

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Medical Subventions

8MA - Redevelopment of Caritas Medical Centre, phase 2

Members are invited to recommend to Finance Committee the upgrading of **8MA** to Category A at an estimated cost of \$1,218.1 million in money-of-the-day prices for the main works of the redevelopment of Caritas Medical Centre, phase 2.

PROBLEM

Four of the seven blocks of Caritas Medical Centre (CMC) are dilapidated, substandard and cannot meet present-day requirements of an acute general hospital. In addition, CMC falls short of clinical space and treatment facilities to cope with the increase in service demand.

PROPOSAL

2. The Secretary for Health, Welfare and Food proposes to upgrade the remaining part of **8MA** to Category A at an estimated cost of \$1,218.1 million in money-of-the-day (MOD) prices for carrying out the main works (i.e. stage II) of the phase 2 redevelopment of CMC.

PROJECT SCOPE AND NATURE

3. Phase 2 redevelopment of CMC comprises two stages. The scope of works of each stage is as follows –

/(a)

- (a) Stage I – preparatory works, covering -
 - (i) site investigation; and
 - (ii) consultancy services for outline sketch design, detailed design, as well as tender documentation and assessment for the main works.

- (b) Stage II – main works, covering -
 - (i) demolition of the existing Wai Ming Block for the construction of a new ambulatory/rehabilitation block on the same site, to accommodate 260 convalescent/rehabilitation beds, ambulatory care and clinical support facilities;
 - (ii) site formation and excavation;
 - (iii) piling works;
 - (iv) refurbishment of Jockey Club Wai Oi Block to accommodate tele-health service, nurse specialist office, community nursing office, maintenance department, central domestic services, security and transport services, a training and conference centre, a library, Red Cross School and staff changing facilities reprovioned from Wai Ming Block, Wai On Block and Wai Yan Block;
 - (v) construction of two link bridges connecting Wai Shun Block with the new ambulatory/rehabilitation block and Wai Oi Block respectively and a walkway linking Wai Yee Block and Wai Shun Block;
 - (vi) demolition of Wai On Block, Wai Tak Block and Wai Yan Block for the construction of a rehabilitation garden, external landscaping, and improvement works of access road and hospital entrances; and
 - (vii) consultancy services for contract administration and site supervision of the main works.

4. Stage I preparatory works, which is funded under 9MA “Redevelopment of Caritas Medical Centre, phase 2 – preparatory works”, are in progress and will be completed substantially by mid 2007. According to the latest schedule, we propose to start the Stage II main works as described in paragraph 3 (b) above in November 2007. The new ambulatory/rehabilitation block and rehabilitation garden will be completed by August 2011 and March 2012 respectively. The site plans showing the existing and proposed layout of CMC are at Enclosures 1 and 2 respectively.

JUSTIFICATION

Substandard building conditions

5. Except for Wai Shun Block (built in 2002 under phase 1 redevelopment), Jockey Club Wai Oi Block (built in 1988) and Wai Yee Block (built in 1964 and renovated in 1993), all the other four CMC’s hospital blocks viz. Wai On Block, Wai Tak Block, Wai Yan Block and Wai Ming Block, are old, dilapidated and substandard. The former three blocks have been in use for more than 40 years while Wai Ming Block for 28 years. Apart from the inadequate and outdated provision of facilities, such as the lack of emergency power supply, the substandard conditions of these blocks have also made it increasingly costly to maintain them in a serviceable condition.

Improving operational efficiency

6. In addition, due to the old design of the building blocks and geographical constraints, services and facilities of CMC are currently scattered among different hospital blocks that are situated on a slope. Commuting among the various blocks has always been difficult for patients, hospital staff and the public. To enhance both the overall operational efficiency of CMC and convenience of hospital users, it is proposed that the clinical services, such as rehabilitation and hospice wards, General Out-patient Clinic, Specialist Out-patient Clinic (SOPC), Geriatric Day Hospital (GDH), and other allied health and supportive services, which are currently housed and scattered in the four blocks of Wai On Block, Wai Tak Block, Wai Yan Block and Wai Ming Block, be centrally located in a new block. Jockey Club Wai Oi Block is proposed to be refurbished to accommodate the administrative offices. To further facilitate commuting, we also propose to construct link bridges to connect the new block with other existing buildings at CMC.

/Insufficient

Insufficient clinical space

7. Apart from the physical upgrading and centralization of the building blocks and clinical services, the opportunity is also taken to increase the clinical space and facilities of CMC to meet present-day standard and rising demand from the growing population. While completion of the new acute block, Wai Shun Block, in 2002 under phase 1 of the redevelopment project, has provided additional space at CMC, the increasing population in the district will continue to exert pressure on service provision from CMC. According to the latest population projections by the Planning Department (PlanD), population in the Sham Shui Po (SSP) district, where 65% of the patients of CMC come from, will increase from around 381 100 in 2006 to 449 200 in 2015, representing a 17.9% rise. One of the services which has experienced significant pressure is SOPC where the number of attendances has grown from 257 000 in 1996-97 by 27.3% to 327 182 in 2005-06. The surge in demand over the years has caused serious overcrowding in the SOPC.

Expansion of geriatric and ambulatory services

8. With an ageing population that is more prone to chronic illnesses and disabilities, the demand for rehabilitation and geriatric services is increasing as well. The SSP district has the second highest percentage (16%) of elderly population aged 65 or above in the territory. At present, CMC runs a GDH which is operated by a multi-disciplinary team of health care professionals and providing comprehensive day care programmes for the treatment, rehabilitation, and health maintenance of elderly patients. The total attendance was 8 870 in 2005-06. As projected by PlanD, the elderly population aged 65 or above in the SSP district will increase from around 59 600 in 2005 by 19.6% to around 71 300 in 2015. To meet the increasing service demand, we propose to expand the GDH's capacity from the existing 40 places to 60 places to cater for an annual attendance of 15 000. We also propose to increase the number of convalescent/rehabilitation beds at CMC from 242 to 260.

9. In line with the international trend to provide surgical services on ambulatory rather than in-patient basis, we propose to set up an expanded day surgery centre with a pre-admission clinic and three designated operating theatres in CMC. Development of ambulatory surgical services not only enhances cost-effectiveness but also improves patient satisfaction in terms of convenience and quality of care. By increasing the number of operating theatres in the day surgery centre from two to three, the number of operations the centre can handle each year will increase from 3 300 to 5 000. We also propose to increase the number of day beds in CMC from 18 to 50. Some 42 of these day beds will be used for day procedures and post-operative recovery, and the remaining eight for day hospice care.

/The

The redevelopment project

10. To enable commencement of the main works, services and facilities of Wai Ming Block will first be decanted to other premises within CMC before it is demolished for construction of the new block in situ. At the same time, Wai Oi Block will be refurbished for accommodation of administrative functions. Upon completion of the new block, services and facilities earlier decanted from Wai Ming Block and those at Wai On Block, Wai Tak Block and Wai Yan Block will be reprovisioned at the new block and the refurbished Wai Oi Block. The Wai On Block, Wai Tak Block and Wai Yan Block will then be demolished to make way for a rehabilitation garden. The Hospital Authority (HA) will ensure that disturbance to patient services during the construction period will be minimised.

11. In sum, the new block, scheduled for completion in August 2011, will accommodate 260 convalescent/rehabilitation beds; 50 beds for day surgery (including 42 beds for day procedures and 8 for hospice care); and 60 day places for geriatric day hospital. Upon completion of the phase 2 redevelopment project, CMC will have a total of 1 276 in-patient beds and will be able to handle 596 000 outpatient attendance annually.

FINANCIAL IMPLICATIONS

12. The HA, in consultation with the Director of Architectural Services (D Arch S), estimates the cost of the main works to be \$1,268.1 million in MOD prices (see paragraph 13 below), made up as follows –

	\$ million		
	New Block	Works to Existing Facilities	Total
(a) Decanting		56.8	56.8
(b) Demolition	31.3		31.3
(c) Substructure/piling	110.3		110.3
(d) Drainage and external works	58.9		58.9
(e) Building	365.4	10.9	376.3
			/(f)

	\$ million		
(f) Building services	358.3	8.4	366.7
(g) Consultants' fees for			54.5
(i) project management & contract administration	39.6		
(ii) site supervision	14.9		
(h) Furniture and Equipment ¹			134.4
(i) Contingencies			40.1
		Sub-total	1,229.3 (in Sept. 2006 prices)
(j) Provision for price adjustment			38.8
		Total	1,268.1 (in MOD prices)

— A breakdown by man-months of the estimate of consultants' fees is at Enclosure 3. The construction floor area (CFA) of the new block is 59 108 square metres (m²). The estimated construction unit cost, represented by building and building services costs, is \$12,244 per m² of CFA in September 2006 prices. We consider this unit cost reasonable as compared with other similar hospital projects.

13. The CMC has undertaken to contribute \$50 million in MOD prices over eight years towards the capital cost of the project. We propose a commitment of \$1,218.1 million in MOD prices for this project, calculated as follows –

	\$ million	
(a) Total capital cost	1,268.1	
(b) Contribution from the CMC	(50.0)	
Total commitment sought	1,218.1	(in MOD prices)

/14.

¹ Based on an indicative list of furniture and equipment items and their estimated prices.

14. Subject to approval, the HA will phase the expenditure as follows

Year	\$ million (Sept 2006)		Price adjustment factor	\$ million (MOD)	
	Funded under 8MA	Construction cost		Funded under 8MA	Construction cost
2007 – 2008	28.1	34.6	0.99900	28.1	34.6
2008 – 2009	59.6	66.0	1.00649	60.0	66.4
2009 – 2010	109.8	116.0	1.01656	111.6	117.9
2010 – 2011	469.7	475.7	1.02672	482.3	488.4
2011 – 2012	392.8	398.8	1.03699	407.3	413.6
2012 – 2013	96.2	102.1	1.05514	101.5	107.7
2013 – 2014	10.7	16.5	1.07624	11.5	17.8
2014 – 2015	7.1	12.8	1.09777	7.8	14.1
2015 – 2016	7.1	6.8	1.11972	8.0	7.6
Total	1,181.1	1,229.3		1,218.1	1,268.1

15. 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 2007 to 2016. The HA will engage consultants for contract administration of the main works and on the basis of fixed-price lump sum fees. The contract will provide for price adjustments because the contract period will exceed 21 months.

16. The HA has assessed the requirements for furniture and equipment (F&E) for this project, and estimates the F&E cost to be \$134.4 million. The proposed F&E provision represents 16.8% of the total construction cost² 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 4.

17. We estimate the additional annual recurrent expenditure arising from the project to be around \$50 million and will be absorbed by the HA.

PUBLIC CONSULTATION

18. The HA consulted the Sham Shui Po District Council (SSPDC) on 17 October 2006 on the proposed project. Members of the SSPDC supported the proposed project. We also consulted the Legislative Council Panel on Health Services (the Panel) on 8 January 2007. Members of the Panel supported the project though they asked questions related to how the redeveloped CMC could cope with the service demand from the growing population in the SSP district; the delineation of role and service provision of hospitals in the Kowloon West Cluster; and the additional manpower required for the redeveloped CMC. We provided the additional information to the Panel on 30 March 2007.

ENVIRONMENTAL IMPLICATIONS

19. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). Consultants engaged by the HA completed a Preliminary Environmental Review (PER) for the proposed works of CMC in October 2001. The PER concluded and the Director of Environmental Protection agreed that the project would not cause long-term environmental impact and that an Environmental Impact Assessment was not necessary. During construction, the contractor will control noise, dust and site run-off nuisances to within established standards and guidelines through implementation of mitigation measures in the relevant contracts. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site and, where applicable, the provision of wheel-washing facilities. These mitigation measures will be adequate to curb negative environment impacts on sensitive hospital users (e.g. hospital patients) to within acceptable level.

/20.

² Represented by building, building services, and drainage and external works costs for this project.

20. We have considered measures in the planning and design stages to reduce the generation of construction and demolition (C&D) materials. We will try to reduce temporary formwork. In addition, we will require the contractors to use metal site hoardings and signboards so that these materials can be recycled or reused in other projects to further minimise the generation of construction waste. We will require the contractor to reuse the demolition materials on site or in other suitable construction sites as far as possible, in order to minimise the disposal of C&D materials to public fill reception facilities.

21. We will also require the contractors 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 day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill and C&D waste to public fill reception, sorting facilities and landfills respectively through a trip-ticket system. We will require the contractors 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 93 000 tonnes of C&D materials. Of these, HA will discharge about 56 000 tonnes (60.2%) to public fill reception facilities for subsequent reuse. In addition, about 37 000 tonnes (39.8%) will be disposed of at landfills. The total cost of accommodating C&D waste materials at public fill reception facilities and landfill sites is estimated to be about \$6.1 million for this project (based on a notional unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne³ at landfills).

LAND ACQUISITION

23. The proposed main works do not require land acquisition.

/BACKGROUND

³ 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.

BACKGROUND INFORMATION

24. CMC commenced operation in 1964 and has developed over the years into an acute general hospital with 1 223 in-patient beds, 18 day beds, 40 geriatric day places and a 24-hour Accident and Emergency department. At present, CMC is one of the seven hospitals of the HA Kowloon West (KW) Cluster, providing a full range of acute, extended and community care services mainly to residents of Sham Shui Po District. Its clinical specialties include medicine, surgery, orthopaedics and traumatology, paediatrics and ophthalmology, etc. CMC also provides rehabilitation and hospice care for the whole population in the KW cluster catchment.

25. Prior to 2002, CMC had eight hospital blocks, namely, Wai Yan Block (built in 1964), Wai Lok Block (built in 1965), Wai On Block (built in 1965), Wai Tak Block (built in 1966), Wai Mon Block (built in 1968), Wai Ming Block (built in 1978), Wai Oi Block (built in 1988) and Wai Yee Block (built in 1964 and renovated in 1993). The Finance Committee approved in November 1997 funding of \$769.2 million in MOD prices for phase 1 redevelopment of CMC (**7MA**), to redevelop Wai Lok Block and Wai Mon Block into a new 14-story acute block to accommodate in-patient wards, the Accident and Emergency Department, Intensive Care Unit and operating theatres, etc. The new block, viz Wai Shun Block, was commissioned in early 2002.

26. On 18 July 2003, Finance Committee approved the upgrading of part of **8MA** to Category A as **9MA** "Redevelopment of Caritas Medical Centre, phase 2 – preparatory works", at an estimated cost of \$47.9 million in MOD prices, for preparatory works of the redevelopment project as described in paragraph 3 (a) above.

27. Wai Ming Block currently accommodates rehabilitation and hospice wards, as well as physiotherapy department, occupational therapy department, medical social service, electro-diagnostic unit, blood-taking centre, patient resource centre, Red Cross library, doctors' common room, in-patient medical records store, mortuary, admission & enquiry office, shroff office, tuck shop, general stores and carparks. Wai Tak Block accommodates the general out-patient department, SOP department, cluster ophthalmic care centre, out-patient X-ray department and out-patient pharmacy. Wai On Block accommodates Red Cross School, HA staff clinic, integrated clinic, tele-health clinic, diabetics centre, out-patient medical records store, as well as clinical psychology, podiatry, speech therapy and dietetics departments. Wai Yan Block accommodates the geriatric day hospital, prosthetics & orthotics department, and maintenance department.

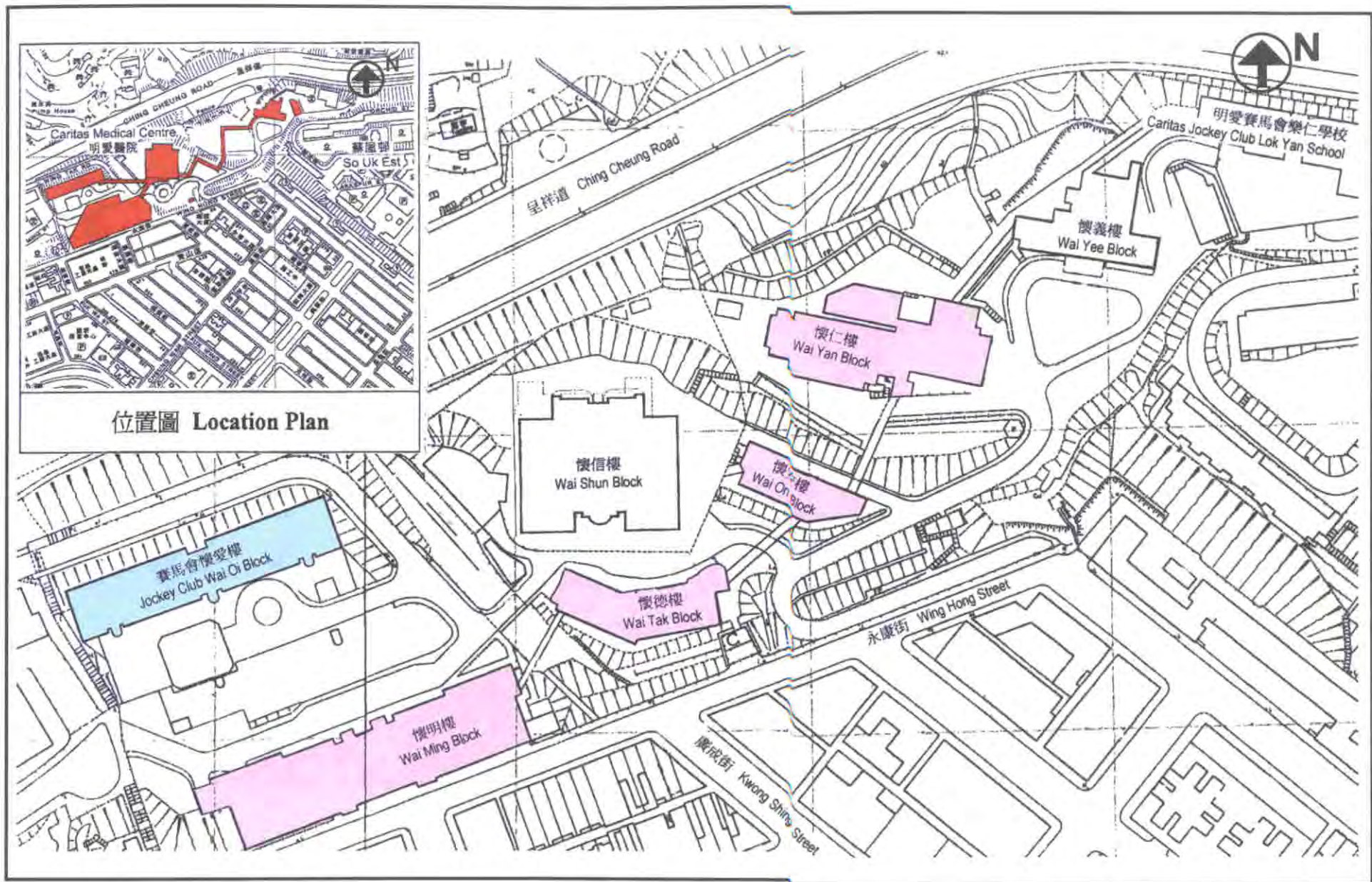
28. Of the 400 trees within the project boundary, 340 of these trees will be preserved. The proposed works will involve removal of 60 trees, including 45 trees to be felled and 15 trees to be transplanted within the project site. None of them are important trees⁴. We will incorporate planting proposals as part of the project, including estimated quantities of 50 trees and 1200 shrubs.

29. We estimate that the proposed main works will create some 625 jobs (70 for professional / technical staff and another 555 for labourers) providing a total of 22 300 man-months.

Health, Welfare and Food Bureau
April 2007

⁴ An “important tree” refers 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.



8008MA - Redevelopment of Caritas Medical Centre, phase 2

明愛醫院第二期重建計劃

Site Plan of Existing Caritas Medical Centre (N.T.S.) 明愛醫院現時平面圖(不按比例)



8008MA - Redevelopment of Caritas Medical Centre, phase 2

明愛醫院第二期重建計劃

Site Plan of Caritas Medical Centre upon completion of Phase 2 Redevelopment (N.T.S.) 明愛醫院二期重建後平面圖(不按比例)

Enclosure 3 to PWSC(2007-08)9

2. A multiplier of 2.0 is applied to the average MPS point to estimate the full staff costs for the staff employed by the consultants. The staff costs include the consultants' overheads and profit. (As at 1 January 2007, MPS point 38 is \$54,255 per month and MPS point 14 is \$18,010 per month.)

Enclosure 4 to PWSC(2007-08)9**8MA – Redevelopment of Caritas Medical Centre, phase 2****Furniture and equipment items with unit cost of \$1 million or more**

Item description	Quantity	Unit cost (\$ million)	Total cost (\$ million)
Drug Dispensing System	1	4.000	4.000
Digital Ophthalmic Imaging System	1	1.200	1.200
Digital Radiography Machine	2	5.500	11.000
Gait & Movement Laboratory System	1	1.500	1.500
Medical Records Storage System	1	5.000	5.000
Ophthalmic Microscopic System	2	1.500	3.000
Patient Flow Management System	1	2.000	2.000
Picture Archiving Communication System	1	12.000	12.000
Physiological Monitoring & Networking System	1	4.000	4.000
Pharmaceutical Bulk Storage System	1	1.500	1.500
Radiography System for Dental Clinic	1	1.500	1.500
Telecommunication System	1	8.000	8.000