

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Environmental Hygiene – Retail markets and cooked food centres

26NM – Retro-fitting of air-conditioning and general improvement works at San Hui Market, Tuen Mun

Members are invited to recommend to Finance Committee the upgrading of **26NM** to Category A at an estimated cost of \$119.7 million in money-of-the-day prices for retro-fitting an air-conditioning system and carrying out general improvement works at the San Hui Market, Tuen Mun.

PROBLEM

We need to upgrade the mechanical ventilation system in the San Hui Market and improve the existing provisions of the market in order to provide a better environment and meet the latest statutory requirements.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Health, Welfare and Food, proposes to upgrade **26NM** to Category A at an estimated cost of \$119.7 million in money-of-the-day (MOD) prices for retro-fitting an air-conditioning system and carrying out general improvement works at the San Hui Market, Tuen Mun.

/ **PROJECT**

PROJECT SCOPE AND NATURE

3. The scope of **26NM** comprises –
- (a) provision of air-conditioning to the San Hui Market;
 - (b) upgrading of fire services installation and provision of barrier-free access to meet current statutory requirements;
 - (c) reprovisioning of fish stalls and improvement works to poultry stalls;
 - (d) upgrading of electrical works including the construction of a new transformer room and plant rooms at the rooftop;
 - (e) refurbishment works including reconfiguration and modification of the existing layout, relocation of toilets, addition of store rooms, replacement of external wall finishes, replacement of internal floor and wall finishes in common areas, replacement of waterproofing layer at the rooftop, improvement of lighting, signage, plumbing and drainage system, replacement of windows, and provision of automatic sliding doors at entrances; and
 - (f) installation of exhaust system with scrubbers for the refuse collection chamber.

————— Layout plans for the ground floor and the rooftop are at Enclosures 1 and 2
————— respectively and a computer rendered drawing for the proposed air-conditioned
————— San Hui Market is at Enclosure 3. We plan to start the proposed works in
August 2005 for completion in February 2007. During this period, we shall
arrange temporary closure of the market by zones so as to minimise disruption to
the normal operation of the market and inconvenience caused to the public.

JUSTIFICATION

4. The San Hui Market was built in 1982 with 333 market stalls located on the ground floor of a free-standing building. At present, it is provided with simple mechanical ventilation devices including ceiling fans and oscillating

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fans, and with windows and louvers on the external walls to facilitate natural ventilation. An air-conditioned San Hui Market will provide a better and more comfortable environment for stall lessees¹ and patrons.

5. The San Hui Market is also not up to the current standards in respect of fire services installation and provision of barrier-free access. Regular and scheduled maintenance works have been carried out to ensure the smooth operation of the facilities, but no major improvement works have been undertaken since commissioning of the market in 1982. The existing internal finishes and building services installations of the market have been subject to normal wear and tear. It is necessary to upgrade the conditions of the San Hui Market to improve its environment and to meet the latest statutory requirements.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be \$119.7 million in MOD prices (see paragraph 7 below), made up as follows –

| | \$ million | |
|--|-------------------|----------------------------|
| (a) Building | 47.5 | |
| (b) Building services | 57.1 | |
| (c) Consultants' fees for construction stage – | 5.3 | |
| (i) contract administration | 3.0 | |
| (ii) site supervision | 2.3 | |
| (d) Contingencies | 11.0 | |
| Sub-total | 120.9 | (in September 2004 prices) |
| (e) Provision for price adjustment | (1.2) | |
| Total | 119.7 | (in MOD prices) |

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¹ The Government has agreed in the last Legislative Council session to undertake air-conditioning retro-fitting works in public markets if 85% of the market stall lessees agree to pay the recurrent cost in operating and maintaining the air-conditioning system. Since more than 85% of stall lessees at San Hui Market support the air-conditioning works and agree to pay the recurrent cost, we agree to undertake the air-conditioning works.

We propose to engage consultants to undertake contract administration and site supervision of the project. A breakdown of the estimate for consultants' fees is at Enclosure 4. The total floor area to be refurbished is about 8 610 square metres (m²). The estimated construction unit cost, represented by the building and the building services costs, is \$12,149 per m² of floor area in September 2004 prices. We consider this unit cost reasonable as compared with similar projects carried out by the Government.

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

| Year | \$ million (Sep 2004) | Price adjustment factor | \$ million (MOD) |
|-------------|----------------------------------|--|-----------------------------|
| 2005 – 06 | 53.0 | 0.99000 | 52.5 |
| 2006 – 07 | 48.0 | 0.98753 | 47.4 |
| 2007 – 08 | 10.0 | 0.99123 | 9.9 |
| 2008 – 09 | 9.9 | 0.99990 | 9.9 |
| | 120.9 | | 119.7 |

8. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2005 to 2009. We intend to award the contract on a lump-sum basis because we can clearly define the scope of works in advance, leaving little room for uncertainty. The contract will not provide for price adjustments because the contract period will not exceed 21 months.

9. At present, the annual recurrent expenditure for the San Hui Market is \$3.15 million. We estimate the annual recurrent expenditure upon completion of the project will be increased to \$6.67 million, including recurrent operating and maintenance costs of \$3.52 million for the air-conditioning system, which will be borne by the stall lessees (for let-out stalls) or by Government (for vacant stalls).

PUBLIC CONSULTATION

10. The Legislative Council Panel on Food Safety and Environmental Hygiene discussed a range of market and cooked food centre improvement works including this project in March 2004 and indicated support for this project. We briefed the Environment, Hygiene and District Development Committee of the Tuen Mun District Council on the development of the project in September 2004. The Committee was supportive of the design of the project.

ENVIRONMENTAL IMPLICATIONS

11. The project is not a designated project under the Environmental Impact Assessment Ordinance. It will not cause long-term environmental impact. We have included in the project estimate the cost of implementing suitable mitigation measures to control short-term environmental impacts. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, and frequent cleaning and watering of the site.

12. At the planning and design stages, we have considered measures to reduce the generation of construction and demolition (C&D) materials. We have introduced more prefabricated building elements into the project design to reduce temporary formwork and construction waste. These include dry-wall partitioning and proprietary fittings and fixtures. In addition, we will require the contractor to use metal site hoardings and signboards so that these materials can be recycled or reused in other projects.

13. We will require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill and C&D waste to designated public filling facilities and landfills respectively through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

14. We estimate that the project will generate about 980 cubic metres (m³) of C&D materials. Of these, we will reuse about 840 m³ (85.7%) as fill in public filling areas², and dispose of the remaining 140 m³ (14.3%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$17,500 for this project (based on a notional unit cost³ of \$125/m³).

LAND ACQUISITION

15. The project does not require any land acquisition.

BACKGROUND INFORMATION

16. We upgraded **26NM** to Category B in October 2001. We engaged consultants to undertake detailed design and tender documentation of the project at a total cost of \$5.1 million and charged this amount to block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". The consultants have completed the detailed design and are finalising tender documents.

17. The proposed retro-fitting of air-conditioning system and general improvement works at San Hui Market will involve removal of four trees, all of which will be replanted within the project site. All trees to be removed are not important trees⁴.

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² A public filling area is a designated part of a development project that accepts public fill for reclamation purposes. Disposal of public fill in a public filling area requires a licence issued by the Director of Civil Engineering and Development.

³ 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/m³), nor the cost to provide new landfills (which are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

⁴ Important trees refer to trees on the Register of Old and Valuable Trees, and any other trees which meet one or more of the following criteria –

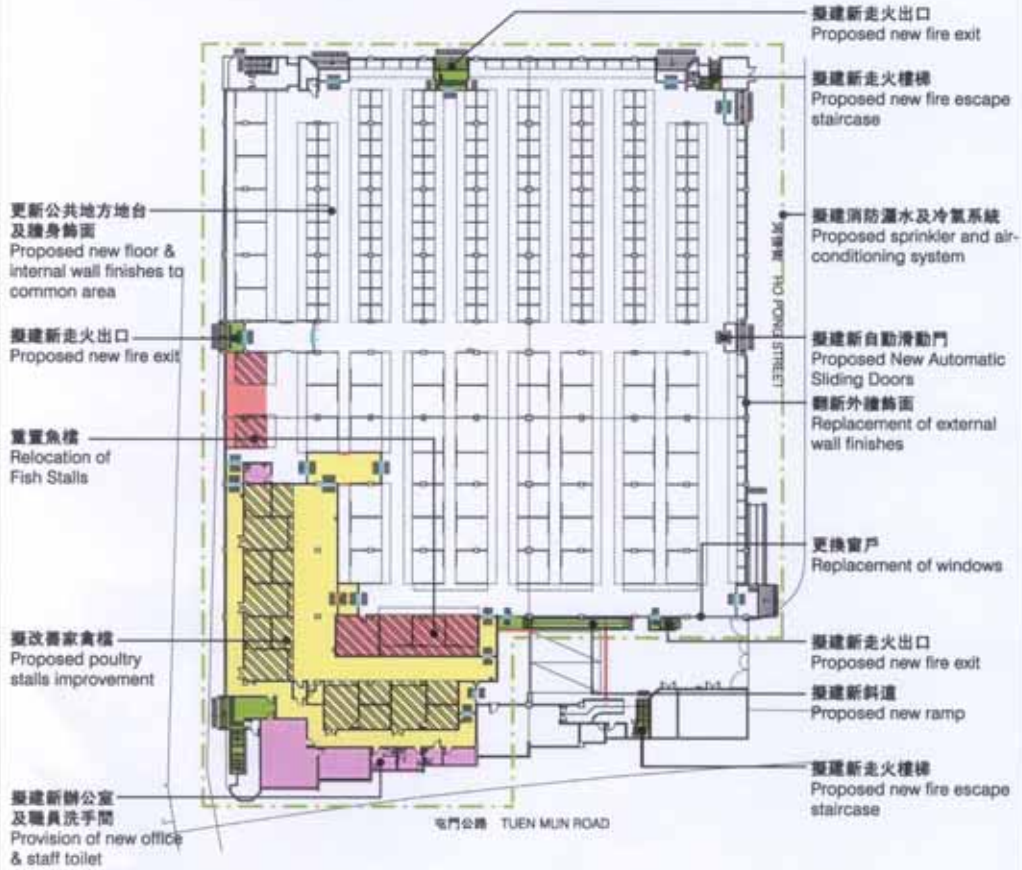
- (a) trees of over 100 years old;
- (b) trees of cultural, historical or memorable significance;
- (c) trees of precious or rare species;
- (d) trees of outstanding form; or
- (e) trees with trunk diameter exceeding 1.0 metre (measured at one metre above ground level).

18. We estimate that the proposed works will create about 218 jobs (194 for labourers and another 24 for professional/technical staff) providing a total employment of 2 900 man-months.


Health, Welfare and Food Bureau
January 2005



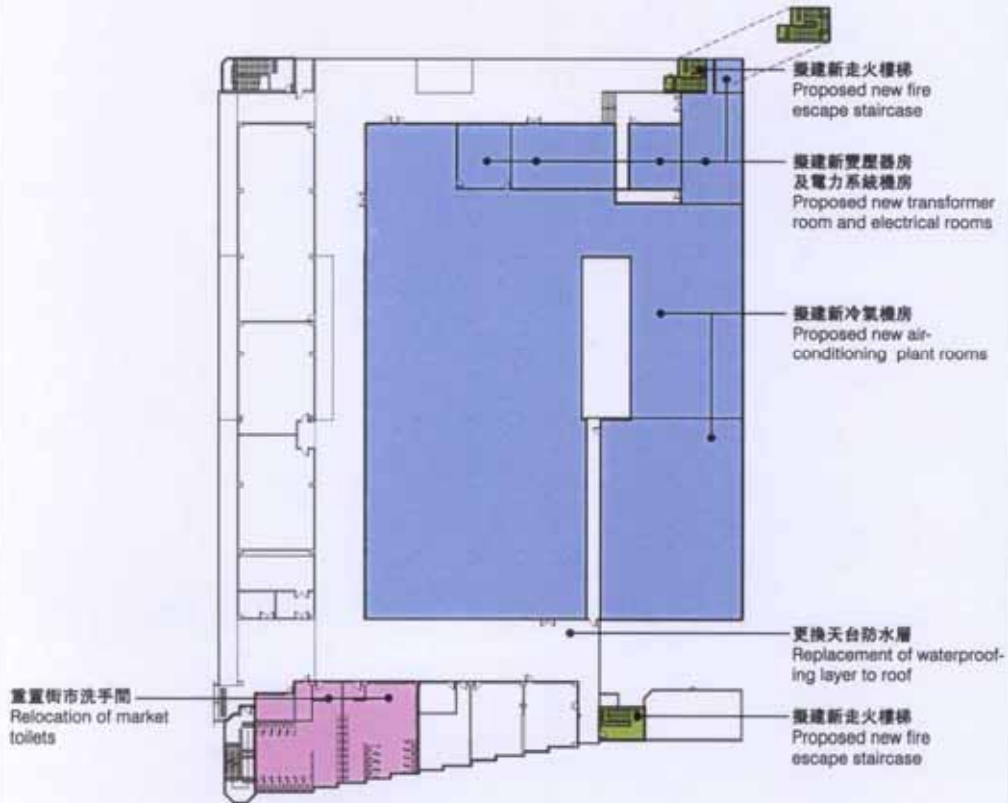
- 擬改善家禽檔
Proposed Poultry Stalls Improvement
- 重置魚檔
Relocation of Fish Stalls
- 擬建街市附設地方
Proposed Market Ancillary Area
- 擬建新走火出口/走火樓梯/斜道
Proposed New Exit/Staircase/Ramp
- 擬建新防火閘
Proposed New Fire Shutter
- 擬建新自動滑動門
Proposed New Automatic Sliding Doors




地下平面圖
GROUND FLOOR PLAN

| | | | | |
|---|--------------------------------|------------------|---|----------------|
| Title 26NM 屯門新墟街市 加裝空氣調節系統及一般改善工程 RETRO-FITTING OF AIR-CONDITIONING AND GENERAL IMPROVEMENT WORKS AT SAN HUI MARKET, TUEN MUN | drawn by Mandy So/Juliet Ho | date 17.01.05 | drawing no. AR/6581/3026/SH/SK-01 | scale 1:600 |
| | approved Hanna Hsu | date 17.01.05 | | |
| office Dennis Lau & Ng Chun Man Architects & Engineers (H.K.) Ltd | | |  ARCHITECTURAL SERVICES DEPARTMENT | |

- 擬建街市附設地方
Proposed Market Ancillary Area
- 擬建新機房
Proposed New Plant Rooms
- 擬建新走火樓梯
Proposed New Staircases



天台平面圖
ROOF PLAN

| | | | | |
|--|--------------------------------|------------------|---|----------------|
| Title 26NM 屯門新墟街市 加裝空氣調節系統及一般改善工程 RETRO-FITTING OF AIR-CONDITIONING AND GENERAL IMPROVEMENT WORKS AT SAN HUI MARKET, TUN MUN | DRAWN BY Mandy So/Juliet Ho | DATE 17.01.05 | DRAWING NO. AB/6581/3026/SH/SK-02 | SCALE 1:600 |
| | CHECKED BY Hanna Hsu | DATE 17.01.05 | | |
| OFFICE Dennis Lau & Ng Chun Man Architects & Engineers (H.K.) Ltd | | |  ARCHITECTURAL SERVICES DEPARTMENT | |


更新公眾地方照明系統
Improvement of lighting

擬建消防灑水及冷氣系統
Proposed sprinkler and
air-conditioning system



更新公眾地方地台及牆身飾面
Proposed new floor and internal wall
finishes to common area

街市公共地方改善建議
PROPOSED IMPROVEMENT TO MARKET COMMON AREA

| | | | | |
|---|--|------------------|---|-----------------|
| Title 26NM 屯門新墟街市 加裝空氣調節系統及一般改善工程 RETRO-FITTING OF AIR-CONDITIONING AND GENERAL IMPROVEMENT WORKS AT SAN HUI MARKET, TUEN MUN | drawn by Mandy So/Juliet Ho | date 17.01.05 | drawing no. AB/6581/3026/SH/SK-03 | scale N.T.S. |
| | approved Hanna Hsu | date 17.01.05 |  ARCHITECTURAL SERVICES DEPARTMENT | |
| | office Dennis Lau & Ng Chun Man Architects & Engineers (H.K.) Ltd. | | | |

**26NM – Retro-fitting of air-conditioning and general improvement works
at San Hui Market, Tuen Mun**

Breakdown of the estimate for consultants' fees

| | | Estimated man- months | Average MPS* salary point | Multiplier (Note 1) | Estimated fee (\$ million) |
|--|--------------|--------------------------------------|--|--------------------------------|---|
| Consultants' staff costs | | | | | |
| Consultants' fees for construction stage | | | | | |
| (i) Contract administration (Note 2) | Professional | — | — | — | 1.4 |
| | Technical | — | — | — | 1.6 |
| (ii) Site supervision (Note 3) | Technical | 79.8 | 14 | 1.6 | 2.3 |
| Total | | | | | <hr/> 5.3 <hr/> |

*MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of resident site staff supplied by the consultants. (As at 1 January 2005, MPS point 14 = \$18,010 per month.)
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreements for the provision of air-conditioning/other improvement works to existing public markets and cooked food centres. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade **26NM** to Category A.
3. We will only know the actual man-months and actual costs after completion of the construction works.