

**For discussion
on 17 May 2000**

PWSC(2000-01)18

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 - CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Medical Subventions

5ME - Redevelopment and expansion of Pok Oi Hospital

Members are invited to recommend to Finance Committee –

- (a) the upgrading of part of **5ME**, entitled “Redevelopment and expansion of Pok Oi Hospital – preparatory works” to Category A at an estimated cost of \$96.37 million in money-of-the-day prices; and
- (b) the retention of the remainder of **5ME** in Category B.

PROBLEM

There is a pressing need to meet the increasing demand for hospital services in the Northern New Territories. The capacity at Pok Oi Hospital (POH) is inadequate and most of its facilities are dilapidated.

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PROPOSAL

2. The Secretary for Health and Welfare proposes to upgrade part of **5ME** to Category A at an estimated cost of \$96.37 million in money-of-the-day (MOD) prices to carry out preparatory works up to pre-tender stage for the redevelopment and expansion of POH.

PROJECT SCOPE AND NATURE

3. The scope of the project **5ME** comprises the following –

(a) Preparatory works

- (i) site investigation;
- (ii) consultancy services including detailed design and preparation of tender documentation for Stage 1 redevelopment as well as outline design for Stage 2 redevelopment; and
- (iii) demolition of the existing South Wing and Accident and Emergency/Out-patient Department (A&E/OPD) Block.

(b) Main works

- (i) Stage 1 redevelopment which entails the construction of a new building on the existing site of the South Wing and A&E/OPD Block to accommodate 300 in-patient beds and other supporting facilities;
- (ii) consultancy services covering contract administration for Stage 1 redevelopment as well as detailed design, preparation of tender documentation and contract administration for Stage 2 redevelopment; and
- (iii) Stage 2 redevelopment which entails the demolition of the existing Central Wing, the North Wing and staff quarters, and the construction of a new building to accommodate 322 in-patient beds as well as the provision of a

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rehabilitation garden and other necessary external landscaping.

4. We propose to upgrade to Category A that part of the project under **5ME** covering the preparatory works described in paragraph 3(a) above, before commencement of the main works. The detailed design work would commence in July 2000 with a view to completion by June 2001. The demolition works will start in December 2000 and be completed by May 2001. We aim to complete the redevelopment and expansion of POH by 2006. A site plan of the existing POH is at Enclosure 1.

JUSTIFICATION

5. At present, the Hospital Authority (HA) provides medical services for the community through its eight hospital clusters. The medical services for Yuen Long, Tuen Mun and North District are provided by the New Territories North (NTN) hospital cluster which comprises POH, Tuen Mun Hospital (TMH), North District Hospital (NDH), Fanling Hospital, Castle Peak Hospital and Siu Lam Hospital. Notwithstanding the opening of the new NDH in 1998, the provision of medical services in the NTN cluster is still insufficient to meet the increasing needs due to population growth. By 2006, the projected population in the NTN cluster will increase by 25% from 1 120 000 in 1999 to 1 400 000. According to the latest review conducted by the HA on the demand and supply of public hospital beds in Hong Kong, there will be a projected shortfall of about 1 000 beds in NTN by 2006. We propose to expand the capacity of POH by opening an additional 272 beds. The proposal will enable POH to provide a total of 622 acute in-patient beds to serve the local population. HA also plans to expand and develop other medical facilities in NTN to cater for the medical needs of the NTN cluster.

6. POH currently has a complement of 350 general beds (excluding the 120 infirmary beds in Tin Ka Ping Centre). Owing to out-dated design, most of its facilities are lagging behind the prevailing standards required for modern practices in medical treatment and care with regard to space, infrastructure and technological provisions. The Accident and Emergency (A&E) Department and Specialist Out-patient Department are overcrowded.

7. Facilities in the South Wing which was built in 1961 are particularly dilapidated and some are beyond repair and maintenance. Although the Central Wing (built in 1966 and subsequently expanded in 1983) and the North Wing

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(built in 1973 and subsequently expanded in 1987) are relatively new compared with the South Wing, the conditions of these buildings have also deteriorated to the extent that only large-scale renovation can restore the condition of the two Wings to acceptable standards. Bearing in mind that our objective is to upgrade POH to a modern general acute hospital, complete redevelopment of POH would enable redesign of the hospital complex and facilities to meet modern health care standards to cater for community needs. The layout of the existing premises poses a lot of restrictions in terms of head room and floor area of each storey for refurbishment into a modern general acute hospital, which in turn would affect the operational efficiency of various units and departments of the remodelled hospital. As the main hospital compound of POH has to accommodate 272 more beds on top of its existing 350 beds, complete redevelopment of the POH main compound is necessary to make the expansion project viable.

8. HA plans to carry out the redevelopment project in two stages. This is to ensure that POH can continue to provide medical services, at an appropriate level, to the public during the redevelopment period. Under Stage 1 redevelopment, a new building will be constructed on the site where the existing South Wing and A&E/OPD Block are located. The new building will accommodate 300 in-patient beds, the A&E, General and Specialist Out-patient Departments, operating theatres and other supporting departments as well as car parking spaces. Stage 2 redevelopment will involve demolition of the existing Central Wing, the North Wing and staff quarters, and the construction of a new building on the same site to accommodate 322 in-patient beds. A rehabilitation garden and other necessary external landscaping will also be provided. A map showing the existing locations of POH and Tin Ka Ping Centre is at Enclosure 2.

9. Upon completion of the redevelopment and expansion project, POH will be upgraded to a modern general acute hospital and the medical services provided by POH will be strengthened in the following respects -

- (a) with the addition of 272 in-patient beds, there will be a total of 622 acute in-patient beds to cater for the need for medical services of the NTN cluster;
- (b) POH will be able to handle some 140 000 A&E attendances per annum compared with its existing capacity of 69 000 attendances; and
- (c) POH will be able to handle some 282 000 specialist outpatient attendances per annum compared with its existing capacity of 36 000.

10. Before we embark on the main works as described in paragraph 3(b) above, we need to carry out site investigation, develop detailed design, as well as prepare tender documents and building plans. HA does not have the expertise to undertake such specialist tasks in-house. We propose to engage professional consultants to carry out these preparatory works. That apart, to enable the project to be completed as soon as practicable to cope with the increasing demand for medical services in the Northern New Territories, we further propose to carry out the demolition of the existing South Wing and A&E/OPD Block at the preparatory works stage. This will enable the project completion programme to be shortened by at least six months.

11. The demolition of the South Wing and A&E/OPD Block during the preparatory stage of the project will necessitate the decantation of 80 existing in-patient beds together with the A&E and out-patient clinics, as well as the surgical services. HA will temporarily re-provision the 80 in-patient beds in Tin Ka Ping Centre and the specialist out-patient and family medicine clinics at the Central Wing of POH. To pave the way for the redevelopment project, surgical services at POH have already been temporarily re-provisioned at NDH with effect from July 1999. HA has also temporarily suspended the A&E Department at POH on 1 May 2000 and in its place, set up a 24-hour out-patient clinic at POH with effect from 1 May 2000 to treat semi-urgent and non-urgent patients, who at present account for over 80% of all A&E patients at POH. Critical, emergency and urgent cases will be handled by A&E Departments of TMH and NDH, the A&E services of which will be enhanced.

FINANCIAL IMPLICATIONS

12. The estimated total capital cost of the project is \$2,169.74 million in December 1999 prices. HA, in consultation with the Director of Architectural Services (D Arch S), estimates the cost of the proposed preparatory works to be \$96.37 million in MOD prices (see paragraph 13 below). A detailed breakdown is as follows –

| | \$million |
|--|------------------|
| (a) Consultants' fees for | 68.45 |
| (i) site supervision for demolition works | 0.92 |
| (ii) outline sketch plan | 15.35 |
| | /(iii) |

| | | |
|------------------------------------|-----------|---------------------------------|
| (iii) detailed design | 22.79 | |
| (iv) tender documentation | 29.39 | |
| (b) Site investigations | 2.65 | |
| (c) Demolition works and decanting | 14.25 | |
| (d) Contingencies | 10.26 | |
| | Sub-total | 95.61 (in December 1999 prices) |
| (e) Provision for price adjustment | 0.76 | |
| | Total | 96.37 (in MOD prices) |

A breakdown by man months of the estimates for consultants' fees is at Enclosure 3.

13. Subject to Members' approval, HA will phase the expenditure as follows -

| Year | \$ million (Dec 1999) | Price adjustment factor | \$ million (MOD) |
|-----------|--------------------------|-------------------------------|---------------------|
| 2000 – 01 | 78.76 | 1.00000 | 78.76 |
| 2001 – 02 | 16.85 | 1.04500 | 17.61 |
| | 95.61 | | 96.37 |

14. We derived the MOD estimate on the basis of Government's latest forecast of trend labour and construction prices for the period 2000 to 2002. HA will engage professional consultants through competitive bidding in line with prevailing government procedures. The competitive bidding will be carried out

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on the basis of fixed-price lump-sum fees. HA will tender the two contracts for demolition and site investigation works under fixed-price lump-sum contracts without provision for price fluctuation. This is because the scope of works can be clearly defined in advance and the works period will be shorter than 21 months.

15. The proposed consultancy and demolition works have no additional recurrent financial implication.

PUBLIC CONSULTATION

16. HA consulted the then Yuen Long Provisional District Board (YLPDB) in December 1998 and April 1999. Members of the then YLPDB supported the proposed redevelopment and expansion of POH, as well as HA's proposal to run a 24-hour out-patient clinic at POH during the redevelopment period. Members were content with the proposed decanting and reprovisioning arrangements outlined in paragraph 11 above.

17. The then Tuen Mun Provisional District Board (TMPDB) had expressed concern about the temporary suspension of the A&E Department at POH during the preparatory stage and Stage 1 redevelopment as it would strain the demand for A&E services at TMH. At the May 1999 meeting of the Board, HA informed the TMPDB of its intention to run a 24-hour out-patient clinic at POH, and assured Members that the bulk of semi-urgent and non-urgent A&E patients would be taken care of by this arrangement. As such, TMH and NDH would only need to take up some 20% of POH's A&E patients.

18. An information paper on the redevelopment and expansion of POH was issued to the LegCo Panel on Health Services on 27 April 2000.

ENVIRONMENTAL IMPLICATIONS

19. Consultants engaged by HA completed a Preliminary Environmental Review (PER) for the proposed redevelopment and expansion of POH in January 1999. The PER concluded and the Director of Environmental Protection agreed that the project will not cause long-term environmental impacts and that an Environmental Impact Assessment is not necessary.

20. HA will follow the standard practice in removal of any asbestos under the Air Pollution Control Ordinance, and will implement mitigation measures to control all construction phase impacts within established standards and guidelines. We have included in the project estimates the cost of implementing suitable mitigation measures to control these short-term environmental impacts.

21. During construction of the new hospital complex, HA will control noise, dust and site run-off nuisances within the established standards and guidelines through the implementation of mitigation measures in the relevant works contracts. These include the use of silencers, mufflers, acoustic lining or shields for noisy demolition activities, as well as frequent cleaning and watering of the site.

22. HA estimates that a total of 5 500 cubic metres of construction and demolition (C&D) materials will be generated under this project, including 1 000 cubic metres of C&D waste to be disposed of at landfills and 4 500 cubic metres of public fill to be delivered to public filling areas. HA has considered ways to reduce the generation of C&D materials as much as possible. HA will require the contractor to submit to HA's project consultants for approval a waste management plan with appropriate mitigation measures including allocation of an area for waste segregation. HA will ensure that the day-to-day operations on site comply with the plan submitted. HA will require the contractor to reuse excavated material as filling materials on site or at other sites as far as possible. To further minimize the generation of C&D materials, HA will require the contractor to use metal hoarding. HA will also require the contractor to separate public fill from C&D waste for disposal at appropriate locations and to sort the C&D waste by category on site to facilitate reuse/recycling. HA will control the disposal of public fill and C&D waste to designated public filling facilities and landfills respectively through a trip ticket system, and record the disposal, reuse and re-cycling of C&D materials for monitoring purposes.

LAND ACQUISITION

23. The proposed consultancy and demolition works do not require land acquisition.

BACKGROUND INFORMATION

24. In the 1998 Policy Address, the Chief Executive announced the

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decision to redevelop and expand POH to meet the rising demand for medical services in the Northern New Territories.

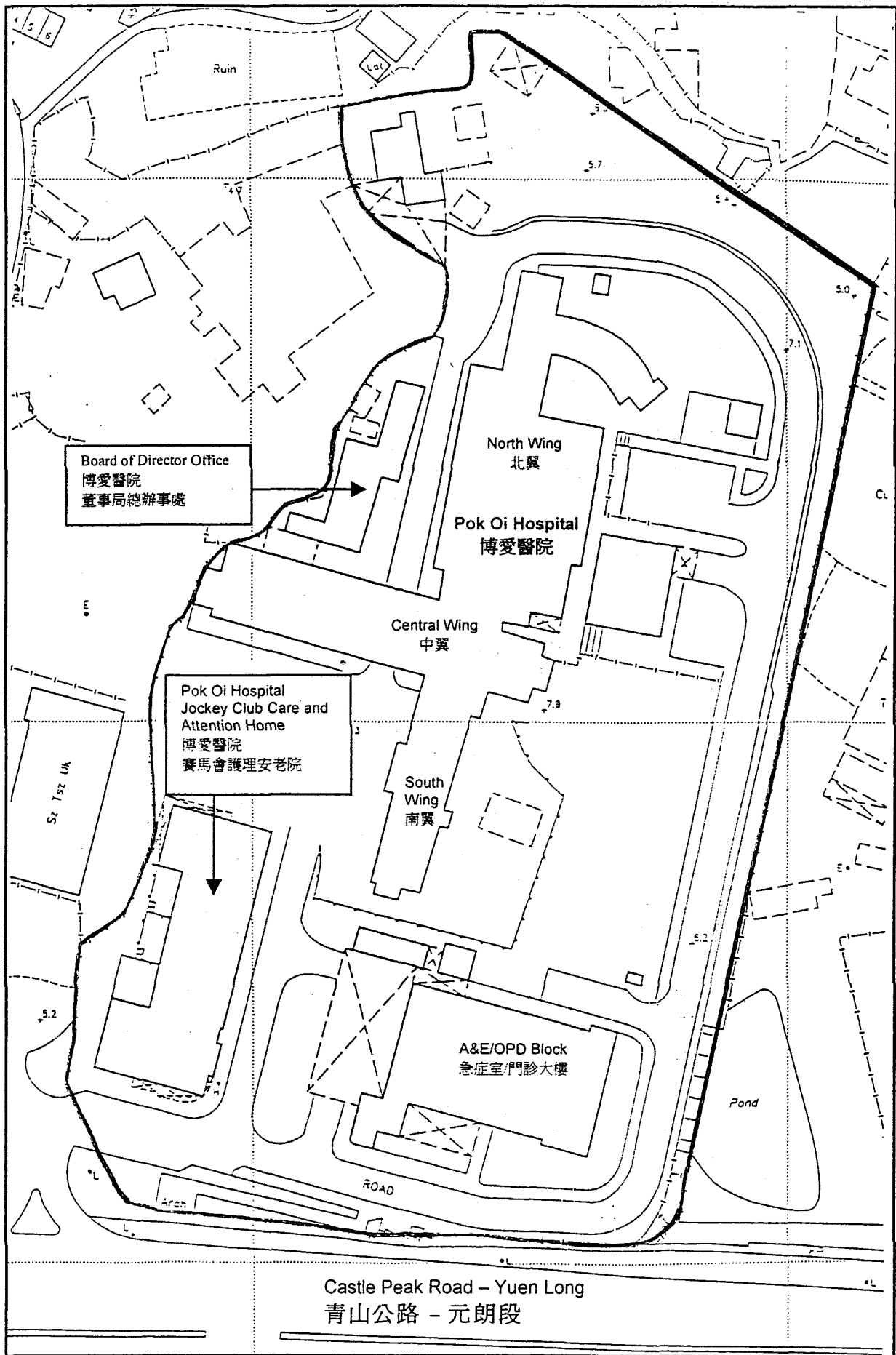
25. The main hospital compound of POH at Castle Peak Road in Au Tau comprises the South Wing which houses the wards, offices and supporting facilities; the A&E/OPD Block which houses the A&E and out-patient clinics; the Central Wing which houses the wards, operating theatres, rehabilitation facilities, offices, callrooms and supporting facilities; and the North Wing which houses the Pharmacy, Laboratory, X-ray, rehabilitation and supporting facilities. The Tin Ka Ping Centre, which houses 120 infirmary beds, is separately located at Yau Shin Street in Au Tau. The scope of this redevelopment project does not cover the Tin Ka Ping Centre.

26. We upgraded **SME** to Category B on 25 February 2000.

27. We estimate that the proposed preparatory works will create some 75 new jobs, comprising 30 professional staff, 20 technical staff and 25 labourers.

Health and Welfare Bureau
May 2000

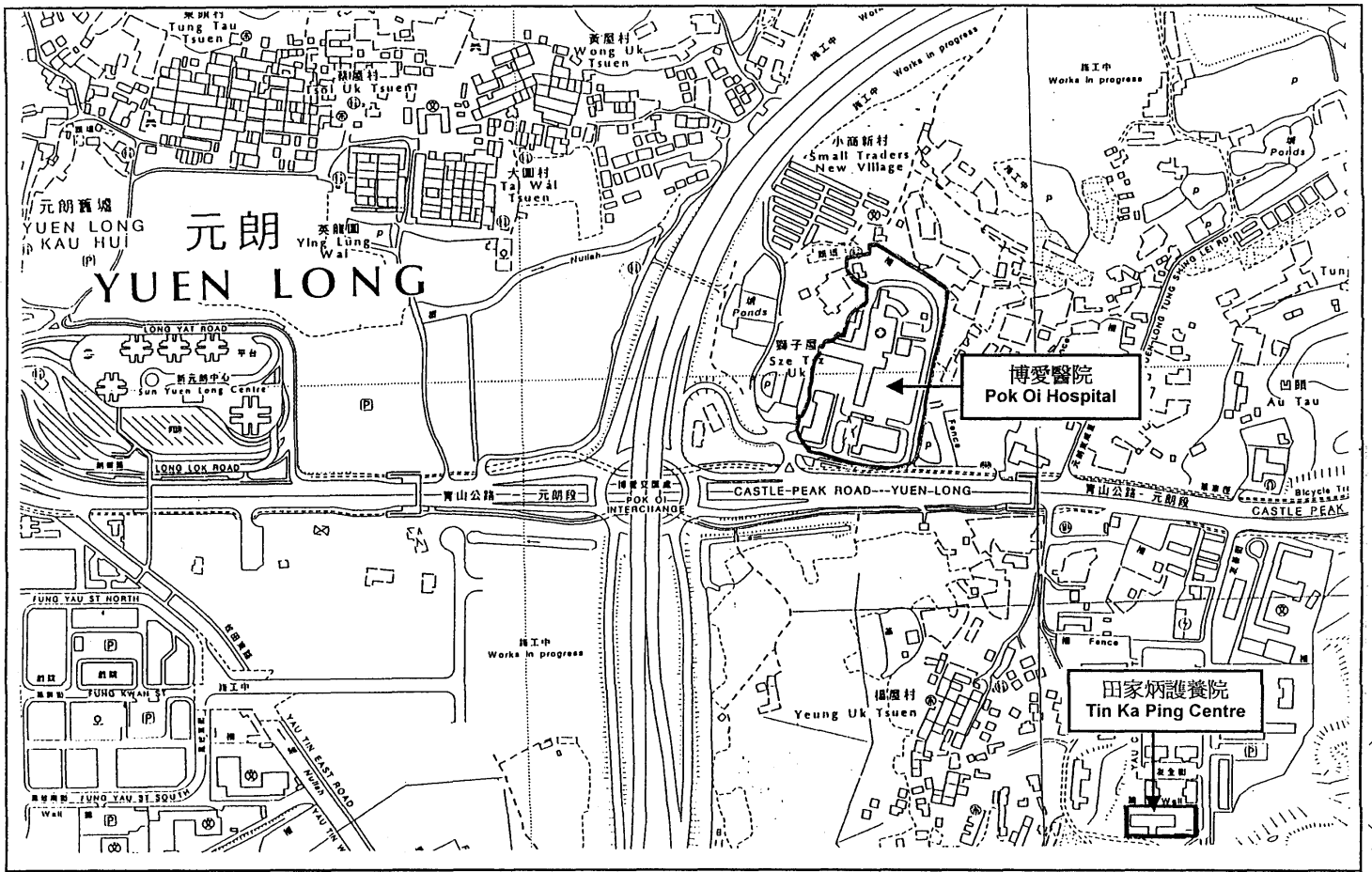
(PWSC0269/WIN11)



SITE PLAN

總平面圖 scale (比例) 1:1000

POK OI HOSPITAL 博愛醫院



SITE PLAN

總平面圖 scale (比例) 1:5000

POK OI HOSPITAL 博愛醫院

Enclosure 3 to PWSC(2000-01)18

5ME - Redevelopment and expansion of Pok Oi Hospital

Breakdown of estimates for consultants' fees

| Consultants' staff costs | | | Estimated man months | Average MPS* salary point | Multiplier factor | Estimated fee (\$ million) |
|---------------------------------|---|--------------|-------------------------------------|--|--------------------------------|---|
| A. | Demolition works | | | | | |
| (I) | Site supervision (Stage 1 only) | | | | | |
| | | Professional | 4 | 40 | 2.4 | 0.60 |
| | | Technical | 9 | 16 | 1.7 | 0.32 |
| | | | | | | 0.92 |
| | | | | | Total consultants' staff costs | 0.92 |
| B. | Pre-contract consultants' fees | | | | | |
| (I) | Outline sketch plan (Stages 1 and 2) | | | | | |
| (a) | Architectural discipline | Professional | 15 | 40 | 2.4 | 2.26 |
| | | Technical | 60 | 16 | 2.4 | 3.03 |
| (b) | Building service discipline | Professional | 15 | 40 | 2.4 | 2.26 |
| | | Technical | 40 | 16 | 2.4 | 2.02 |
| (c) | Structural engineering discipline | Professional | 10 | 40 | 2.4 | 1.51 |
| | | Technical | 30 | 16 | 2.4 | 1.51 |
| (d) | Quantity surveying discipline | Professional | 5 | 40 | 2.4 | 0.75 |
| | | Technical | 10 | 16 | 2.4 | 0.50 |
| (e) | Project management discipline | | 10 | 40 | 2.4 | 1.51 |
| | | | | | Sub-total | 15.35 |

| Consultants' staff costs | | | Estimated man months | Average MPS* salary point | Multiplier factor | Estimated fee (\$ million) |
|--------------------------|---|--------------|----------------------------|------------------------------------|----------------------|----------------------------------|
| (II) | Detailed design (Stage 1 only) | | | | | |
| (a) | Architectural discipline | Professional | 36 | 40 | 2.4 | 5.42 |
| | | Technical | 70 | 16 | 2.4 | 3.53 |
| (b) | Building service discipline | Professional | 18 | 40 | 2.4 | 2.71 |
| | | Technical | 50 | 16 | 2.4 | 2.52 |
| (c) | Structural engineering discipline | Professional | 16 | 40 | 2.4 | 2.41 |
| | | Technical | 40 | 16 | 2.4 | 2.02 |
| (d) | Quantity surveying discipline | Professional | 8 | 40 | 2.4 | 1.21 |
| | | Technical | 20 | 16 | 2.4 | 1.01 |
| (e) | Project management discipline | | 13 | 40 | 2.4 | 1.96 |
| | | | | | Sub-total | 22.79 |
| (III) | Contract documentation (Stage 1 only) | | | | | |
| (a) | Architectural discipline | Professional | 24 | 40 | 2.4 | 3.62 |
| | | Technical | 94 | 16 | 2.4 | 4.74 |
| (b) | Building service discipline | Professional | 24 | 40 | 2.4 | 3.62 |
| | | Technical | 78 | 16 | 2.4 | 3.93 |
| (c) | Structural engineering discipline | Professional | 21 | 40 | 2.4 | 3.16 |
| | | Technical | 70 | 16 | 2.4 | 3.53 |
| (d) | Quantity surveying discipline | Professional | 16 | 40 | 2.4 | 2.41 |
| | | Technical | 54 | 16 | 2.4 | 2.72 |

| Consultants' staff costs | | | Estimated man months | Average MPS* salary point | Multiplier factor | Estimated fee (\$ million) |
|--------------------------|-------------------------------------|--------------|----------------------------|------------------------------------|---------------------------------------|----------------------------------|
| (e) | Project management discipline | Professional | 11 | 40 | 2.4 | 1.66 |
| | | | | | Sub-total | 29.39 |
| | | | | | Total consultants' staff costs | 68.45 |

* MPS = Master Pay Scale

Notes

1. A multiplier factor of 2.4 is applied to the average MPS point to arrive at the full staff costs for the staff employed by the consultants. The staff costs include the consultants' overheads and profit. (As at 1 April 1999, MPS point 40 = \$62,780 per month and MPS point 16 = \$21,010 per month). A multiplier factor of 1.7 is applied in the case of site staff supplied by the consultants.
2. The figures given above are based on estimates prepared by the Director of Architectural Services and the Hospital Authority. We will only know the actual man months and actual fees when we have selected the consultants through the competitive bidding system.