

## **NOTE FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE**

### **Supplementary Information on 5ME – Redevelopment and expansion of Pok Oi Hospital**

#### **INTRODUCTION**

When Members considered paper PWSC(2001-02)37 on project **5ME** – Redevelopment and expansion of Pok Oi Hospital (POH) at the Public Works Subcommittee meeting on 31 May 2001, the Administration undertook to provide the following information –

- (a) cost savings generated under the single-stage redevelopment option;
- (b) expenditure incurred for preparatory works under the single-stage redevelopment as compared to the original approved scope of activities for project **6ME** entitled “Redevelopment and expansion of Pok Oi Hospital - preparatory works”; and
- (c) a risk assessment of the single-stage redevelopment option.

#### **THE ADMINISTRATION’S RESPONSE**

2. The redevelopment and expansion of POH, whether conducted in one or two stages, entails the construction of one building only and the total construction floor area for the redeveloped POH under either option is the same.

3. The main difference between the two redevelopment options is that under the single-stage redevelopment option, the main hospital building will be built at one go. Existing patient services currently provided at the Central Wing and North Wing will not be disrupted during the entire construction period. Decanting of existing patient services will only be effected upon the completion of the new

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hospital building, following which the Central Wing and North Wing will be demolished. The two-stage redevelopment option involves splitting the construction of the new hospital building in two halves. Upon completion of the first half under Stage 1, existing services currently provided at the Central Wing and North Wing will be relocated to the partially-completed hospital building. The Central Wing and North Wing will then be demolished to make way for the construction of the remaining half of the new hospital building. Under the two-stage redevelopment option, the works programme is some 15 to 18 months longer than the single-stage redevelopment option.

### **Cost savings generated under the single-stage redevelopment option**

4. Compared with the two-stage redevelopment option, the single-stage redevelopment option will reduce construction costs and consultants' fees by \$90.50 million and \$20.23 million respectively, while increasing decanting costs by \$20.61 million. Overall, therefore, a single-stage redevelopment will reduce costs by about \$90 million. The savings are attributable to the following -

- (a) reduced preliminaries<sup>1</sup> as a result of a shorter construction programme. About \$27 million will be saved;
- (b) the need to construct an additional external wall to provide a suitable building envelope for the partially-completed hospital building under the two-stage redevelopment option will be obviated. This will save some \$3.5 million; and
- (c) the need to provide temporary accommodation within the partially-completed hospital building to ensure continuity in the provision of services under Stage 2 of the two-stage redevelopment option will be obviated. These services include allied health services (e.g. physiotherapy and occupational therapy), administrative services (e.g. offices and medical records), and supporting services (e.g. general stores, linen exchange, maintenance workshops and staff lockers). About \$60 million will be saved.

5. The shorter construction programme under the single-stage redevelopment option will result in a consequential reduction in consultants' fees. Based on actual bids submitted by the appointed consultants, a saving of \$20.23 million can be achieved. A detailed breakdown of the savings is as follows -

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<sup>1</sup> Preliminaries include contractor's overhead, site office costs, hiring of equipment, etc.

- (a) \$7.56 million due to reduction in project management fees;
- (b) \$6.00 million due to reduction in architect's fees for reduced contract administration; and
- (c) \$6.67 million due to reduction in site supervision fees.

6. The reduction in expenditure on construction costs and consultants' fees referred to in paragraphs 4 and 5 above is offset by an increase in decanting costs. This is because temporary facilities have to be constructed to support certain administrative and supporting services of POH (e.g. offices, maintenance workshop) in order to free up a greater site area for the construction of the new hospital under the single-stage redevelopment. Patient services, however, will not be affected during the interim. Based on actual contract prices, the increase should be in the region of \$20.61 million.

**Expenditure incurred for preparatory works under the single-stage redevelopment as compared to the approved scope for project 6ME**

7. Against the approved project estimate (APE) of \$96.37 million approved by the Finance Committee in June 2000 for project 6ME for the conduct of preparatory works, commitments amounting to \$94.96 million have been made for preparatory works under single-stage redevelopment. A detailed breakdown is as follows –

	<b>Provision in APE (\$ million)</b>	<b>Commitment made (\$ million)</b>
(a) Consultants' fees for		
(i) site supervision for demolition and decanting works	0.92	1.27
(ii) outline sketch plan	15.35	7.97
(iii) detailed design	22.79	29.82
(iv) tender documentation (including contract administration)	29.39	4.45
Sub-total	68.45	43.51

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	<b>Provision in APE (\$ million)</b>	<b>Commitment made (\$ million)</b>
(b) Site investigations	2.65	3.98
(c) Demolition works and decanting	25.27 <sup>2</sup>	47.47
Total	<u>96.37</u>	<u>94.96</u>

8. With regard to paragraph 7(a) above, the reduction in consultants' fees is the net result of the following –

- (a) \$0.35 million additional expenditure in site supervision due to additional demolition and decanting works;
- (b) \$7.38 million saving in preparing outline sketch plan as the fee demanded by the consultant appointed through the competitive bidding system is lower than the original estimate;
- (c) \$7.03 million additional expenditure for detailed design, which is the net result of –
  - (i) \$2.01 million saving due to lower consultancy fees;
  - (ii) \$9.04 million additional expenditure as the scope of design has been expanded to cover the entire project whereas the original funding approval covered detailed design up to Stage 1 only; and
- (d) \$24.94 million reduction in the preparation of tender documentation which comprises –
  - (i) \$14.76 million reduction due to lower consultancy fees;

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<sup>2</sup> Including \$10.26 million for contingencies and \$0.76 million in respect of provision for price adjustment.

- (ii) \$10.18 million reduction due to modification in the phasing of works : tender documentation to be conducted would only be up to the site formation and foundation works stage instead of up to Stage 1 under the original funding approval.

9. With regard to paragraph 7(b) above, an extra \$1.33 million was spent on site investigation as additional bore-holes had to be made in order to ascertain the ground conditions.

10. With regard to paragraph 7(c) above, certain demolition works have to be advanced and additional decanting will be entailed in order to maximize the site area for construction under the single-stage redevelopment option. Such development has resulted in an increase in the costs of demolition works and decanting by \$22.20 million, including –

- (a) \$1.59 million due to advancing the demolition of ancillary buildings (e.g. dangerous goods stores, disused boiler house, and furniture store) which would otherwise have been undertaken during Stage 2 of the two-stage redevelopment option; and
- (b) \$20.61 million due to additional decanting requirements as mentioned in paragraph 6 above.

### **Risk assessment of the single-stage redevelopment option**

11. The project consultants commissioned by HA advised that compared with the two-stage redevelopment option, the single-stage redevelopment option will have less programme, cost and contractual risks.

12. The works sequence for Stage 1 under the two-stage redevelopment option is essentially the same as that for the single-stage redevelopment option. Under the two-stage redevelopment option, the same works sequence for Stage 1 will have to be repeated under Stage 2. Programme risks confronted under the single-stage redevelopment option will be confronted twice under the two-stage redevelopment option, i.e. both during Stage 1 and Stage 2.

13. As for the overall project programme, the two-stage redevelopment option is about 15-18 months longer than that under the single-stage redevelopment option. As with other works projects, a longer programme increases exposure to cost risks because of uncertainties in price movements.

14. Under the single-stage redevelopment option, decanting of existing patient services from the Central Wing and North Wing to the new hospital building need only be effected after completion of the hospital building. Under the two-stage redevelopment option, decanting of such services to the partially-completed hospital building has to be undertaken immediately after the completion of Stage 1 and before the commencement of Stage 2. The project is therefore more prone to contractual risks arising from late start and/or late completion of the required decanting activities under the two-stage development option.

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Health and Welfare Bureau  
June 2001