

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

### **HEAD 703 – BUILDINGS**

#### **Environmental Hygiene – Retail markets and cooked food centres**

#### **34NM – Installation of air-conditioning system at Tai Wai Market**

Members are invited to recommend to the Finance Committee the upgrading of **34NM** to Category A at an estimated cost of \$109.7 million in money-of-the-day prices for the installation of air-conditioning system at Tai Wai Market.

### **PROBLEM**

We need to install air-conditioning (A/C) system and carry out improvement works (collectively referred to as “the proposed works”) at Tai Wai Market (the Market) to enhance its operating environment.

### **PROPOSAL**

2. The Director of Architectural Services, with the support of the Secretary for Food and Health, proposes to upgrade **34NM** to Category A at an estimated cost of \$109.7 million in money-of-the-day (MOD) prices for the proposed works at the Market.

**/PROJECT .....**

**PROJECT SCOPE AND NATURE**

3. The scope of the project comprises -
- (a) installation of a full-fledged A/C system in the Market;
  - (b) reprovisioning of two existing poultry stalls affected by the installation of the new A/C system and associated alteration works;
  - (c) improvement works to building services and other facilities associated with the installation of the A/C system, including the electricity supply and mechanical ventilation system, barrier free facilities, windows and louvres, and a refuse collection point; and
  - (d) other improvement works to facilities of the Market, including the loading/unloading bays (in particular installation of sound-absorbent facilities), signage system, refurbishment of toilet facilities and replacement of roller-shutters for market entrances.

4. The site and location plan, floor plan and artist's impressions for the Market are at Enclosures 1 to 3. The works will be carried out in three phases for about 17 months in total. The first two phases will last for about ten months in total. Phase 1 will involve re-provisioning of two poultry stalls. Phase 2 will involve the improvement works for electricity supply. In the first two phases, the Market will continue normal operation. In Phase 3, full market closure for about seven months<sup>1</sup> will be required for extensive building works for installation of the A/C system as well as the improvement works. The works to be carried out in different phases are shown at Enclosure 2. Rental waiver to the affected tenants will be applied in accordance with the prevailing policy. Subject to the funding approval of the Finance Committee, we plan to commence the construction in the fourth quarter of 2018 for completion in the second quarter of 2020.

**/JUSTIFICATION .....**

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<sup>1</sup> Full market closure period is reduced from eight to seven months in light of the suggestion made by the Legislative Council Panel on Food Safety and Environmental Hygiene. Please refer to paragraph 14 for details.

## JUSTIFICATION

5. The Market, with 195 stalls, has a site area of about 4 020 square metres (m<sup>2</sup>) at the ground floor of the Grandeur Garden at Chik Fai Street, Tai Wai, Sha Tin. At present, mechanical ventilation by means of ducts and fans without A/C is provided at the Market<sup>2</sup>. With the passage of time, the existing ventilation system is inadequate to cope with the rising expectations of market tenants and members of the public, resulting in increasing requests for installation of an A/C system to provide a better and more comfortable working and shopping environment. Following the established mechanism<sup>3</sup>, Food and Environmental Hygiene Department (FEHD) conducted a questionnaire survey in August 2014 to gauge the views of all tenants of the Market. With sufficient support<sup>4</sup> from the tenants for retrofitting A/C, the Architectural Services Department (ArchSD) conducted a preliminary feasibility assessment and worked out two options for consulting the Market Management Consultative Committee (MMCC). At its meeting in July 2015, the MMCC endorsed the option of retrofitting a full-fledged A/C system (instead of mere enhancement to the existing ventilation system), together with other improvement works to the Market as a package. Detailed design work then ensued and is now completed.

6. As announced in the Policy Address in October 2017, the Government is committed to improving the facilities of existing FEHD public markets, especially in retrofitting A/C, and better meeting the public demand for shopping daily fresh provisions. Following this policy direction, the proposed project at the Market is a mature one in the pipeline for seeking funding approval, as an early contribution to the whole programme that would provide an enhanced operating environment for the tenants and thus attract patronage.

**/FINANCIAL .....**

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<sup>2</sup> Pending the provision of A/C system, Food and Environmental Hygiene Department has installed/provided additional exhaust trunks, 12 evaporative air coolers and 32 fans in the Market as interim measures to improve ventilation.

<sup>3</sup> According to the established mechanism, a request for the retrofitting of A/C at a public market will first be discussed at a meeting of the relevant Market Management Consultative Committee (MMCC). Where there is a consensus among members of the MMCC would the request be further explored. The Food and Environmental Hygiene Department will conduct a questionnaire survey to gauge the extent of support from market tenants for the request.

<sup>4</sup> The support rate in Tai Wai Market was 97%. Since 1 July 2015, the threshold of tenants' support for retrofitting A/C facilities in public markets was lowered from 85% to 80%. If 80% or more of the tenants support the proposal, the Government will conduct a detailed technical feasibility study. Taking into consideration the findings of the study, the extent of works required, cost effectiveness, length of business disruption and tenants' views, the Government will decide whether there is a case for committing resources for A/C installation.

**FINANCIAL IMPLICATIONS**

7. We estimate the capital cost of the project to be \$109.7 million in MOD prices, broken down as follows –

		<b>\$ million</b> <b>(in MOD prices)</b>
(a)	Site works	3.2
(b)	Building	43.8
(c)	Building services	40.3
(d)	Drainage	1.2
(e)	External works	0.6
(f)	Additional energy conservation features	1.2
(g)	Furniture and equipment <sup>5</sup>	0.1
(h)	Consultants' fees for	3.9
	(i) contract administration	3.7
	(ii) management of resident site staff (RSS)	0.2
(i)	Remuneration of RSS	5.4
(j)	Contingencies	10.0
Total		<hr/> 109.7

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<sup>5</sup> The estimated cost is based on an indicative list of furniture and equipment required.

8. We propose to engage consultants to undertake contract administration and site supervision for the project. A detailed breakdown of the estimate for consultants' fees and RSS costs by man-months is at Enclosure 4. The construction floor area (CFA) of this project is about 4 020 m<sup>2</sup>. The estimated construction unit cost, represented by the building and building services costs, is \$20,920 per m<sup>2</sup> of CFA in MOD prices. We consider this unit cost comparable to that of similar projects built by the Government.

9. Subject to funding approval, we plan to phase the expenditure as follows –

Year	\$ million (in MOD prices)
2018 – 2019	3.2
2019 – 2020	49.9
2020 – 2021	32.8
2021– 2022	11.1
2022– 2023	7.7
2023– 2024	5.0
	<hr/> 109.7 <hr/>

10. We have derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period 2018 to 2024. We will deliver the proposed works through a lump-sum contract as the scope of the works can be clearly defined in advance. The contract will provide for price adjustment.

11. We estimate the annual recurrent expenditure arising from this project to be \$6.7 million. The recurrent costs arising from the proposed works would be taken into consideration when determining the relevant fees and charges in accordance with the “cost-recovery” and “user pays” principles, where applicable.

## **PUBLIC CONSULTATION**

12. Since 2015, we have initiated consultations on the proposed A/C project with various stakeholders, including the MMCC of the Market, and the Management Office and Incorporated Owners (the MO & IO) of the Grandeur Garden, and responded to their comments and requests by shortening the full market closure period and minimising the number of stalls affected as far as possible. We also addressed the concerns of the MO & IO about any possible impact of the new A/C system on the ceiling of the Market and any possible adverse noise impact arising from the operation of the new A/C system. At the latest consultation session held in October 2017, the MMCC noted the full market closure of about eight months and supported the project. As regards the MO & IO of the Grandeur Garden, they were briefed on the details of the project in October 2017, with site visits arranged to further alleviate their concerns. They were assured that the Government would be responsible for rectifying latent defects to the works arising from the new A/C system.

13. We presented the latest progress of the project, including the scope of works, the works programme by phases and the views of the stakeholders to the Health and Environment Committee (HEC) of the Sha Tin District Council on 9 November 2017. HEC members unanimously supported the proposed project, and requested the Government to, amongst others, further expedite the works programme so as to minimise the impact on the tenants of the Market.

14. We consulted the Legislative Council Panel on Food Safety and Environmental Hygiene (the Panel) on 13 March 2018. Members of the Panel supported the project but requested that, among other things, the period for full closure of the Market should be shortened. We have considered the overall situation and have taken measures with a view to reducing the full market closure period from about eight months to not more than seven months. Supplementary information requested by Panel members will be submitted to the Panel.

**/ENVIRONMENTAL .....**

**ENVIRONMENTAL IMPLICATIONS**

15. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). It will not cause long-term environmental impact. We have included in the project estimates the cost of implementing suitable mitigation measures to control short-term environmental impacts.

16. We will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contract. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, and frequent cleaning and watering of the site.

17. At the planning and design stages, we have considered measures to reduce the generation of construction waste where possible (e.g. using metal site hoardings and signboards so that these materials can be recycled or reused in other projects). In addition, we will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the site) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities<sup>6</sup>. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

18. At the construction stage, we will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

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<sup>6</sup> Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

19. We estimate that the project will generate in total about 583 tonnes of construction waste. Of these, we will reuse about 31 tonnes (5.3%) of inert construction waste on site and deliver 472 tonnes (81.0%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 80 tonnes (13.7%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at public fill reception facilities and landfill sites is estimated to be about \$50,000 for this project (based on an unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

## **HERITAGE IMPLICATIONS**

20. This project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

## **LAND ACQUISITION**

21. The project does not require any land acquisition.

## **ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES**

22. This project will adopt various forms of energy efficient features, in particular -

- (a) high efficiency air cooled chiller with variable speed drive;
- (b) light-emitting diode (LED) type light fittings; and
- (c) LED type exit sign and directional exit sign.

23. The total estimated additional cost for adoption of the above energy conservation measures is around \$1.2 million, which has been included in the cost estimate of this project. The energy efficient features will achieve 7.6% energy savings in the annual energy consumption with a payback period of about 8.5 years.



**BACKGROUND INFORMATION**

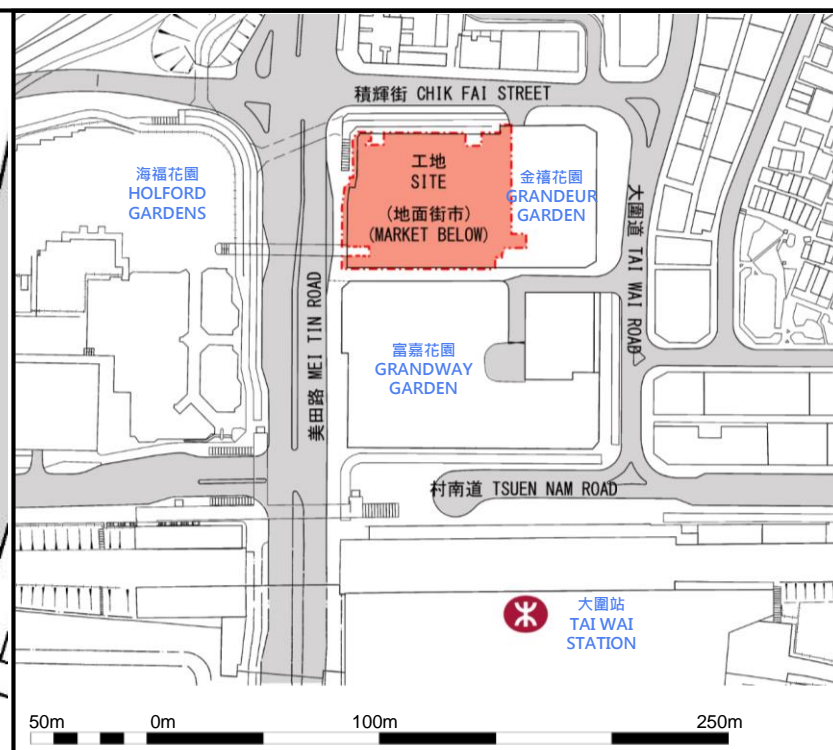
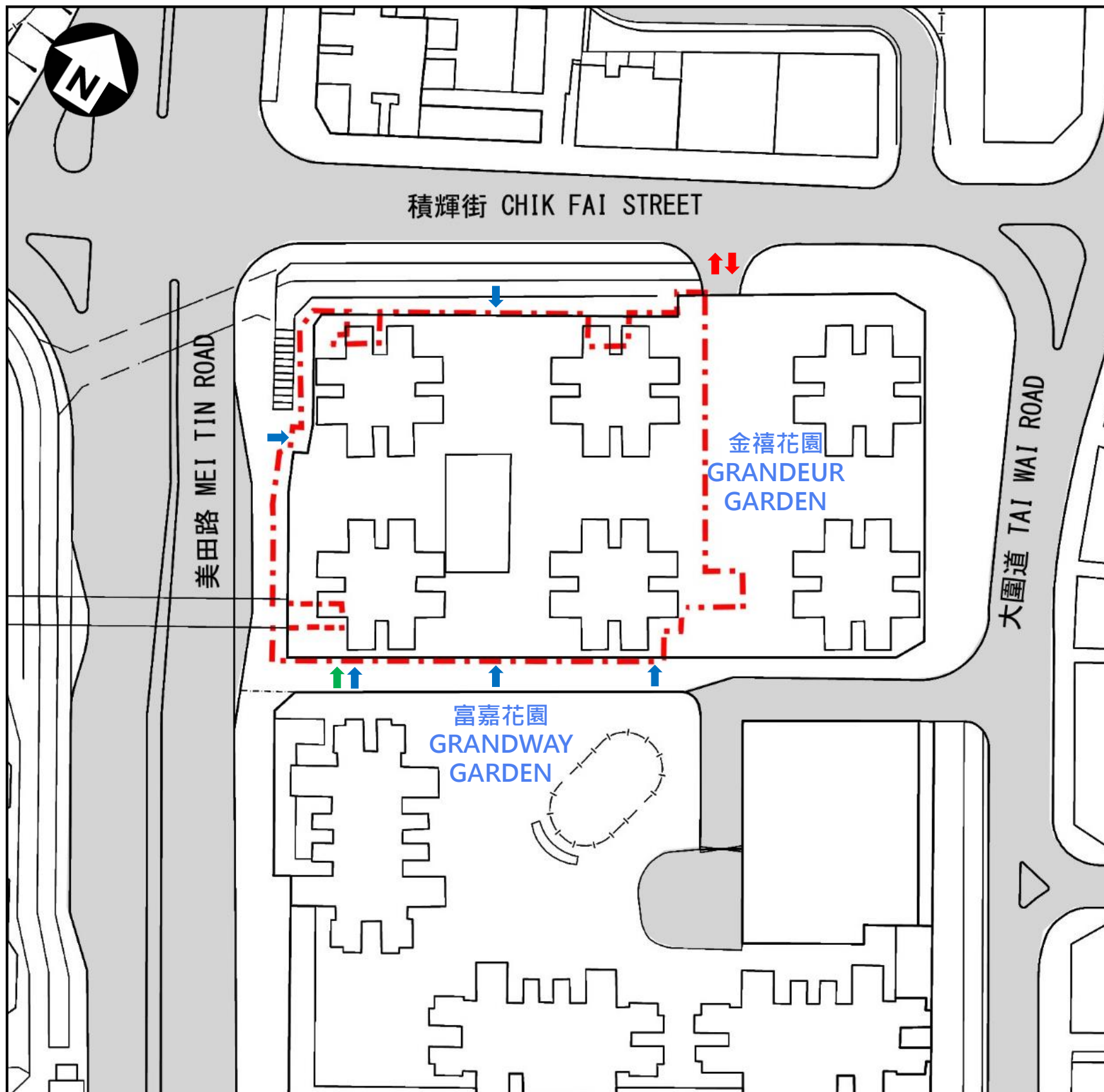
24. We upgraded **34NM** to Category B in September 2016. We engaged consultants to undertake various services, including layout design in July 2017, detailed design in October 2017 and ground investigation in November 2017 at a total cost of about \$3.9 million in MOD prices. The services and works by the consultants were funded under block allocation **Subhead 3100GX** “Project feasibility studies, minor investigations and consultants’ fees for items in Category D of the Public Works Programme”. The layout design, detailed design and ground investigation have been completed.

25. The proposed works will not involve any tree removal or planting proposals.

26. We estimate that the proposed works will create about 90 jobs (82 for labourers and eight for professional or technical staff) providing a total employment of 1 400 man-months.

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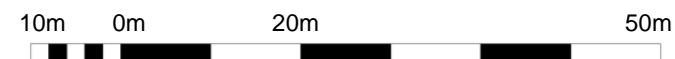
Food and Health Bureau  
April 2018



位置圖 LOCATION PLAN

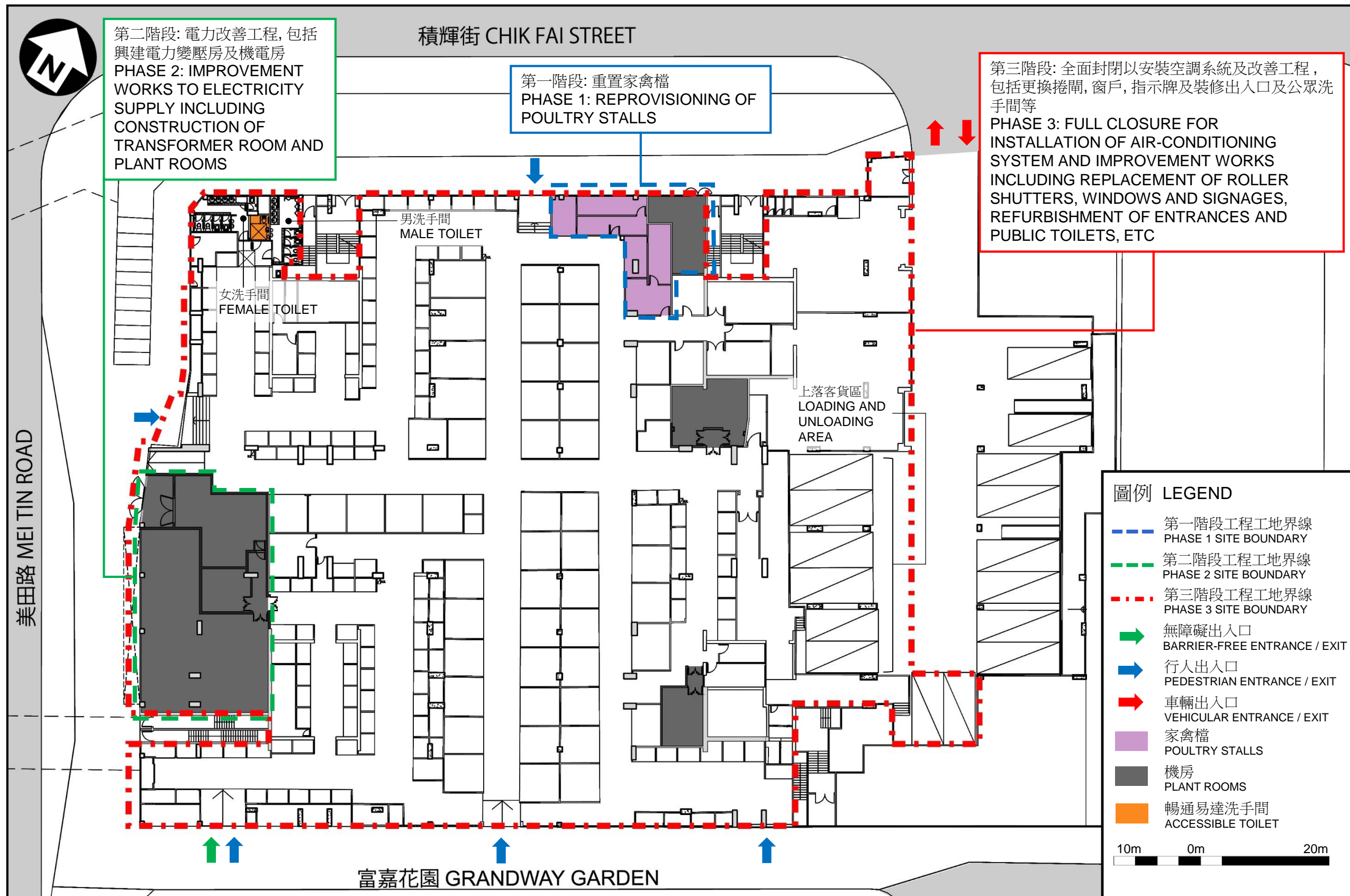
圖例 LEGEND

- - - 工地界線  
SITE BOUNDARY
- ➡ 無障礙出入口  
BARRIER-FREE ENTRANCE / EXIT
- ➡ 行人出入口  
PEDESTRIAN ENTRANCE / EXIT
- ➡ 車輛出入口  
VEHICULAR ENTRANCE / EXIT



工地平面圖  
SITE PLAN

34NM  
大圍街市加裝空調系統工程  
INSTALLATION OF AIR-CONDITIONING SYSTEM AT TAI WAI MARKET



街市地下平面圖  
Market G/F Plan

34NM

大圍街市加裝空調系統工程

INSTALLATION OF AIR-CONDITIONING SYSTEM AT TAI WAI MARKET



ARCHITECTURAL  
SERVICES  
DEPARTMENT 建築署





大圍街市美田路出入口外觀  
VIEW OF TAI WAI MARKET FROM MEI TIN ROAD

構思圖  
ARTIST'S  
IMPRESSION

34NM

大圍街市加裝空調系統工程

INSTALLATION OF AIR-CONDITIONING SYSTEM AT TAI WAI MARKET



ARCHITECTURAL  
SERVICES  
DEPARTMENT 建築署

## Enclosure 4 to PWSC(2018-19)8

### 34NM – Installation of Air-conditioning System at Tai Wai Market

#### Breakdown of the estimates for consultants' fees and resident site staff costs (in September 2017 prices)

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fees for contract administration (Note 2)	Professional	—	—	—	2.8
	Technical	—	—	—	0.4
				Sub-total	3.2 #
(b) Resident site staff (RSS) costs (Note 3)	Professional	-	-	-	-
	Technical	109	14	1.6	4.8
				Sub-total	4.8
Comprising -					
(i) Consultants' fees for management of RSS			0.2#		
(ii) Remuneration of RSS			4.6#		
				<b>Total</b>	<b>8.0</b>

\* MPS = Master Pay Scale

#### Notes

1. A multiplier of 1.6 applied to the average MPS salary point to estimate the cost of RSS supplied by the consultants (as at now, MPS salary point 14 = \$27,485 per month).
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for provision of contract administration and site supervision of **34NM**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade **34NM** to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.

#### Remarks

The cost figures in this Enclosure are shown in constant prices to correlate with the MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 7 of the main paper.