

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Medical Subventions

13MD – Redevelopment of Kwong Wah Hospital

Members are invited to recommend to Finance Committee –

- (a) the upgrading of part of **13MD**, entitled “Redevelopment of Kwong Wah Hospital – preparatory works”, to Category A at an estimated cost of \$552.7 million in money-of-the-day prices; and
- (b) the retention of the remainder of **13MD** in Category B.

PROBLEM

The existing capacity of Kwong Wah Hospital (KWH) is inadequate to meet the increasing demand and requirements for healthcare services in Kowloon West (KW) cluster due to physical and space constraints.

PROPOSAL

2. The Secretary for Food and Health proposes to upgrade part of **13MD** to Category A at an estimated cost of \$552.7 million in money-of-the-day (MOD) prices for the preparatory works for the redevelopment of KWH.

/PROJECT

PROJECT SCOPE AND NATURE

3. The part of **13MD** which we propose to upgrade to Category A (i.e. the preparatory works) comprises –

- (a) site surveys and investigations;
- (b) decanting works including relocation and temporary reprovisioning for clinical services, facilities and equipment, offices and staff accommodation in the affected buildings during redevelopment;
- (c) protection works for the Tung Wah Museum, such as erection of hoarding, covered walkways, structural strengthening and vibration control; and
- (d) consultancy services for outline sketch design, detailed design, as well as tender documentation and assessment for the main works.

Subject to funding approval by the Finance Committee (FC), we plan to start the preparatory works in March 2013 for completion in 2022. While the site surveys and investigations and decanting works are expected to be completed in 2014 and 2015 respectively, consultancy services relating to tendering and design would be needed throughout the redevelopment period prior to commencement of different phases of constructions works.

4. We will retain the remainder of **13MD** (i.e. the main works) in Category B. The main works, which are planned to commence in phases from 2016 for completion in 2022, comprises –

- (a) phased demolition of the Administration Building, Nurses' Quarters, Chinese Medicine Clinical Research and Services Centre, Staff Barracks, Main Hospital Building and Tung Wah Group of Hospitals (TWGHs) Yu Chun Keung Memorial Medical Centre (YCKMMC);
- (b) construction of a new complex;
- (c) alteration/addition works to TWGHs Tsui Tsin Tong Out-patient Building (TTT OPB); and
- (d) landscaping and road works.

— The existing site plan of KWH and the tentative site plan¹ of KWH upon completion of the main works are at Enclosures 1 and 2 respectively. Subject to the outcome of the detailed design, the main works are estimated to cost about \$9,200 million at September 2012 price level. Funding for the main works will be sought to dovetail with the implementation programme of the project.

JUSTIFICATION

5. At present, the Hospital Authority (HA) provides public hospital services for Sham Shui Po, Mongkok, Wong Tai Sin, Kwai Tsing, Tsuen Wan and North Lantau districts through its KW cluster, which comprises KWH, Caritas Medical Centre, Our Lady of Maryknoll Hospital, Wong Tai Sin Hospital, Kwai Chung Hospital, Princess Margaret Hospital and Yan Chai Hospital. KWH was established in 1911 and is a major acute hospital offering comprehensive acute care services.

Ageing hospital buildings

6. Apart from the TWGHs TTT OPB which was built in 1999 and the Tung Wah Museum which is a declared monument built in 1911, the rest of the hospital buildings at KWH are old and in need of redevelopment. The Main Hospital Building was constructed in stages between 1959 and 1964. The Staff Barracks, Chinese Medicine Clinical Research and Services Centre, Nurses' Quarters and Administration Building were all constructed in the 1960s and are in need of constant repairs. The TWGHs YCKMMC was constructed in 1981 and becomes inefficient and outdated in terms of accommodation requirement.

7. With the passage of time, the space provision of most KWH buildings has become inadequate to meet nowadays' services requirement and their building services installations are out-dated. The structural conditions of the buildings have also been deteriorating. Located in a densely populated area, KWH is one of the busiest hospitals of HA. The extremely heavy utilisation of KWH has also accelerated the wear and tear of its facilities.

/Space

¹ The tentative site plan may be modified by the consultant in the light of findings of the preparatory works.

Space constraints

8. Inadequate operational floor space has been a perennial problem facing KWH against the ever-increasing service demands. Numerous improvement works have been carried out in ad-hoc manner over the years to cope with operational needs of clinical services units. At present, related facilities and services are scattered over different buildings at KWH, causing unnecessary travelling and inconvenience to patients, increasing the risk of cross infections and hampering the operational efficiency of the hospital.

9. To ensure that modern and safe services could be provided to meet future healthcare needs of the community, we propose to redevelop KWH. The redevelopment proposal will modernise KWH to enhance its operational efficiency, as well as provide a patient-oriented environment with adequate capacity and capability for the delivery of holistic and seamless healthcare services.

Need for Redevelopment

Major Acute Services

10. KWH will retain its role as a major acute hospital providing a full range of in-patient and ambulatory care services after redevelopment. By providing additional space and large floor plates with a patient-oriented design and rationalized services, the redevelopment project will facilitate provision of KWH's existing clinical services such as medicine, surgery, obstetrics and gynaecology, orthopaedics and traumatology and paediatrics in a well-coordinated approach to meet future models of care. In-patient services will be considerably strengthened with provision of isolation facilities, re-alignment of critical care service as well as improved accessibility to diagnostic and procedural facilities and rehabilitation services. Area for in-patient accommodation will be expanded from around 27 000 square meters (m²) to around 32 000 m². The redevelopment plan will enable KWH to meet the standards of a modern acute hospital, with a patient-oriented setting and flexible use of space that improve patient's comfort, achieve operational efficiency and provide quality healthcare.

/Accident

Accident and Emergency (A&E) Services

11. On average, there are about 400 patients visiting the A&E department of KWH daily. The management of this large number of patients for emergency care within very confined space provisions is undesirable. We will introduce an emergency medicine (EM) ward in the redeveloped KWH to reduce unnecessary hospitalisation through early diagnosis, assessment and treatment of patients. The observation ward will also be expanded so as to allow adequate observation time for quality delivery of emergency care. Isolation facilities will also be provided to enhance infection control. We will expand the A&E department from around 1 800 m² to around 5 000 m² to cater for the provision of the EM ward as well as other additional and enhanced treatment facilities.

Ambulatory Care Services

12. Ambulatory care services will be delivered among different clinical specialties in patient-oriented setting, with a view to reducing the need for hospitalisation. Through concentration of advanced medical technology and clinical expertise, one-stop multi-disciplinary services will be provided to patients with non-acute conditions for more effective treatment and continuity of care. The existing scattered ambulatory services such as haemodialysis, day surgery and endoscopy, as well as the ambulatory component of obstetrics and gynaecology, and paediatric services, etc. will be expanded and put under one roof. The total floor area of ambulatory care centre of the redeveloped KWH will increase from 4 700 m² to around 24 000 m².

13. As cancer treatment represents a significant area of work at KWH, medical oncology service will be introduced to enhance treatment of cancer patients. Many cancer patients having their initial treatment through surgical or procedural intervention will require chemotherapy pre-operatively or post-operatively. At present, after diagnosis and surgery, KWH refers cancer patients to Princess Margaret Hospital for medical oncology treatment. Upon completion of the redevelopment of KWH, the new medical oncology service will provide front-line management, consultation services and chemotherapy programmes in the ambulatory care centre.

/14.

14. The demand for specialist out-patient consultation services in KWH has increased in the past five years. The number of out-patient attendances has risen by 8% from 321 700 to 348 800 between 2006 and 2011. The existing facilities are inadequate to meet the high service demand and prevailing infection control requirements. Currently, doctors have to share consultation rooms due to lack of space. There is a need to expand the space and facilities of the existing specialist out-patient department to meet service demands, shorten waiting time, reduce risks of cross infection and provide patient-centred environment. We plan to expand the specialist out-patient department from around 3 600 m² to around 6 700 m² and to increase the number of consultation rooms from 44 to around 100.

Other Services

15. Apart from the above, other services (including Pathology Department, allied health services, lecture theatre and staff training facilities, department offices and ancillary facilities including supporting and administrative services) will be improved and expanded. In addition, modern technology will be introduced where appropriate to facilitate efficient operation of the redeveloped hospital.

Chinese Medicine (CM) Services

16. The TWGHs has a long history of providing CM services in its two CM general clinics. Since 2001, the TWGHs has further established six modern CM clinical research and services centres, and five integrated Chinese and western treatment centres in Hong Kong. The TWGHs currently runs CM services and preventive care services in KWH with the support of the western medicine colleagues in various locations within KWH. With the surging demand for CM over the years, the inadequate floor space and scattered service locations have hindered the service development as well as provision of comprehensive clinical training for CM graduates and students. The redeveloped KWH will accommodate reprovisioned facilities for enhanced Chinese and western medicine hospital services, including integrated Chinese and western medicine in-patient accommodation with over 50 beds. This will not only foster close collaboration between CM and different clinical specialties, but will also enhance training opportunities for CM practitioners and students.

The Redevelopment Project

17. The main works of the project comprise phased demolition of all the existing buildings except for the TWGHs TTT OPB for the construction of a new complex which will embrace the philosophy of ambulatory care as a new model of service delivery. The Tung Wah Museum, which is a declared monument built in 1911, will also be retained.

18. The new complex will accommodate the following new and existing services and facilities with expanded capacity –

New services

- (a) EM ward;
- (b) medical oncology service;

Existing and expanded services

- (c) in-patient ward accommodation with isolation facilities;
- (d) A&E department;
- (e) various ambulatory services such as haemodialysis, day surgery, endoscopy, day obstetrics and gynaecology, and day paediatrics, etc;
- (f) Out-patient Department;
- (g) operating theatres;
- (h) Intensive Care Unit/High Dependency Unit;
- (i) labour and delivery rooms;
- (j) Radiology Department;
- (k) Pathology Department;
- (l) allied health services;
- (m) lecture theatre and staff training facilities;
- (n) department offices;

/(o)

- (o) ancillary facilities including administrative and supporting services (such as stores, callrooms/overnight rooms, staff changing rooms, staff recreational facilities and carparks) ; and
- (p) services run by TWGHs, including health promotion and wellness centre; CM general out-patient clinic; CM Clinical Research and Services Centre; CM laboratory and radiology facilities, and integrated Chinese and western medicine in-patient accommodation.

19. To ensure that there will be no disruption to the continuity of services for patients during implementation of the project, KWH will make appropriate decanting arrangements for its services. While essential clinical services will remain on-site, other ancillary facilities such as offices, stores and staff accommodation will be temporarily decanted off-site. The redevelopment project will be implemented in phases, and the vacated space in buildings not demolished will be deployed to accommodate the affected clinical services. Other measures to maintain clinical services include extending service hours of the operating theatres as and when necessary. To ensure adequate capacity and capability to deliver quality patient service, we will also arrange clinical support from other hospitals in the KW cluster when surging demand for clinical services is anticipated. Details of the decanting arrangement will be considered in the detailed planning and design stage.

FINANCIAL IMPLICATIONS

20. HA, in consultation with the Director of Architectural Services, estimates the cost of the proposed preparatory works to be \$552.7 million in MOD prices, broken down as follows –

	\$ million
(a) Consultants' fees for	235.2
(i) Outline sketch plan	51.9
(ii) Detailed design	76.5
(iii) Tender documentation and assessment	106.8
(b) Site surveys and investigations	8.0

/(c)

	\$ million
(c) Decanting works (including protection works for Tung Wah Museum)	130.0
(d) Contingencies	37.3
Sub-total	<u>410.5</u> (in September 2012 prices)
(e) Provision for price adjustment	142.2
Total	<u>552.7²</u> (in MOD prices)

Owing to lack of sufficient in-house resources, HA will engage consultants (for services set out in paragraph 20(a)) and contractors (for services set out in paragraph 20(b) and (c)) to carry out the preparatory works. A breakdown by man-months of the estimated consultants' fees for carrying out services detailed in paragraph 20(a) is at Enclosure 3.

21. Subject to funding approval, the HA will phase the expenditure as follows –

Year	\$ million (Sept 2012)	Price adjustment factor	\$ million (MOD)
2013 – 14	21.0	1.06250	22.3
2014 – 15	44.0	1.12625	49.6
2015 – 16	67.0	1.19383	80.0
2016 – 17	63.0	1.26545	79.7
2017 – 18	29.0	1.34138	38.9
2018 – 19	42.0	1.41180	59.3

/2019 – 20

² The estimate has taken into account the returned tender price for paragraph 20(a) and the estimated cost for paragraphs 20(b) and (c).

Year	\$ million (Sept 2012)	Price adjustment factor	\$ million (MOD)
2019 – 20	54.0	1.48239	80.0
2020 – 21	65.0	1.55651	101.2
2021 – 22	25.5	1.63434	41.7
	410.5		552.7

22. We have derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period from 2013 to 2022. HA will award the contracts on a lump sum basis for decanting, site surveys and investigation works. The contracts will provide for price adjustments. For on-site decanting works, HA's term contractor, who is familiar with the operating environment and selected through competitive bidding process, will be used to facilitate early completion of works.

23. The proposed preparatory works will not give rise to any additional recurrent expenditure.

PUBLIC CONSULTATION

24. HA consulted the Yau Tsim Mong District Council (YTMDC) on 12 January 2012. Members of the YTMDC supported the proposed project.

25. We consulted the Legislative Council Panel on Health Services on 11 June 2012. Members of the Panel supported the project.

ENVIRONMENTAL IMPLICATIONS

26. The redevelopment project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). HA will engage consultants to carry out a Preliminary Environmental Review for the proposed redevelopment of KWH at the design stage and will submit the findings to the Director of Environmental Protection for agreement.

27. The proposed preparatory works which covers site surveys and investigations, decanting works, protection works to Tung Wah Museum as well as consultancy services will not cause any adverse environmental impact. HA will implement standard environmental pollution control measures to manage the environmental impact of the site investigation works.

28. The proposed preparatory works will only generate very little construction waste. HA will require the consultant to fully consider measures to minimise the generation of construction waste and to reuse/recycle construction waste as much as possible in the future implementation of the construction project.

HERITAGE IMPLICATIONS

29. As the Tung Wah Museum, which is a monument declared under the Antiquities and Monuments Ordinance (Cap. 53), is in close proximity to the concerned site, HA will ensure that adequate protection measures will be implemented to avoid any adverse impact of the proposed preparatory works to the declared monument.

LAND ACQUISITION

30. The proposed preparatory works and main works do not require land acquisition.

BACKGROUND INFORMATION

31. We upgraded **13MD** to Category B in September 2010.

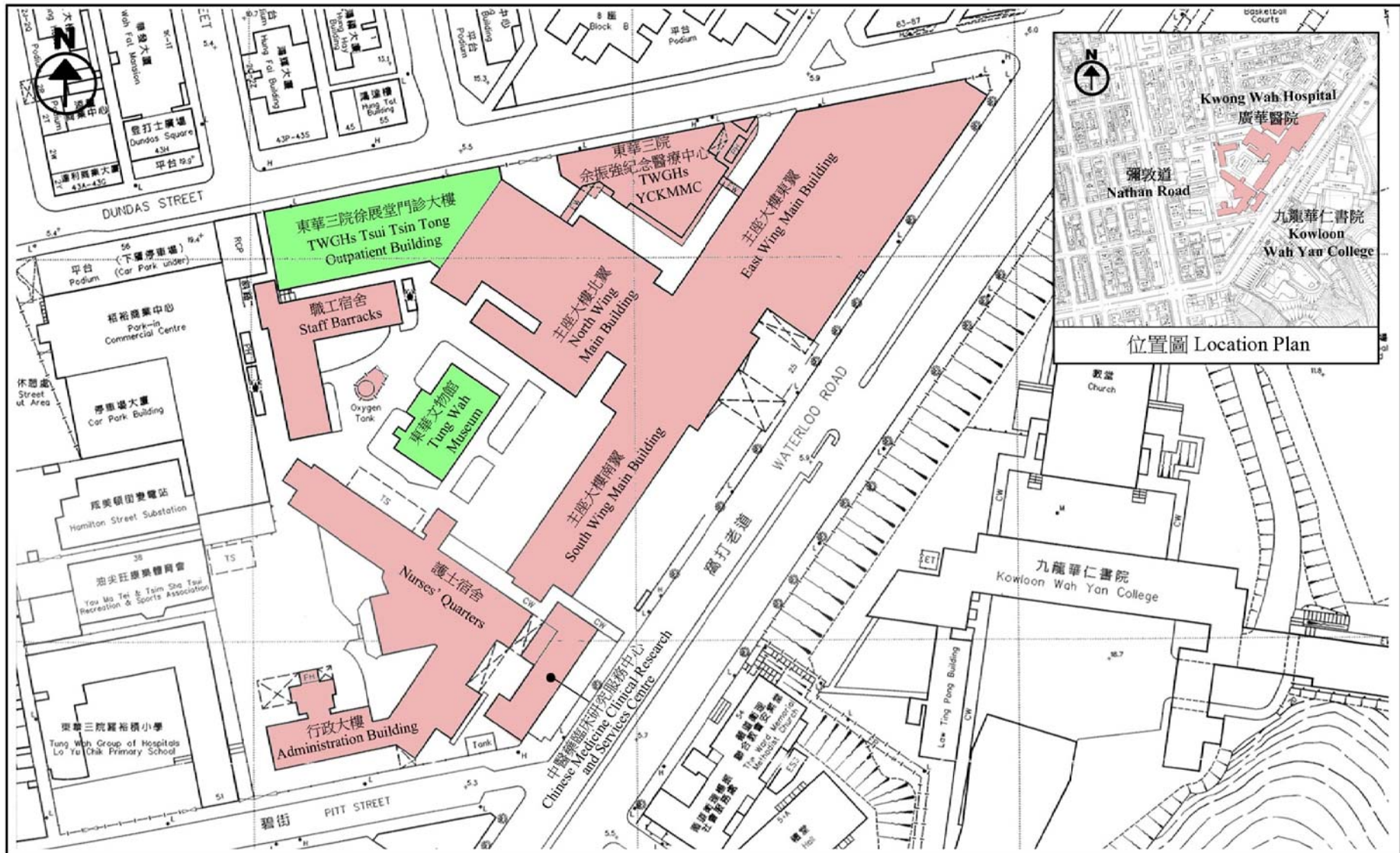
32. KWH is an acute general hospital with around 1 200 in-patient beds that runs a 24-hour A&E department and provides a full range of acute, ambulatory, extended care and community medical services. Its clinical specialties include medicine and geriatrics, surgery, orthopaedics and traumatology, paediatrics, ear, nose and throat, obstetrics and gynaecology, neurosurgery and intensive/coronary care.

33. We engaged consultants to carry out traffic impact assessment and heritage impact assessment. The total cost of the above-mentioned services is around \$0.5 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”. Both the above consultancy services have been completed.

34. The proposed preparatory works will not involve any tree removal or planting proposals.

35. We estimate that the proposed preparatory works will create about 124 jobs (97 for labourers and another 27 for professional/technical staff) providing a total employment of 4 500 man-months.

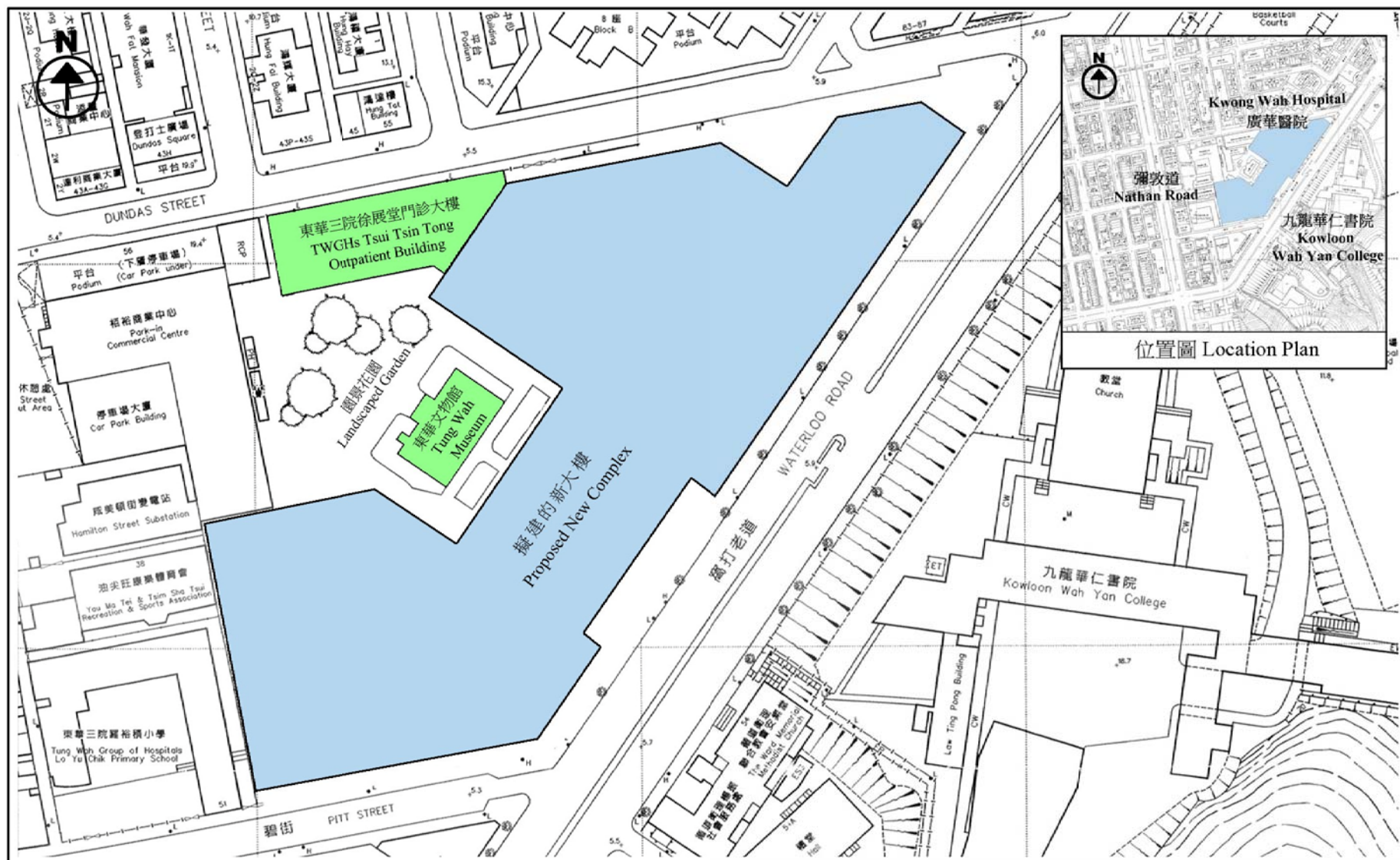
Food and Health Bureau
December 2012



8013MD - Redevelopment of Kwong Wah Hospital 廣華醫院重建計劃

Site Plan of Existing Kwong Wah Hospital (Not to Scale)
廣華醫院現時平面圖 (不按比例)

- Buildings to be demolished 將予拆卸的樓宇
- Buildings to be retained 將予保留的樓宇



8013MD - Redevelopment of Kwong Wah Hospital 廣華醫院重建計劃

Site Plan of Kwong Wah Hospital after Redevelopment (Not to Scale)
廣華醫院重建後平面圖 (不按比例)

- New Building 新大樓
- Buildings retained 被保留的樓宇

Enclosure 3 to PWSC(2012-13)46

13MD (Part) – Redevelopment of Kwong Wah Hospital

Breakdown of estimates for consultants' fees (in September 2012 prices)

Consultants' staff costs ^{Note 1}			Estimated man- months	Average MPS* salary point	Multiplier <small>(Note 2)</small>	Estimated fee (\$ million)
A. Outline sketch plan						
(a)	Architectural	Professional	97	38	2.0	12.7
		Technical	198	14	2.0	8.9
(b)	Building services	Professional	38	38	2.0	5.0
		Technical	73	14	2.0	3.3
(c)	Structural engineering	Professional	25	38	2.0	3.3
		Technical	61	14	2.0	2.7
(d)	Quantity surveying	Professional	8	38	2.0	1.1
		Technical	13	14	2.0	0.6
(e)	Project management	Professional	76	38	2.0	10.0
		Technical	97	14	2.0	4.3
Sub-total						<hr/> 51.9 <hr/>
B. Detailed design						
(a)	Architectural	Professional	135	38	2.0	17.7
		Technical	277	14	2.0	12.4
(b)	Building services	Professional	61	38	2.0	8.0
		Technical	143	14	2.0	6.4
(c)	Structural engineering	Professional	42	38	2.0	5.5
		Technical	74	14	2.0	3.3
(d)	Quantity surveying	Professional	9	38	2.0	1.2
		Technical	20	14	2.0	0.9
(e)	Project management	Professional	97	38	2.0	12.7
		Technical	187	14	2.0	8.4
Sub-total						<hr/> 76.5 <hr/>

Consultants' staff costs ^{Note 1}			Estimated man- months	Average MPS* salary point	Multiplier (Note 2)	Estimated fee (\$ million)
C. Tender documentation and assessment						
(a)	Architectural	Professional	161	38	2.0	21.2
		Technical	320	14	2.0	14.3
(b)	Building services	Professional	85	38	2.0	11.2
		Technical	176	14	2.0	7.9
(c)	Structural engineering	Professional	54	38	2.0	7.1
		Technical	112	14	2.0	5.0
(d)	Quantity surveying	Professional	52	38	2.0	6.8
		Technical	118	14	2.0	5.3
(e)	Project management	Professional	121	38	2.0	15.9
		Technical	270	14	2.0	12.1
Sub-total						106.8
Total						235.2

* MPS = Master Pay Scale

Notes

1. The actual man-months and actual fees will only be known after completion of the preparatory works.
2. A multiplier of 2.0 is applied to the average MPS point to estimate the full staff cost including the consultants' overheads and profit for staff employed in the consultants' offices. (As at now, MPS salary point 38 = \$65,695 per month and MPS salary point 14 = \$22,405 per month.)