

For discussion

on 17 February 2014

**Legislative Council Panel on Health Services
Redevelopment of Queen Mary Hospital (Phase 1)
- Preparatory Works**

Purpose

This paper briefs Members on the proposed preparatory works for the redevelopment of Queen Mary Hospital (QMH), phase 1.

Background

2. Established in 1937, QMH is a major acute hospital in the Hong Kong West (HKW) Cluster of the Hospital Authority (HA), serving a population of over 531 000 in the Central and Western and Southern Districts as well as treating many patients in other geographical districts in Hong Kong. It provides a full range of acute and tertiary services, including 24-hour Accident and Emergency (A&E) services, in-patient service, ambulatory care and rehabilitation services, as well as specialist services covering a wide range of specialties and subspecialties.

3. Being the teaching hospital of the Li Ka Shing Faculty of Medicine of The University of Hong Kong, QMH is responsible for providing professional clinical training, pioneering innovative technology, and

conducting clinical trials for new treatment modalities. In addition, QMH serves as a tertiary and quaternary referral centre for many complex and advanced services such as organ transplant, neonatal intensive care, coronary care, burns and reconstructive surgery and neurosurgery, for the entire territory. Since July 2003, QMH has become the only designated liver transplant centre in Hong Kong to provide world-class standard liver transplant service. The A&E Department of QMH has been designated as one of the five trauma centres in the territory.

Need for Redevelopment of QMH

Insufficient Clinical Space

4. Many buildings of QMH are over 50 years old, with limited space provisions having regard to service demands, utilization patterns and technological advancements. Currently, the space provision of QMH is around 77 m² Gross Floor Area (GFA) per bed excluding teaching facilities and staff quarters. By way of comparison, the space provision of Prince of Wales Hospital (PWH), which is the other teaching hospital in Hong Kong, is around 140 m² per bed. Besides, the operational space in the A&E Department, including areas for clinical treatment and supporting services, observation beds, patient waiting area, as well as the specially designed cubicle for patients with suspected infectious diseases are all accommodated in an extremely small area. The GFA of the A&E Department of QMH is 1 050 m² as compared to that of the PWH which is over 4 000 m². Given the limited space, the existing A&E Department can only accommodate one major trauma room, one resuscitation cubicle, one treatment cubicle and nine consultation / examination rooms. Such facilities and space provision cannot meet the modern standard in emergency medicine practice and are insufficient to cope with the increasing service demand.

Unsatisfactory Services Zoning

5. Apart from space limitations, the unfavourable topography of QMH does not facilitate clinical convenience. Incremental growth and piecemeal developments over the years have resulted in a lack of proper services zoning for easy co-location and patient-centred orientation. Related or even the same services are scattered over different locations in the hospital. This has made alignment of functional relationships amongst departments or service units difficult and has lengthened travelling time. Currently, the operating theatres (OTs) are located in two separate buildings, with 14 OTs scattered on six different floors in the Main Block and four other OTs on alternate floors in Block K. Likewise, the intensive care units (ICUs) are spread on two different floor levels and hospital wings of the Main Block. Such arrangement is not cost-effective in terms of sharing of manpower and equipment among OTs and is also not ideal for patient safety as help from other OTs may be remote when an emergency occurs during operations.

Outdated Design and Facilities

6. Having established for over 75 years, the design of QMH has become outdated and no longer meets the service requirements and workflow logistics of a modern tertiary acute hospital. For example, nurse stations in wards are cramped and at locations not convenient for close observation of patients. The clinical pathology laboratories are housed in a building almost 40 years old, which cannot provide the physical environment conducive to efficient workflows. With many of the buildings having been in use for over decades, their structural conditions and designed capacity have become the limiting factors for QMH to embrace the latest technological advancements, as installation of new medical equipment is often not feasible. Building services

provisions at QMH are also inadequate. In particular, the lift service is slow and insufficient which has resulted in long waiting time during peak hours or when the lifts are used for the transport of materials.

7. Commuting among the various hospital blocks and floors in QMH has also caused much inconvenience to patients, staff and the public. In situations where transportation of critically-ill patients who are attached with essential medical devices and life-supporting instruments is required, the transport journey may take even longer to complete.

Limited Accessibility

8. QMH is served only by one access road, winding up from Pok Fu Lam Road at the Sassoon Road junction. However, its A&E Department in Block J is located at the far end of the QMH site which can only be accessed through this narrow two-lane carriageway. Ambulances have to share this single access road with public transport, which is susceptible to blockage by minor incidents such as car accident or fallen trees in a typhoon. Traffic congestion along the access road delays the transfer of patients to the A&E Department which is highly undesirable as timely treatment is critical to the clinical outcome of patients with major trauma or other life-threatening conditions.

9. In summary, the design of existing facilities in QMH is outdated and cannot meet the service requirements of a modern tertiary acute hospital. In addition to insufficient clinical space, the existing buildings are set within a difficult topography and cannot facilitate clinical convenience. The site has only one major access point and a single, narrow two lane road. This single access point and narrow road are shared by ambulances, services traffic and public transport. The redevelopment of QMH is imperative in order to

address the infrastructural problems of the hospital site.

The Proposed Project

10. HA has formulated the Clinical Services Plan (CSP) for the HKW Cluster to delineate the service delivery model in the Cluster. It involves an analysis of the service needs and a feasibility study on how to maximize the benefits of existing hospital plans to the community which included the development of a concept plan for the redevelopment of QMH. This was a highly intensive and consultative process involving clinicians and key stakeholders of the project. The CSP sets out the clinical strategies, models of care and future service development in the HKW Cluster and guides the planning for the redevelopment of QMH.

Concept Design of QMH

11. Underpinned by the CSP for the HKW Cluster, a Concept Plan for the redevelopment of QMH has been developed, which aims to renew the hospital in phases into a modern health sciences centre and to modernise its facilities to cope with the growing clinical service and teaching demands. The redevelopment plan will provide additional space and maximized floor areas to meet operational needs, be adaptable to service development, as well as promote integrated research and education. The new QMH will adopt a patient-oriented design and be equipped with state-of-the-art medical equipment, with well-coordinated services and improved accessibility for more cost-effective and efficient operations to meet the long-term needs of the community.

12. The Concept Plan recommends, as the phase 1 redevelopment of QMH the construction of a new hospital block at the north end of the hospital

campus that has large floor plates with prompt circulation from the A&E Department to hot floors¹ so as to strengthen emergency services for critical patients. To minimize disruptions to clinical services during redevelopment, it is necessary to temporarily decant the existing services in the Clinical Pathology Block (CPB) (including mortuary services) and University Pathology Building (UPB), as well as facilities of the Housemen Quarters (HQ) to the vacated Senior Staff Quarters (SSQ) .

13. The scope of the proposed phase 1 redevelopment of QMH therefore comprises the following :

- (a) conversion of SSQ into clinical pathology laboratories, staff accommodation, teaching facilities and car parking facilities for the temporary decanting of the existing facilities and equipment in the CPB, UPB and HQ;
- (b) alterations to Block K to accommodate Haematology Department relocated from CPB and a new temporary body store;
- (c) improvement of access road adjacent to the Administration Building leading to the SSQ site;
- (d) demolition of CPB, UPB and HQ for the construction of a new block to accommodate –
 - (i) A&E Department;
 - (ii) A&E Observation Ward;
 - (iii) Emergency Medicine Wards;

¹ Hot floors refer to floors where critical services are delivered, e.g. A&E, ICU, OTs and emergency diagnostic facilities.

- (iv) Diagnostic Radiology Department;
- (v) Peri-operative Centre;
- (vi) Cardiac Catheterization Laboratories;
- (vii) Endoscopy Unit;
- (viii) Electro-diagnostic Unit;
- (ix) Intensive Care Unit / Critical Care Unit / Paediatric Intensive Care Unit;
- (x) In-patient Wards;
- (xi) Clinical Pathology Services (including Mortuary);
- (xii) University Pathology Services;
- (xiii) a roof helipad; and

(d) provision of a new access point from Pokfulam Road.

14. To fully achieve the objective of renewing QMH into a modern health sciences centre which is adaptable to future service delivery models with adequate capacity and capability to meet the long-term needs of the community, we will continue to review the need of carrying out redevelopment works in other parts of QMH.

Project Implementation

15. We propose to carry out the phase 1 redevelopment of QMH in two stages, namely, preparatory works and main works. Before we can embark on the main works, we need to conduct site investigations, carry out noise mitigation measures, and decant existing facilities and equipment in the three buildings to be demolished. Owing to a lack of sufficient in-house resources, HA will engage professional consultants to carry out the preparatory works.

16. The proposed project implementation will comprise :
- (a) Preparatory works, covering –
 - (i) site investigations; minor studies and surveys, as well as pre-contract consultancy for the main works;
 - (ii) decanting works including conversion of SSQ with associated access improvements and alterations to Block K;
 - (iii) advanced noise mitigation measures in connection with the main works; and
 - (iv) consultancy services for contract administration and site supervision of the decanting works.

 - (b) Main works, covering -
 - (i) demolition of CPB, UPB and HQ;
 - (ii) site formation and geotechnical works;
 - (iii) construction of a new hospital block;
 - (iv) landscaping; and
 - (v) provision of an additional access road.

17. A site plan showing the location of decanting works at QMH is at
———— **Enclosure.**

18. The estimated cost of the proposed preparatory works mentioned in paragraph 16(a) above is in the order of \$1.6 billion in money-of-the-day (MOD) prices. HA invited tenders for the carrying out of the proposed decanting works in December 2013 and completed the tender assessment. We plan to award the contract to the successful tenderer after we have sought funding approval for implementing the preparatory works of phase 1 redevelopment of QMH from the Finance Committee (FC) in May 2014. We

expect that the proposed preparatory works will take around 40 months and will be completed by 2017. We aim to start the main works in 2017 for completion of the whole phase 1 redevelopment project by 2023.

Public Consultation

19. HA consulted the Culture, Leisure & Social Affairs Committee (CLSAC) of the Central and Western District Council and the Community Affairs and Tourism Development Committee (CATC) of the Southern District Council on the proposed project on 14 and 25 November 2013 respectively. Members of the CLSAC and the CATC supported the proposed project in both consultations.

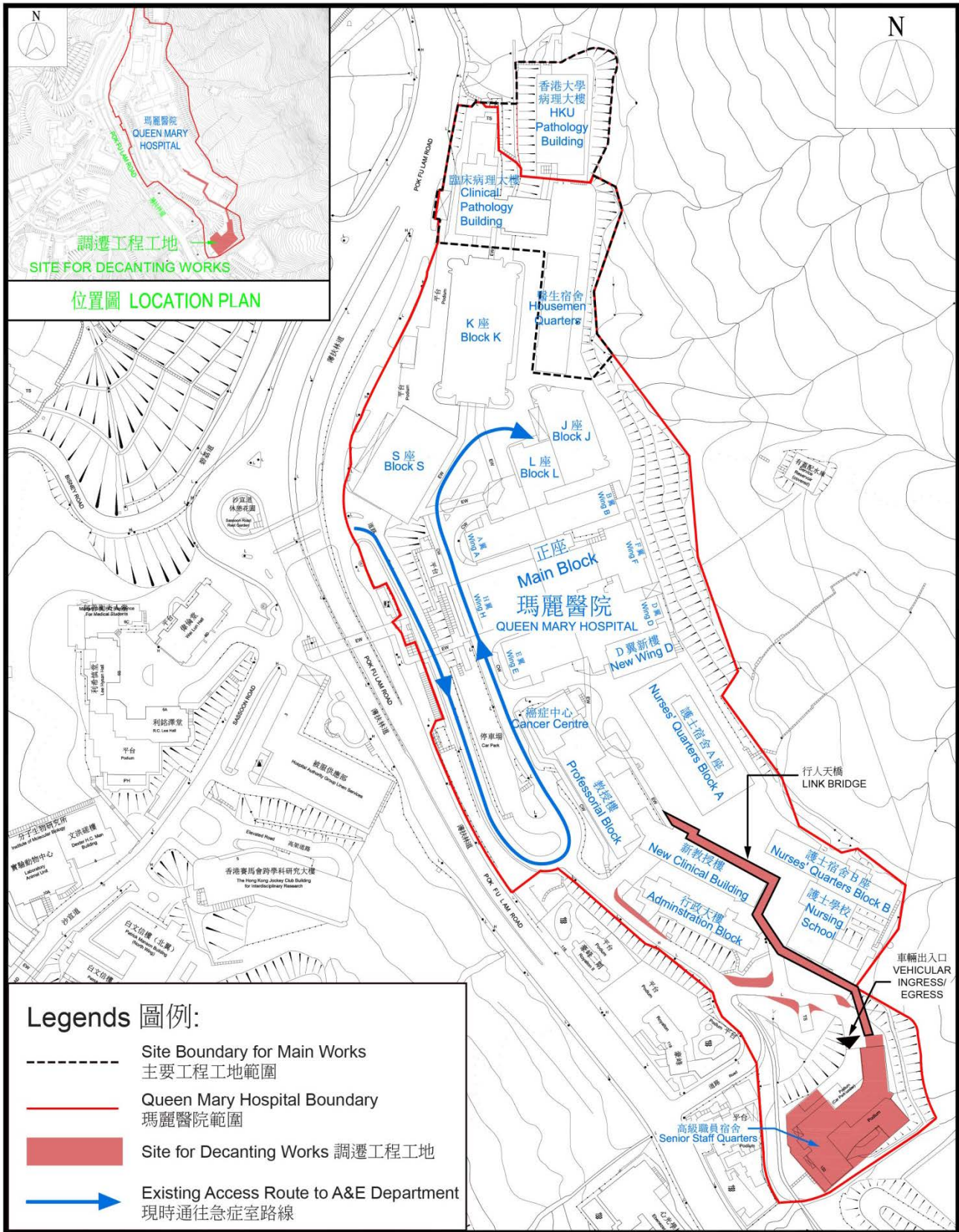
Advice Sought

20. Members are invited to comment on the proposed project as outlined in this paper.

Food and Health Bureau

Hospital Authority

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Site Location Plan (Not to Scale)

工地平面圖 (不按比例)