

## **Legislative Council Panel on Health Services**

### **Redevelopment of Prince of Wales Hospital, Phase 1**

#### **Purpose**

This paper briefs members on the proposed phase 1 redevelopment of the Prince of Wales Hospital (PWH).

#### **Background**

2. The PWH is a major acute hospital with about 1 300 beds and providing a comprehensive range of secondary services for the population in the New Territories East (NTE) cluster. It is also one of the two teaching hospitals in Hong Kong and serves as a tertiary referral centre providing highly specialized services such as organ transplant, burns treatment, medical oncology, paediatric surgery and cardiothoracic surgery for the whole territory.

3. Despite its strategic importance, the PWH suffers from inadequate space provision, out-dated building services installations and deteriorating conditions, hence the need for major improvement works. Members have been informed of the current state of the PWH and the Government and the Hospital Authority's (HA's) plan to redevelop the PWH vide Paper No. CB(2)2692/03-04(04) at the meeting of the Panel held on 14 June 2004. Members also noted that a study would be conducted to examine the possibility of a Public-Private-Partnership (PPP) approach in taking forward the redevelopment project. This paper updates members on the HA's proposal to proceed to phase 1 of the PWH redevelopment plan.

#### **Need for Redevelopment**

4. Members have been informed of the reasons for the need to redevelop the PWH which are recapitulated in paragraphs 5 to 10 below.

## Inadequate space provision to cope with increasing service demand

5. The PWH was planned as a regional hospital in the 1970s and commenced operation in 1984, providing medical services for the population in the NTE. At the time of planning, population in the NTE region was about 203 000 which grew to over 1 300 000 in 2005. According to the latest projections of the Census and Statistics Department, the population of the NTE cluster would increase further by 4.4% and 7.9% by 2010 and 2013 respectively.

6. To cope with the increase in service demand, numerous alteration and addition works have been carried out at the PWH to provide additional space as well as to maintain and improve its facilities. The works include provision of additional units of the Endoscopy Centre, the Urodynamic and Lithotripsy Centre; enlargement of the Intensive Care Unit and the Labour Ward; and construction of additional buildings such as the Cancer Centre and the Li Ka Shing Specialist Clinic (South Wing). Despite these improvement works, the PWH is still short of space. Discounting teaching facilities and staff quarters, space provision at the PWH is only around 100 m<sup>2</sup> per bed in terms of Gross Floor Area (GFA), which is less than the space provision of 110 m<sup>2</sup> per bed in GFA for a secondary acute hospital such as the North District Hospital and far below the space provision of 140 m<sup>2</sup> per bed in GFA for Queen Mary Hospital (QMH), the other teaching and tertiary acute hospital. The PWH can only accommodate ten operating theatres, as compared with 18 currently available in the QMH.

## Outdated and inflexible design of facilities

7. The bits and pieces improvement works carried out over the years have resulted in scattering of related facilities and services over different locations in the PWH. For example, patients in need of an operation have to be transported for about 20 minutes among buildings, from Blocks E and F to operating theatres located in the Clinical Sciences Building. Patients also have to walk from one end of the hospital to the other to pay fees and charges, consult doctors, receive treatment and collect drugs etc. Such an arrangement increases the transit time for staff, patients and materials. It also undermines the HA's objective of providing high quality medical services. While some relocation or reorganisation of the facilities and services might be possible, the lack of space and outdated building design render such a plan difficult to pursue without causing disturbance to the patients.

8. In addition, the original hospital design of the 1970s had no provisions for the application of computer technology and digitized clinical management information in the delivery of patient care. The existing building structures and internal layouts also do not have the flexibility to accommodate changes in service delivery models necessitated by the evolvement of the demographic structure, the trend of increasing emphasis on ambulatory care services, the emergence of new diseases and advances in medical technology.

#### Deterioration of building services and facilities

9. The heavy utilization of hospital facilities has led to faster deteriorations and shorter serviceable life spans than those normally expected of building finishes, fixtures and building services installations. However, as a result of the high occupancy and utilization rates, coupled with the limited space available for decanting arrangements and the need to minimize disruptions of services, it has always been difficult for major preventive maintenance programmes, which are normally scheduled for building services installations, to be carried out at the PWH. Only day-to-day patch repair works can be carried out, where finishes, fixtures and other installations have become rather dilapidated in condition. Examples of the unsatisfactory conditions of the existing buildings and building services installations at the PWH, which may pose risks of safety hazards to both patients and staff, include –

- (a) the lift service of PWH is slow, inefficient and inadequate, with lifts not designated into those for use by patients, by staff or for transporting materials. This not only results in long waiting time during peak hours or when the lifts are used for materials transport, but also increases the potential risks of cross infection;
- (b) the central air-conditioning system is already fully loaded and can no longer cover further service expansions in PWH; and
- (c) there is a complete lack of mechanical transport systems such as pneumatic tubes for urgent despatch of drugs, documents or samples for laboratory testing, which have become a standard feature in modern hospital design for achieving operational efficiency and covering situations requiring prompt medical attention.

10. To ensure that adequate space and modern and safe services and facilities will be provided to meet current standards and future needs in the

coming decades, the HA proposes to redevelop the PWH. The redevelopment plan will enable the PWH to be updated to match the standards of a modern tertiary acute hospital, with a patient-oriented setting that improves patient comfort, achieves operational efficiency, and meets the challenges of clinical and technological advances.

## **The Proposed Works**

11. The redevelopment of the PWH is planned to be implemented in phases to ensure that the medical services it delivers to the residents of the NTE cluster may remain undisrupted throughout the redevelopment period. Phase 1 of the works involves the construction, at the existing helipad and tennis court, of a new block of about 800 in-patient beds for the provision of all essential services for the acute, emergency and critical care of adult patients. The proposed new block will accommodate facilities and services including –

- (a) In-patient wards for medicine and therapeutics, surgery, cardiothoracic surgery, neurosurgery, orthopaedics and traumatology and infectious diseases;
- (b) Intensive care unit;
- (c) Coronary care / high dependency / neurosurgery high dependency units;
- (d) Burns unit;
- (e) Diagnostic radiology and organ imaging department (in-patient);
- (f) Accident and emergency department;
- (g) Anaesthesiology and operating theatre suite;
- (h) Ambulatory surgery;
- (i) Core / rapid response laboratory;
- (j) Blood bank;
- (k) Pharmacy;
- (l) Sterile supplies department / theatre sterile supplies unit;
- (m) Mortuary; and
- (n) Ancillary facilities for patient relations / risk management office, shroff / accounting office, security office and control room, allied health satellite treatment areas, hospital data centre, communications, registration and admission, linen service, information / enquiry counter, electronic banking services, convenience store, waste collection, auditorium, etc.

12. Upon completion, the new block will present the hospital with opportunities to overcome the current severe constraints on its ability to meet service and teaching demands. It will also provide the necessary accommodation for decanting of existing services to facilitate future improvement plans, if need be, to meet the hospital's long-term functional needs.

## **Project Implementation**

13. We propose to adopt the Design-and-Build approach to implement the project. The HA has also conducted an in-house study to examine the possibility of implementing the project through a PPP approach and concluded that such an approach is not suitable for the redevelopment of the PWH :

(a) Timing

The PPP option normally entails a “part tendering, part negotiation” procurement process which is complex and lengthy. It has been estimated that the project programme would need to be extended by about three years should the PPP option be adopted. However, as outlined in paragraphs 5 to 10 above, the need for redeveloping PWH is clear and indeed should be pursued early. There is also strong public support for early redevelopment of the PWH so as to equip the hospital adequately.

(b) Lack of Hospital PPP Experience

The PWH redevelopment project is a complex one involving an estimated cost of about \$1.882 billion. The PWH, as a leading acute hospital in the NTE cluster and one of the two teaching hospitals, is strategically important. It is therefore of paramount importance that a high level and stable services should be maintained at the PWH. In-situ redevelopment also poses inherent physical constraints and the works have to be implemented with a greater degree of care and precision.

Hong Kong lacks experience with PPP for hospital projects. While this should not prevent testing out the feasibility of the approach on the PWH redevelopment project, the risk associated with embarking on the approach for such a major, complicated and

significant project could be high.

(c) Long Term Commitment

The PPP option would normally entail a long-term contract for the commercial partner. As we are currently reviewing the future health care model so as to see that our community may continue to enjoy a high level of service which is sustainable, affordable and accessible, it is considered prudent not to commit unnecessarily the HA into such a long-term commitment at this juncture.

**Public Consultation**

14. The HA consulted the Sha Tin District Council (DC) on 23 March 2006. Members of the DC supported the project.

**The Way Forward**

15. We plan to seek the Finance Committee (FC)'s approval in July 2006 to fund the proposed project at an estimated cost of about \$1,882 million in money-of-the-day prices. Subject to FC's approval, we will proceed to invitation of tenders in the third quarter of 2006. Construction works is planned to commence in mid-2007 for completion in mid-2010.

**Advice Sought**

16. Members are invited to note the content of this paper.

Hospital Authority  
Health, Welfare and Food Bureau  
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