B of CPH and external areas in the vicinity to accommodate a maximum of 500 mentally handicapped beds, Social Education Unit and seminar / conference room, etc;
 - (b) miscellaneous works items including alterations to patients bathrooms and toilets, installation of continuous ceiling hoist system, enhancement of air-conditioning system, and re-flooring with non-slippery finishes, etc to suit the special needs of the severely mentally handicapped (SMH) patients;
 - (c) upgrading the capacity of CPH's supporting services such as catering, materials transport, linen exchange, engineering and mechanical maintenance, general supplies, etc; and
 - (d) alteration works associated with decanting a small number of patients from Block B to other wards at Block A of CPH.
4. A site plan showing the proposed relocation at CPH is at Enclosure 1. We plan to start construction works in August 2009 for completion in June 2011.

JUSTIFICATION

5. SLH is one of the hospitals under the New Territories West Cluster (NTWC) of the Hospital Authority (HA). Other hospitals in the cluster include the Tuen Mun Hospital (TMH), Pok Oi Hospital and CPH. SLH is currently the only hospital providing rehabilitative and infirmary services exclusively to SMH adult patients in Hong Kong.

Deteriorating physical conditions in SLH

6. SLH was opened in 1972 and the physical conditions of its buildings have deteriorated over the years. One of the more disruptive and recurring problems facing SLH is roof leakage. Although re-roofing works have been carried out, rainwater leakage still occurs frequently. The damp environment also poses the risks of infection.

7. The existing sewage treatment system, with septic tanks and soakaways, has been in use since the establishment of SLH. It is approaching the end of its serviceable lifespan and may pose pollution threats to the environment. Simply replacing the existing system with new septic tanks and soakaways cannot meet modern standards of sanitation for health care facilities, which require the direct connection of drains to the public sewerage system to minimize the risks of pollution. Owing to its isolated location, there are no public sewers running in the vicinity of SLH to allow such connection.

Out-dated standards of provision

8. SLH is currently accommodating about 350 patients. Since it was designed in the 1960s, its space provisions lag behind current standards for quality patient care. There is limited room for improvement due to the physical constraints of the existing buildings, which were planned and designed with no provision for expansion.

9. Day / activity rooms are essential facilities in modern patient care for SMH patients who are not bed-bound but need to stay in the hospital for years. These facilities should be better designed to provide a home-like environment to facilitate patients' rehabilitation and re-integration into the community. Attempts have been made to convert some of the ward areas to provide such facilities within the existing layout, but only with limited success as the areas were not originally designed to fit this purpose. Furthermore, most SMH patients need wheelchairs that are moulded to fit their individual body shape. The accommodation of these wheelchairs, together with other equipment items such as patient hoists, shower trolleys, etc, creates enormous pressure on storage area. The need for storage space also increases arising from the need to use more equipment items following technology advancement.

10. Meanwhile the low mobility and high dependency of SMH patients could increase the chances of the spreading of communicable diseases among them. The provision of infection control facilities in SLH is behind current standards. For instance, owing to the lack of cohort facilities within the existing ward units, some clinical support services will have to be suspended during infection outbreaks in order to release the accommodation for the cohort of patients. It is therefore necessary to improve the facilities of SLH to keep up with the prevailing infection control standards so as to reduce the risk of infection.

/Proposed

Proposed relocation of SLH to CPH

11. Block B of CPH was completed under the first phase of the redevelopment of CPH in 1996. With the approach of increasing the emphasis on community based services and the enhanced provision of such services, space in ten wards at Block B of the CPH has become available for alternative uses. After the proposed relocation to CPH, the services provided by SLH would be enhanced significantly as follows –

- (a) Since many SMH patients have concomitant psychiatric illness, accommodating these patients in CPH will enable more efficient delivery of psychiatric services to them;
- (b) After relocation to Block B of CPH, which is close to Tuen Mun Hospital as the major acute hospital in the NTWC, patients of SLH can benefit from better and more timely support in clinical services such as pharmacy and diagnostic radiology. Furthermore, the merging of non-clinical supporting services of SLH and CPH, such as catering, security and hospital administration, will improve operational efficiency;
- (c) The problems of out-dated standards for space, patient care, use of equipment and infection control as mentioned above can be rectified. In addition, other necessary auxiliary facilities for support to quality of services, such as closed circuit television (CCTV) system, nurse call / emergency call systems, card access system and central air-conditioning system, are available and ready for use at Block B of CPH; and
- (d) Upon relocation to CPH, the SMH patients could be taken care of at premises more accessible by means of public transport, hence facilitating the visits by the families and friends of the patients.

12. We have considered the option of redeveloping SLH but found it more cost effective to relocate the hospital to CPH with the added benefits of more efficient delivery of psychiatric services, better clinical support and enhanced accessibility. Upon the proposed relocation of SLH to CPH, the existing building in SLH will be retained for other services. HA will consider the appropriate types of services to be provided having regard to the demand in the district as well as the space available and the accommodation requirements in other types of services.

/FINANCIAL

FINANCIAL IMPLICATIONS

13. We estimate the capital cost of the project to be \$320.2 million in MOD prices (see paragraph 15 below) as follows –

	\$ million	
(a) Building ¹	139.2	
(b) Building services	71.0	
(c) Drainage	1.0	
(d) External works	11.0	
(e) Decanting works	19.0	
(f) Additional energy conservation measures	2.0	
(g) Furniture & Equipment (F&E) ²	21.0	
(h) Consultants' fee	8.2	
(i) contract administration	7.1	
(ii) risk management	1.0	
(iii) management of resident site staff	0.1	
(i) Remuneration of resident site staff	2.6	
(j) Contingencies	24.4	
	<hr/>	
Sub-total	299.4	(in September 2008 prices)
(k) Provision for price adjustment	20.9	
	<hr/>	
Total	320.3	(in MOD prices)
	<hr/>	

/14.

¹ Item (a) above refers to building works in connection with the renovation/alteration works in Block B. These works include alteration of the internal layout, provision of new plant room, patient hoisting system, and finishes/fittings/fixtures and other associated works such as all necessary temporary works.

² Based on an indicative list of F&E items and their estimated prices.

14. We propose to engage consultants to undertake contract administration, quantity surveying services and site supervision of the project. A detailed breakdown of the estimates for the consultant's fees and resident site staff costs by man-months is at Enclosure 2. The construction floor area (CFA) of **69MM** is 11 151 square metres (m²). The estimated construction unit cost, represented by the building and the building services costs, is \$18,850 per m² of CFA in September 2008 prices. We consider this unit cost reasonable as compared with other similar hospital projects.

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

Year	\$ million (Sept 2008)	Price adjustment factor	\$ million (MOD)
2009 – 10	15.0	1.03500	15.5
2010 – 11	160.0	1.05570	168.9
2011 – 12	70.0	1.07681	75.4
2012 – 13	30.0	1.09835	33.0
2013 – 14	20.0	1.12032	22.4
2014 – 15	4.4	1.15113	5.1
	299.4		320.3

16. 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 2009 to 2015. We will deliver the construction works through lump-sum contract because we can clearly define the scope of the works in advance. The contract will provide for price adjustments. We will deliver the alteration works associated with decanting from Block B to Block A of CPH through re-measurement term contract.

17. HA has assessed the requirements for F&E for this project, and estimates the F&E costs to be \$21 million. The proposed F&E provision represents 9.5% of the total construction cost³ of the project. An indicative list of major F&E items (costing \$1 million or above per item) to be procured for the project is at Enclosure 3.

18. The annual recurrent expenditure arising from this project is estimated at \$1.4 million, which will be absorbed by HA.

PUBLIC CONSULTATION

19. HA consulted the Social Services Committee of the Tuen Mun District Council (TMDC) on 10 March 2009. Members of the TMDC supported the proposed relocation of SLH to Block B of CPH but requested HA to provide more support to the mental and ex-mental patients upon discharge, and to ensure that sufficient beds were reserved for those in need.

20. We consulted the Legislative Council Panel on Health Services on 11 May 2009. Members of the Panel supported the project and requested that HA duly consider the future use of the SLH building upon the relocation of the facilities to CPH.

ENVIRONMENTAL IMPLICATIONS

21. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project has little potential to give rise to any long-term environmental impact.

22. 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 and the building of barrier wall for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities to prevent dust nuisance.

/23.

³ Represented by the building, building services, drainage and external works costs.

23. We have considered measures in the planning and design stages to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. brickworks/blockworks from demolition of existing facilities) on site or in other suitable construction sites as far as possible, in order to minimise 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 wastes, as well as the use of non-timber formwork to further minimize the generation of construction waste.

24. 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.

25. We estimate that the project will generate in total about 1 230 tonnes of construction waste. Of these, we will reuse about 25 tonnes (2%) of inert construction waste on site and deliver 805 tonnes (66%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 400 tonnes (32%) 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 \$71,735 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

26. This project has adopted various forms of energy efficient features, including -

/(a)

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.

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.

- (a) automatic demand control of chilled water circulation system;
- (b) automatic demand control of supply air;
- (c) demand control of fresh air supply with carbon dioxide sensors;
- (d) heat pipes for heat energy reclaim of exhaust air;
- (e) T5 energy efficient fluorescent tubes with electronic ballast and lighting control by occupancy sensors;
- (f) light-emitting diode (LED) type exit signs;
- (g) heat pump for space heating/dehumidification;
- (h) automatic on/off switching of lighting and ventilation fan inside the lift; and
- (i) building energy management system for large installations.

27. For renewable energy technologies, we will install solar hot water system to provide renewable energy for environmental benefits.

28. The total estimated additional cost for adoption of the energy conservation measures is around \$2 million (including \$1.4 million for energy efficient features), which has been included in the cost estimate of the project. The energy efficient features will achieve 10% energy savings in the annual energy consumption with a payback period at about 3 years.

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

30. The project does not require any land acquisition.

/ BACKGROUND

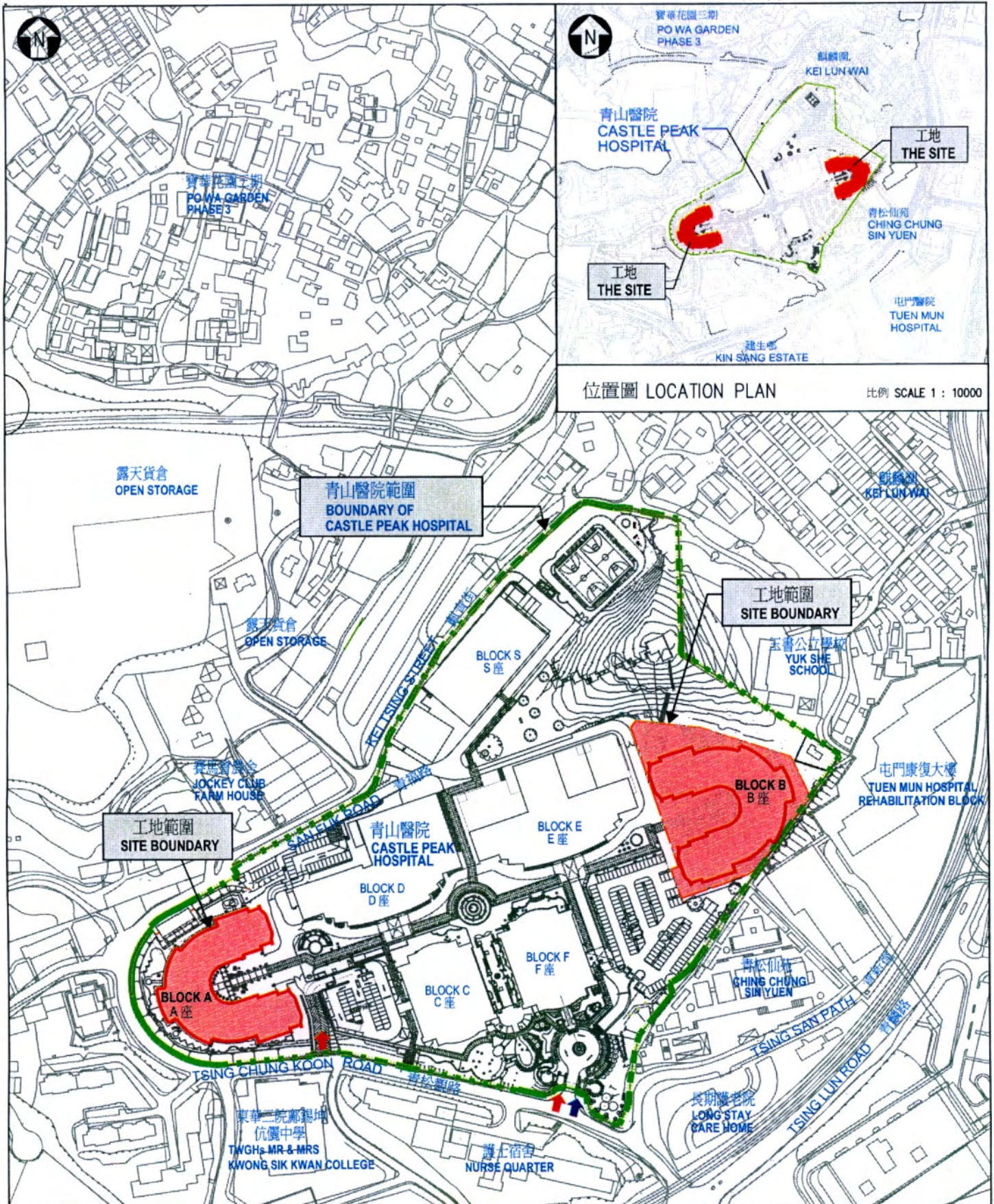
BACKGROUND INFORMATION

31. We upgraded **69MM** to Category B in September 2007. We engaged an architectural consultant in February 2009 to undertake the detailed design. We engaged a quantity surveying consultant in February 2009 to prepare tender documents. The total cost of the above consultancy services is \$8.1 million. We have charged this amount to block allocation **Subhead 8100MX** “Hospital Authority – improvement works, feasibility studies, investigations and pre-contract consultancy services for building projects”. The architectural consultant has completed the detailed design. The quantity surveying consultant is finalising the tender documents for this project.

32. The proposed renovation/alteration works will not involve any tree removal and planting proposal.

33. We estimate that the proposed works will create about 430 jobs (386 for labourers and another 44 for professional/technical staff) providing a total employment of 5 700 man-months.

Food and Health Bureau
June 2009



位置圖 LOCATION PLAN

比例 SCALE 1 : 10000

Legends ↑ PEDESTRIAN ACCESS 行人出入口 ↑ VEHICULAR ACCESS 車輛出入口

8069MM

小欖醫院搬遷至青山醫院B座

RELOCATION OF SIU LAM HOSPITAL TO BLOCK B OF CASTLE PEAK HOSPITAL

drawn by 繪圖 EMIL MOK

approved 覆核 PEGGY YU

office 辦事處 PROJECT MANAGEMENT BRANCH 工程策劃管理處

date 日期 04/09

date 日期 04/09

drawing no. 編號 AB/7264/XA01

scale 比例 1 : 3000



ARCHITECTURAL SERVICES DEPARTMENT 建築署

Enclosure 2 to PWSC(2009-10)61

69MM – Relocation of Siu Lam Hospital to Block B of Castle Peak Hospital

Breakdown of estimates for consultants' fees and resident site staff costs (in September 2008 prices)

		Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fees for					
(i) contract	Professional	–	–	–	3.8
administration (Note 2)	Technical	–	–	–	3.3
Sub-total					7.1
(ii) Risk	Professional	3	38	2.0	0.4
Management	Technical	15	14	2.0	0.6
Sub-total					1.0
(b) Resident site staff costs ^(Note 3)					
	Professional	1	38	1.6	0.1
	Technical	81	14	1.6	2.6
Sub-total					2.7
Comprising –					
(i) Consultants' fees for management of resident site staff					0.1
(ii) Remuneration of resident site staff					2.6
Total					10.8

* 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 2008, MPS point 38 = \$60,535 per month, and MPS point 14 = \$19,835 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 **69MM**. The assignment will only be executed subject to Finance Committee's approval to upgrade **69MM** 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.

69MM – Relocation of Siu Lam Hospital to Block B of Castle Peak Hospital

**Indicative list of furniture and equipment items
with unit cost of \$1 million or more**

Item description	Quantity	Unit cost (\$ million)	Total cost (\$ million)
Closed circuit television (CCTV) system	1	1.000	1.000