ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Medical Subventions

71MM – Reprovisioning of Yaumatei Specialist Clinic at Queen Elizabeth Hospital

Members are invited to recommend to Finance Committee the upgrading of **71MM** to Category A at an estimated cost of \$1,891.6 million in money-of-the-day prices for the reprovisioning of Yaumatei Specialist Clinic at Queen Elizabeth Hospital.

PROBLEM

We need to reprovision the Yaumatei Specialist Clinic (YMTSC) to make way for the construction of the proposed Central Kowloon Route (CKR).

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Food and Health, proposes to upgrade **71MM** to Category A at an estimated cost of \$1,891.6 million in money-of-the-day (MOD) prices for reprovisioning of YMTSC at Queen Elizabeth Hospital (QEH).

/PROJECT

PROJECT SCOPE AND NATURE

- 3. The scope of **71MM** comprises
 - (a) demolition of the old Specialist Out-patient Clinic Building at QEH for the construction of a 11-storey new Specialist Clinic Building (New Building);
 - (b) reprovisioning of the following services/facilities currently provided by Hospital Authority (HA) at YMTSC, with enhancements as described in paragraph 10 below
 - (i) Ear, Nose and Throat (ENT) Specialist Clinic (including Speech Therapy and Audiology services);
 - (ii) Geriatric Day Hospital (including Community Geriatric Assessment services);
 - (iii) Renal Dialysis Centre; and
 - (iv) Child Psychiatric Out-patient Clinic and Day Hospital;
 - (c) provision of Linear Accelerator Suite;
 - (d) relocation of the following ambulatory care facilities/services currently available at the Ambulatory Care Centre (ACC) of QEH to the New Building, with enhancements as described in paragraph 13 below
 - (i) Adolescent Medical Centre;
 - (ii) Special Medical Care Centre;
 - (iii) Diabetes and Metabolic Centre; and
 - (iv) Multidisciplinary Pain Management Centre; and
 - (e) provision of ancillary facilities including link bridges, carparks, taxi and minibus loading/unloading area, and refuse collection point.

A site plan showing the proposed New Building is at Enclosure 1. The floor plans, sections and the perspective view (artist's impression) of the New Building are at Enclosures 2 to 7.

4. Subject to funding approval of the Finance Committee, we plan to start the construction works in June 2013 for completion in June 2016. The YMTSC will continue operation until the commissioning of the facilities in the New Building in the third quarter of 2016.

JUSTIFICATION

- 5. The YMTSC, located at Battery Street, Yau Ma Tei, was built as an extension to the Yaumatei Jockey Club Polyclinic in 1992. Currently, HA is providing the following services at YMTSC
 - (a) ENT Specialist Clinic (including Speech Therapy and Audiology services);
 - (b) Geriatric Day Hospital (including Community Geriatric Assessment services);
 - (c) Renal Dialysis Centre;
 - (d) Child Psychiatric Out-patient Clinic; and
 - (e) Child Psychiatric Day Hospital.
- 6. The construction of the proposed CKR will necessitate the demolition of YMTSC as the latter is situated along the proposed tunnel alignment of CKR. We propose to construct the New Building at the site of the old Specialist Out-patient Clinic Building at QEH and the area around it for reprovisioning the HA facilities. The old Specialist Out-patient Clinic Building at QEH, which is now vacated, was used as a Chinese Medicine Clinic which has already been relocated to the Clinical Oncology Centre in QEH in 2009. The existing specialist clinics of QEH are accommodated in the ACC within the hospital.

/7.

7. The facilities of Department of Health (DH) currently provided within the YMTSC building, including a Maternal and Child Health Centre, Dermatological Clinic and the Methadone Clinic will be reprovisioned within the same district under separate projects.

Reprovisioning of Medical Services at YMTSC

- 8. The reprovisioning of the services at YMTSC at the New Building in QEH also provides the opportunity to strengthen and enhance the existing facilities and services for patients through increase in service capacity, provision of more space, enhancing operational efficiency, and provision of more spacious environment for better quality of services to patients. The New Building will have a net operational floor area of about 6 700 square metres (m²), as compared with 3 100 m² in the existing YMTSC.
- 9. At present, staff members of YMTSC have to go to QEH regularly for delivery of documents, laboratory specimens and x-ray films, etc. Such delivery between two places will no longer be necessary following the reprovisioning of the services at QEH thus enhancing the operational efficiency. Furthermore, operational costs of the reprovisioned facilities could be reduced with the sharing of administrative support, facilities management, and security services with QEH. Moreover, the close proximity of the reprovisioned services at the New building to QEH will facilitate clinical convenience.
- 10. Details of the services of YMTSC to be reprovisioned at the New Building are set out below –

(a) ENT Specialist Clinic

The existing ENT Specialist Clinic has inadequate consultation rooms. The number of consultation rooms will be increased from 13 to 20 upon the reprovisioning so as to meet the general standard of provision. Further enhancement will be made by providing special rooms for diagnostic tests and treatment in the clinic.

(b) Geriatric Day Hospital

The existing Geriatric Day Hospital is located on separate floors. The existing 45 places in the day hospital will be reprovisioned on one floor and in a more spacious environment for better quality of services to patients.

(c) Renal Dialysis Centre (RDC)

Currently, QEH operates two RDCs, one in YMTSC and the other in QEH. With the advent of transplant surgery and dialysis treatments, life expectancy of patients suffering from end-stage renal failure has been extending, resulting in increasing demand for dialysis treatment. To meet the increase in service demand, eight additional places for renal dialysis will be provided after the reprovisioning at the New Building, bringing the total number of places to 25.

(d) Child Psychiatric Centre (CPC)

The existing CPC in YMTSC, which consists of a Child Psychiatric Out-patient Clinic with seven consultation rooms and Child Psychiatric Day Hospital with 25 places, operates on two different floors. The existing provision of the above facilities will be maintained in a more spacious environment on one floor after the reprovisioning to enhance operational efficiency.

Provision of Linear Accelerator Suite

11. To provide more modern radiotherapy service and better treatment for cancer patients, a Linear Accelerator Suite will be set up at the New Building to accommodate two new linear accelerators of modern model to replace the existing ones at QEH. The Suite at the New Building will meet the modern space standards and comply with the latest radiation protection requirements.

/Expansion

Expansion of Ambulatory Care Services at QEH

12. Apart from the reprovisioning of the existing facilities and services in YMTSC, we also propose to re-locate some of the facilities in the existing ACC of QEH to the New Building. The existing ACC has inadequate space and facilities to meet present-day requirements. The relocation of a range of existing ACC services to the New Building provides the opportunity to strengthen and enhance ACC's facilities and services. The space in ACC thus released will be used for re-engineering of medical specialist outpatient services and pharmacy service.

13. The facilities proposed to be included in the New Building are as follows –

(a) Adolescent Medical Centre (AMC)

The AMC of QEH provides holistic and one-stop service for adolescents from 12 to 19 years of age through a multi-disciplinary team comprising doctors in adolescent medicine, gynaecology and psychiatry; clinical psychologist; social worker and occupational therapist, etc. Apart from maintaining the existing services on medical consultation and psychological intervention, there will be new facilities which are currently not provided in ACC due to space constraints for family and group therapy, counselling, educational programmes as well as a resource library.

(b) Special Medical Care Centre (SMCC)

Currently, the SMCC of QEH is a major facility in Hong Kong that provides comprehensive medical services to patients suffering from acquired immunodeficiency syndrome (AIDS), as well as training and post-exposure prophylactics or counselling for healthcare workers. The existing provision of facilities in SMCC will be maintained in a more spacious environment after the relocation.

(c) Diabetes and Metabolic Centre (DMC)

The Diabetes Clinic and Metabolic Clinic of QEH are presently located in separate buildings to provide specialist out-patient consultation services, education programmes, screening and tests. To provide comprehensive services to diabetic and metabolic patients and to meet the increasing service demand, it is proposed to integrate the existing Diabetes Clinic and Metabolic Clinic into a new DMC in the proposed New Building. The DMC will provide patients with one-stop service and obviate the need for them to go to different service stations scattered in various blocks in QEH.

(d) Multidisciplinary Pain Management Centre (MPMC)

At present, QEH operates a designated clinic for the provision of special treatment to patients with chronic pain problems. Since the clinic only has one consultation room, joint assessment by professionals, such as physiotherapists, occupational therapists, counsellors, etc. is difficult. Provision of highly intensive programmes, particularly those for patients with functional debilitation, is also limited due to Following the re-location of space constraints. facilities to the New Building, four additional consultation rooms with enhanced space provision will be provided. Furthermore, an integrated out-patient MPMC with modern facilities will be set up to provide patients with one-stop treatment, such as injections, physiotherapy and psychological intervention by relevant specialties.

FINANCIAL IMPLICATIONS

14. We estimate the capital cost of the project to be \$1,891.6 million in MOD prices (please see paragraph 16 below), broken down as follows –

		\$ million
(a)	Site works and demolition	4.4
(b)	Piling works ¹	50.2
(c)	Building works ²	713.0
(d)	Building services ³	361.0
(e)	Drainage works	6.3
(f)	External works	14.9
(g)	Soft landscaping works	1.4
(h)	Link bridges ⁴	40.6
(i)	Additional energy conservation measures	18.0
(j)	Furniture and equipment (F&E) ⁵	158.0

/(k)

Page 8

Piling works cover the construction of piles and all related testing and monitoring.

Building works comprise construction of the substructure and superstructure of the building.

Building services works comprise electrical installations, ventilation and air-conditioning, fire services installation, lift and escalators, etc.

Two new link bridges will be constructed to provide easy access between the main hospital blocks of QEH, ACC and the New Building in order to improve patient journey and operational convenience.

Based on an indicative list of furniture and equipment items and their estimated prices. An indicative list of the major F&E items is at Enclosure 9.

		\$ million					
(k)	Consultants' fees for	8.2					
	(i) quantity surveying services	5.0					
	(ii) risk management	2.2					
	(iii) management of resident site staff	1.0					
(1)	Remuneration of resident site staff	9.6					
(m)	Contingencies	138.6					
	Sub-total	1,524.2	(in September 2012 prices)				
(n)	Provision for price adjustment	367.4					
	Total	1,891.6	(in MOD prices)				
			_				

Due to insufficient in-house resources, we propose to engage consultants to undertake quantity surveying services, risk management and site supervision for the project. A detailed breakdown of the estimate for consultants' fees and resident site staff costs by man-months is at Enclosure 8. The construction floor area (CFA) of this project is about 25 013 m². The estimated construction unit cost, represented by the building and the building services costs, is \$42,938 per m² of CFA in September 2012 prices. We consider this unit cost reasonable as compared with that of similar clinic projects.

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

Year	\$ million (Sept 2012)	Price adjustment factor	\$ million (MOD)
2013 – 14	80.0	1.06225	85.0
2014 – 15	200.0	1.12599	225.2
2015 – 16	550.0	1.19354	656.4
2016 – 17	370.0	1.26516	468.1
2017 – 18	125.0	1.34107	167.6
2018 – 19	110.0	1.41147	155.3
2019 – 20	65.0	1.48205	96.3
2020 – 21	24.2	1.55615	37.7
	1,524.2	_	1,891.6

- 17. 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 2013 to 2021. We will deliver the works of the New Building through a design-and-build contract. We will award the contract on a lump-sum basis because we can clearly define the scope of the works in advance. The contract will provide for price adjustments.
- 18. The HA has assessed the requirements for F&E for this project, and estimates the F&E costs to be \$158.0 million. The proposed F&E provision represents 14.4% of the total construction cost of the project⁶. An indicative list of major F&E items (costing \$1 million or above per item) to be procured for the project is at Enclosure 9.
- 19. We estimate the additional annual recurrent expenditure arising from this project to be \$41.1 million.

/PUBLIC

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

PUBLIC CONSULTATION

- 20. We consulted the Community Building Committee (CBC) of the Yau Tsim Mong District Council (YTMDC) on the proposed project on 14 May 2009 and 6 December 2012. Members of CBC supported the proposed project in both consultations and requested its early implementation.
- 21. We consulted the former and the current Legislative Council Panel on Health Services on 13 July 2009 and 18 March 2013 respectively. Members of both Panels supported the project.

ENVIRONMENTAL IMPLICATIONS

- 22. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). It has very little potential for giving rise to adverse environmental impacts. We would implement the standard pollution control measures during construction, as promulgated by the Director of Environmental Protection. We have included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts.
- 23. 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, and the building of barrier wall for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.
- At the planning and design stages, we have considered measures to reduce the generation of construction waste where possible (e.g. using metal site hoardings and signboards so that these materials can be recycled or reused in other projects). In addition, we will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the site) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of

/inert

inert construction waste at public fill reception facilities⁷. We will encourage the contractor to maximise the use of recycled/recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

- 25. At the construction stage, we will 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 at public fill reception facilities and landfills respectively through a trip-ticket system.
- We estimate that the project will generate in total about 20 370 tonnes of construction waste. Of these, we will reuse about 1 870 tonnes (9.2%) of inert construction waste on site and deliver 15 900 tonnes (78.0%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 2 600 tonnes (12.8%) 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 \$754,300 for this project (based on a unit cost of \$27 per tonne for disposal at public fill reception facilities and \$125 per tonne⁸ at landfills).

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

- 27. This project will adopt various forms of energy efficient features and renewable energy technologies, in particular
 - (a) high efficiency air-cooled chiller with variable speed drive;

/(b)

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.

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 m³), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

- (b) automatic demand control of chilled water circulation system;
- (c) automatic demand control of supply air;
- (d) demand control of fresh air supply with carbon dioxide sensors;
- (e) heat wheels/heat pipes for heat energy reclaim of exhaust air; and
- (f) heat pump for hot water supply.
- 28. For greening features, we will provide greening on the appropriate roofs and facades of the buildings for environmental and amenity benefits.
- 29. For recycling features, we will adopt a rainwater and condensate water recycling systems for landscape irrigation.
- 30. The total estimated additional cost for adoption of the above features is around \$18.0 million (including \$4.0 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 6.3% energy savings in the annual energy consumption with a payback period of about 5.6 years.

HERITAGE IMPLICATIONS

31. This 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

32. This project does not require any land acquisition.

/BACKGROUND

BACKGROUND INFORMATION

- 33. We upgraded **71MM** to Category B in September 2008.
- 34. We engaged consultants to carry out traffic impact assessment, utility mapping, topographical and tree survey, and minor site investigation works including drainage impact assessment, sewerage impact assessment, and employed a term contractor to carry out ground investigation works, services diversion and tree transplanting. We also appointed a quantity surveying consultant to prepare tender document. The total cost of the above-mentioned services is about \$4.6 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". All the above consultancy services and site investigation works have been completed.
- 35. Of the 94 trees within the project site boundary and adjacent area, 47 trees will be preserved. The project will involve removal of 47 trees including 40 trees to be felled and seven trees to be transplanted within QEH compound subject to finalisation of design. All trees to be felled are not important tree⁹. We will incorporate planting proposals as part of the project, including estimated quantities of 82 trees, 10 000 shrubs and groundcovers.

An "important tree" refers to trees in the Register of Old and Valuable trees, or any 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;

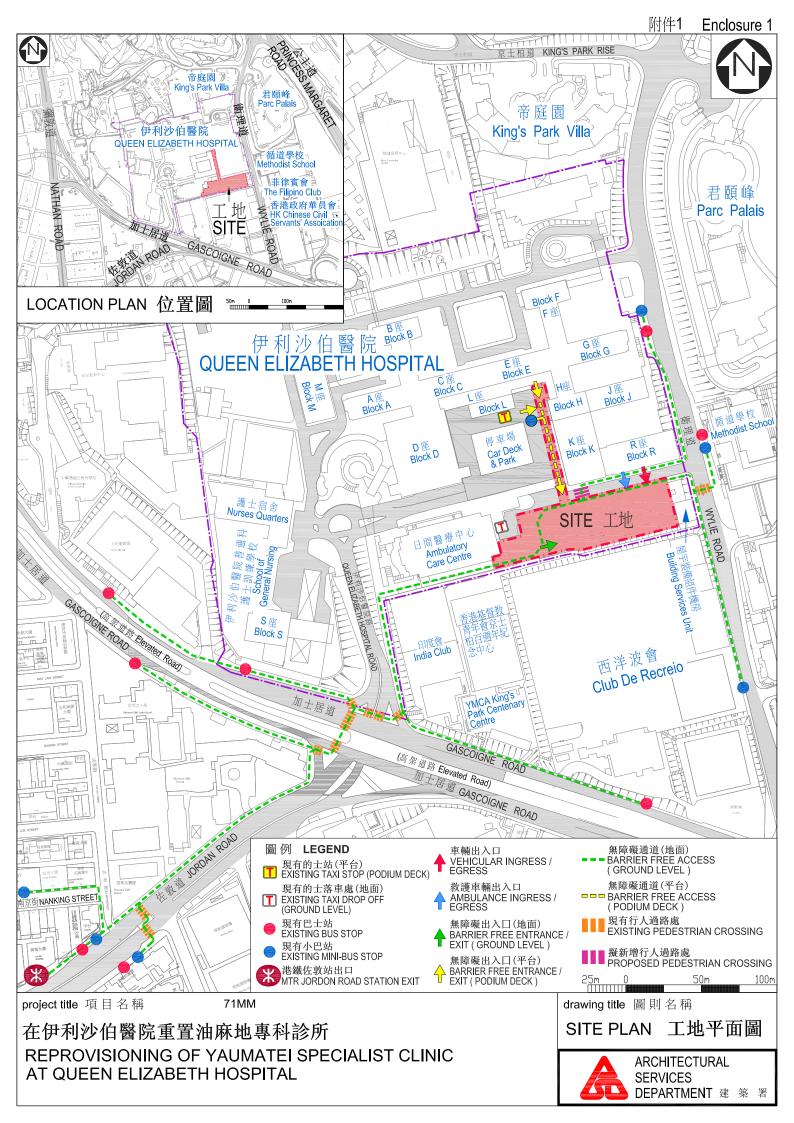
⁽d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtail like aerial roots, trees growing in unusual habitat; or

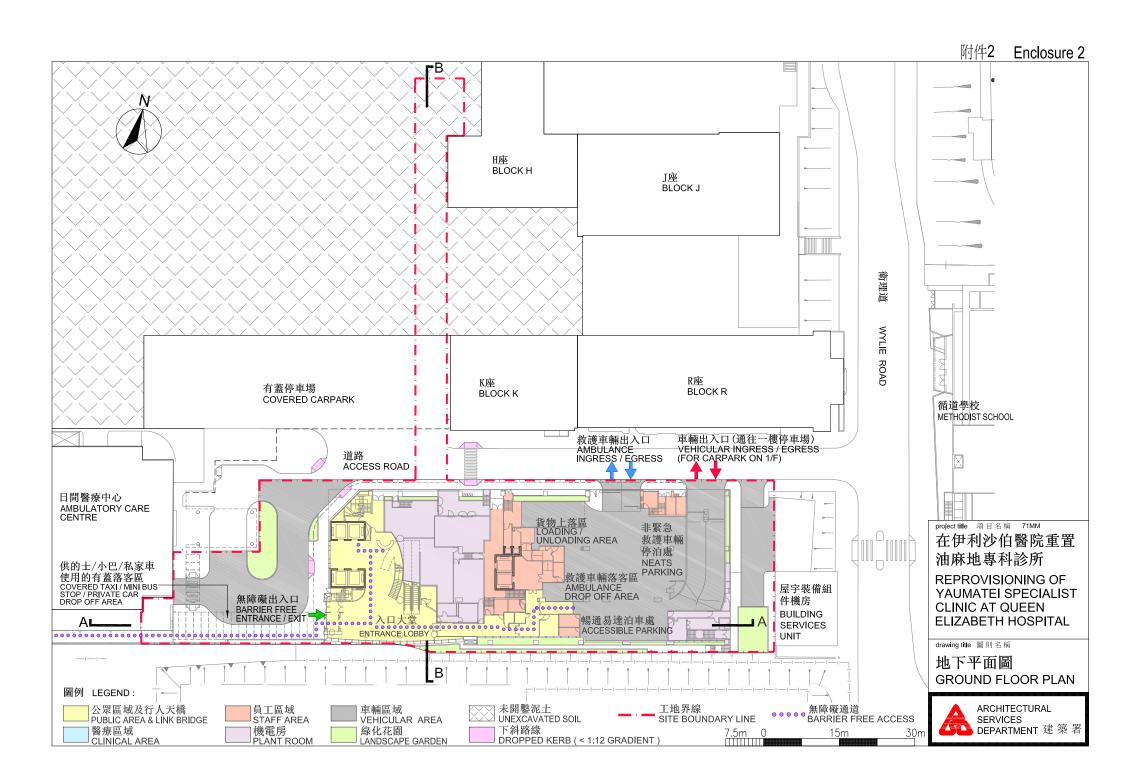
⁽e) trees with trunk diameter equal or exceeding 1.0 metre (m) (measured at 1.3m above ground level), or with height/canopy spread equal or exceeding 25 m.

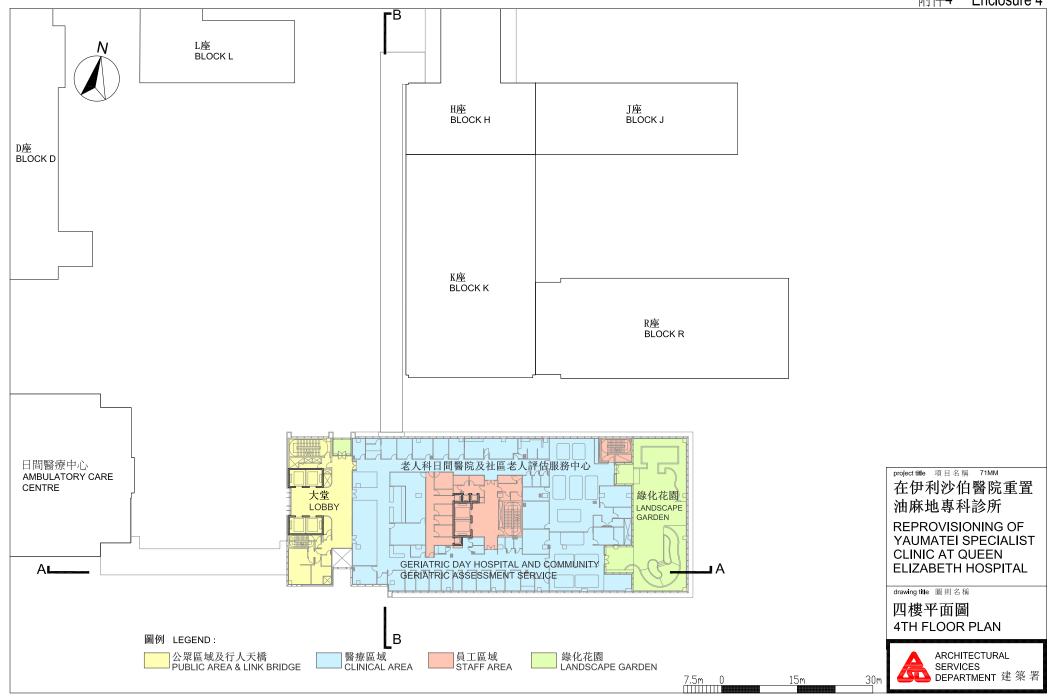
36.	We	estimate	that th	e j	proposed	works	will	create	about	555	jobs
(495 fo	r labourers	and anot	her 60	for	professio	nal/tecl	nnical	l staff)	providi	ing a	total
employ	ment of 17	7 120 man	-month	ıs.							

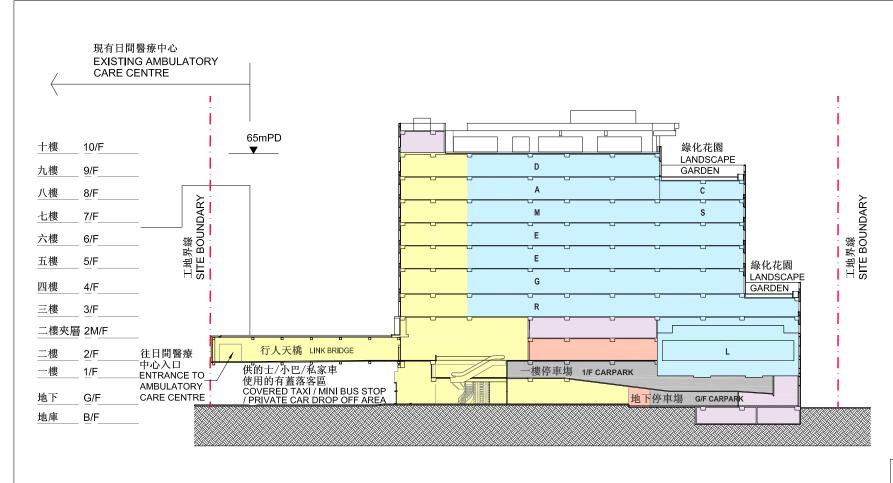
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Food and Health Bureau April 2013









圖例 LEGEND:

- 糖尿病及內分泌中心 DIABETES & METABOLIC CENTRE
- 有少年醫療中心 ADOLESCENT MEDICAL CENTRE
- C 兒童精神科門診部及日間醫院
 CHILD PSYCHIATRIC OUT-PATIENT CLINIC AND DAY HOSPITAL
- 路專科疼痛治理中心 MULTIDISCIPLINARY PAIN MANAGEMENT CENTRE
- s 特別內科診療中心 SPECIAL MEDICAL CARE CENTRE

- 耳鼻喉專科診所 EAR, NOSE AND THROAT (ENT) SPECIALIST CLINIC
- B 老人科日間醫院及社區老人評估服務中心 GERIATRIC DAY HOSPITAL AND COMMUNITY GERIATRIC ASSESSMENT SERVICE
- R 腎臓透析中心 RENAL DIALYSIS CENTRE
- 直線加速器治療室 LINEAR ACCELERATORS SUITE

公衆區域及行人天橋
PUBLIC AREA & LINK BRIDGE
機電房
BLANT BOOM

PLANT ROOM

員工區域

STAFF AREA

車輛區域 ______ VEHICULAR AREA

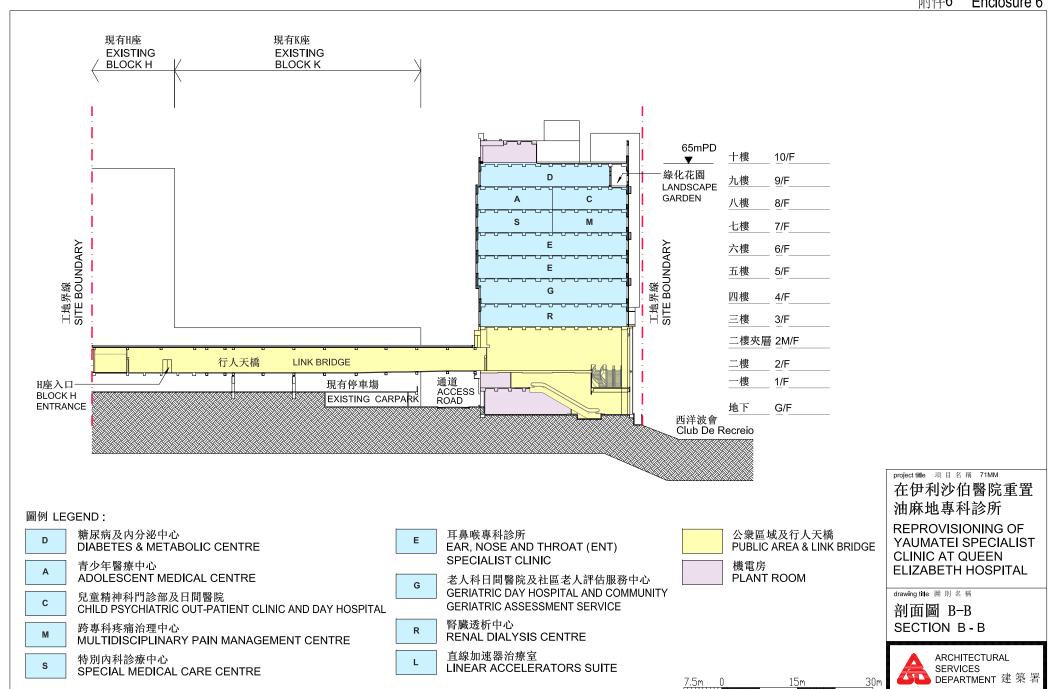
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在伊利沙伯醫院重置 油麻地專科診所 REPROVISIONING OF YAUMATEI SPECIALIST CLINIC AT QUEEN ELIZABETH HOSPITAL

drawing title 圖則名稱 **剖而屬 A-A**

剖面圖 A-A SECTION A-A







project title 項目名稱 71MM

在伊利沙伯醫院重置 油麻地專科診所

REPROVISIONING OF YAUMATEI SPECIALIST CLINIC AT QUEEN ELIZABETH HOSPITAL

drawing title 圖則名稱

從南面望向專科診所 的構思透視圖

PERSPECTIVE VIEW FROM SOUTHERN DIRECTION (ARTIST'S IMPRESSION)



71MM – Reprovisioning of Yaumatei Specialist Clinic at Queen Elizabeth Hospital

Breakdown of the estimates for consultants' fees and resident site staff costs (in September 2012 prices)

	,	Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fee for (i) quantity surveying services (Note 2)	Professional Technical	- -	_ _	_ _	3.0 2.0
				Sub-total	5.0
(ii) risk management	Professional Technical	10 31	38 14	1.6 1.6	1.1 1.1
				Sub-total	2.2
(b) Resident site staff costs (Note 3)	Professional Technical	36 190	38 14	1.6 1.6	3.8 6.8
Comprising –				Sub-total	10.6
(i) Consultants' fees for management of resident site staff	or				1.0
(ii) Remuneration of resident site staff					9.6
resident site stari				Total	17.8

^{*} MPS = Master Pay Scale

Notes

- 1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of resident site staff supplied by the consultants. (As at now, MPS salary point 38 = \$65,695 per month and MPS salary point 14 = \$22,405 per month.)
- 2. The consultants' staff cost for quantity surveying services is calculated in accordance with the existing consultancy agreement for provision of quantity surveying services for **71MM**. The assignment will only be executed subject to Finance Committee's approval to upgrade **71MM** to Category A.
- 3. The actual man-months and actual costs will only be known after completion of the construction works.

71MM – Reprovisioning of Yaumatei Specialist Clinic at Queen Elizabeth Hospital

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

Item description	Quantity	Unit cost (\$ million)	Total cost (\$ million)
Balance & Vestibular Rehabilitation System	1	5.700	5.700
Carpark Control System	1	1.052	1.052
CCTV System	1	1.513	1.513
Integrated Public Address System	1	2.185	2.185
Intercom System	1	1.540	1.540
Linear Accelerator	2	20.000	40.000
Mobile Shelving System	1	2.830	2.830
Operating Microscope with Video System	1	1.800	1.800
Portable C-arm Fluoroscopy Unit	1	2.000	2.000
Robotic Therapy System	1	4.350	4.350
Stroboscopy System	1	1.300	1.300
Structure-Motion Analysis and Functional Rehabilitation System	1	5.650	5.650
Telecommunication System	1	5.000	5.000
Water Treatment Plant	1	2.180	2.180
3D Direct Ear Scanner for Earmould	1	1.800	1.800