For discussion **PWSC(2017-18)26**
on 8 January 2018

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS
Quarters – Internal security
64JA – Construction of Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O

Members are invited to recommend to the Finance Committee the upgrading of **64JA** to Category A at an estimated cost of $1,625 million in money-of-the-day prices for the construction of disciplined services quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O.

PROBLEM

There is a substantial shortfall of departmental quarters (DQs) for married rank and file (R&F) officers in the Fire Services Department (FSD).

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Security, proposes to upgrade **64JA** to Category A at an estimated cost of $1,625 million in money-of-the-day (MOD) prices for the construction of disciplined services quarters for the FSD at Pak Shing Kok, Tseung Kwan O (the Project).

/PROJECT …..

PROJECT SCOPE AND NATURE

3. The Project site occupies an area of 12 388 square metres (m^2). The scope of the Project includes —

(a) construction of five 16- to 17-storey quarters blocks with a total construction floor area (CFA) of about 46 341 m^2 for the provision of 648 H-grade DQs units[1]; and

(b) provision of the following ancillary facilities —

(i) a management office;

(ii) amenity and communal areas, including a multi-function room[2] and outdoor children playing facilities; and

(iii) 101 car parking spaces and seven motorcycle parking spaces.

4. A site and location plan, layout plans, a sectional drawing and an artist's impression for the Project are at Enclosures 1 to 5. Subject to the funding approval of the Finance Committee, we plan to commence construction in the first quarter of 2018 for completion by the second quarter of 2021.

JUSTIFICATION

5. It is the government's policy to provide DQs for married disciplined services staff, subject to the availability of resources. As at 1 November 2017, the FSD had a total of 5 497 R&F officers eligible for DQs, and only 3 828 DQs units were available for allocation, representing a shortfall rate of 30.4%. Eligible R&F staff have to wait for about six years on average to be allocated a DQ unit.

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[1] Government quarters are graded as appropriate having regard to their size, location, view, environment, facilities. The reference area of a H-grade DQ unit is about 50 m^2.

[2] Covering an area of approximately 30 m^2, the multi-function room will primarily serve as a meeting room for resident's association.

6. To provide high quality emergency services to members of the public, the Government relies on a professional fire services and ambulance workforce. In the coming years, the FSD will continue to recruit R&F officers to fill existing vacancies and meet the manpower requirements of new initiatives, such as the addition of ambulance shifts to cope with the growing demand for emergency ambulance services, the strengthened management and staff training for specialised teams such as the Urban Search and Rescue Team, the Mountain Search and Rescue Team, and the development of a fire station cum ambulance depot at the Boundary Crossing Facilities of the Hong Kong-Zhuhai-Macao Bridge.

7. To alleviate the shortfall of DQs, we propose to provide additional 648 units in a new DQs project at Pak Shing Kok, Tseung Kwan O, adjacent to the Fire and Ambulance Services Academy.

8. The Project site falls within an area zoned "Government, Institution or Community (4)" (G/IC(4)) on the draft Tseung Kwan O Outline Zoning Plan (OZP) No. S/TKO/25. The maximum building height of the site as specified in the OZP is 40 metres (m). At its meeting of 18 March 2016, the Town Planning Board approved the application for the proposed flat use and the proposed relaxation of building height restriction from 40 m to 52 m. The DQs blocks to be constructed in this Project site is expected to reach a building height of close to 52 m. The numbers of car parking spaces and motorcycle parking spaces provided in the Project are the maximum provision according to the Hong Kong Planning Standards and Guidelines (HKPSG)[3].

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the Project to be $1,625 million in MOD prices (please see paragraph 11 below), broken down as follows –

	$ million (in MOD prices)
(a) Site works	2.9

/**$ million** …..

[3] The HKPSG is a Government manual of criteria for determining the scale, location and site requirements of various land uses and facilities. According to Chapter 8 of the HKPSG, various relevant factors, including traffic and environmental impacts etc., should be taken into consideration when determining the appropriate level of parking facilities.

			$ million (in MOD prices)
(b)	Piling/Foundation		24.4
(c)	Building[4]		1,144.3
(d)	Building services[5]		174.4
(e)	Drainage		18.5
(f)	External works		85.7
(g)	Additional energy conservation, green and recycled features		7.0
(h)	Furniture and equipment[6]		14.0
(i)	Consultants' fees for		4.4
	(i) contract administration	4.2	
	(ii) management of resident site staff (RSS)	0.2	
(j)	Remuneration of RSS		1.7
(k)	Contingencies		147.7
	Total		1,625.0

10. 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 6. The estimated construction unit cost, represented by the building and building services costs, is $28,456 per m^2 of CFA in MOD prices. We consider this unit cost comparable to that of similar projects built by the Government.

/11. …..

[4] Building works comprise construction of substructure and superstructure of the building.

[5] Building services works cover electrical installations, ventilations and air-conditioning installations, fire services installations and lift installation and other specialist installations.

[6] The estimated cost is based on an indicative list of furniture and equipment required.

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

Year	$ million (MOD)
2018 – 2019	52.6
2019 – 2020	110.9
2020 – 2021	386.1
2021 – 2022	725.7
2022 – 2023	142.1
2023 – 2024	109.8
2024 – 2025	97.8
	1,625.0

12. 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 2025. We will deliver the construction works through a design-and-build contract and award the contract on a lump-sum basis, as the scope of the works can be clearly defined in advance. The contract will provide for price adjustment.

13. We estimate the annual recurrent expenditure arising from this project to be $24.3 million.

PUBLIC CONSULTATION

14. The FSD consulted the Housing & Environmental Hygiene Committee of the Sai Kung District Council on 17 March 2016. The Committee supported the Project.

15. We consulted the Legislative Council Panel on Security (the Panel) on 5 May 2017. Members of the Panel had no objection for this Project to be submitted to the Public Works Subcommittee.

/ENVIRONMENTAL …..

ENVIRONMENTAL IMPLICATIONS

16. The Project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We have completed a preliminary environmental review (PER) for the Project in March 2016. The PER has concluded and the Director of Environmental Protection agreed that with the implementation of mitigation measures recommended in the PER, the Project would not have any long-term adverse environmental impacts.

17. During construction, we will control noise, dust and site run-off nuisances within established standards and guidelines through implementation of mitigation measures in the relevant contract. These include the use of silencers, mufflers, acoustic linings or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel washing facilities. We have included in the Project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts.

18. 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[7]. 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.

19. 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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[7] 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.

20. We estimate that the Project will generate in total 26 800 tonnes of construction waste. Of these, we will reuse 5 400 tonnes (20.2%) of inert construction waste on site and deliver 13 600 tonnes (50.7%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 7 800 tonnes (29.1%) 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 $2.5 million for this Project (based on a 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

21. The Project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites or buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

22. The Project does not require any land acquisition.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

23. The Project will adopt various forms of energy-efficient features and renewable energy technologies, in particular lift power regeneration and photovoltaic system.

24. For greening features, we will provide green roof as well as planting areas for environmental and amenity benefits. For recycled features, we will adopt rainwater harvesting system for irrigation purpose.

25. The total estimated additional cost for adoption of the above energy conservation measures is around $7 million (including $0.5 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 5.1% energy savings in the annual energy consumption with a payback period of about eight years.

/BACKGROUND …..

BACKGROUND INFORMATION

26. We upgraded **64JA** to Category B in September 2010. We engaged consultants to undertake various services, including ground investigation in October 2014, topographical survey in February 2015, and other environmental investigations in July 2015, and quantity surveying services in June 2016. The total cost is about $4.1 million. We 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".

27. Of the 126 trees within the Project boundary, the proposed works will involve the felling of these trees subject to finalisation of design. No important trees [8] will be affected during the implementation of the Project. We will incorporate planting proposals as part of the Project, including estimated quantities of 126 trees, 25 000 number of shrubs/herbaceous plants/groundcovers and climbers.

28. We estimate that the proposed works will create about 530 jobs (480 for labourers and 50 for professional or technical staff) providing a total employment of 12 000 man-months.

Security Bureau
December 2017

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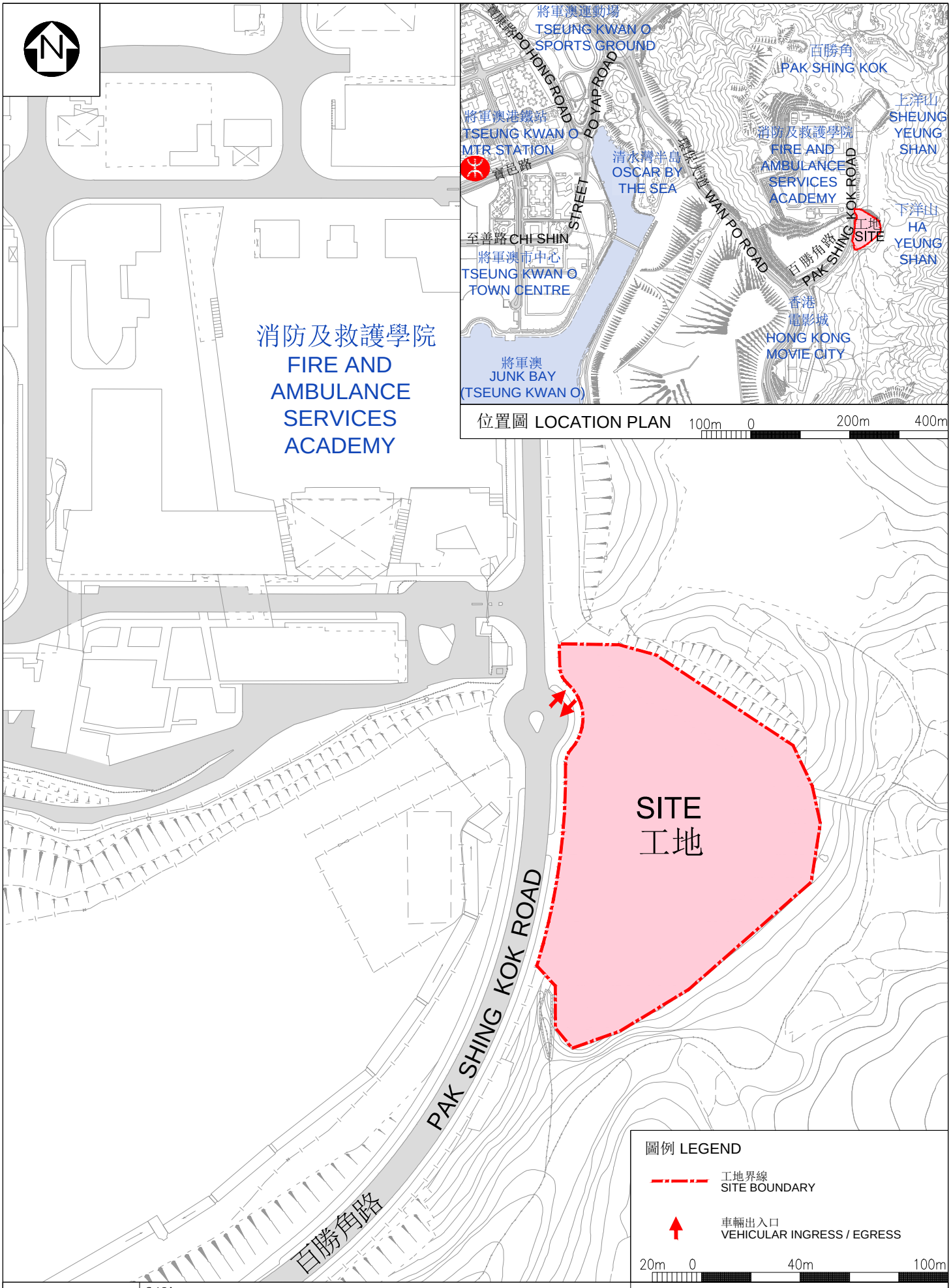
[8] "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

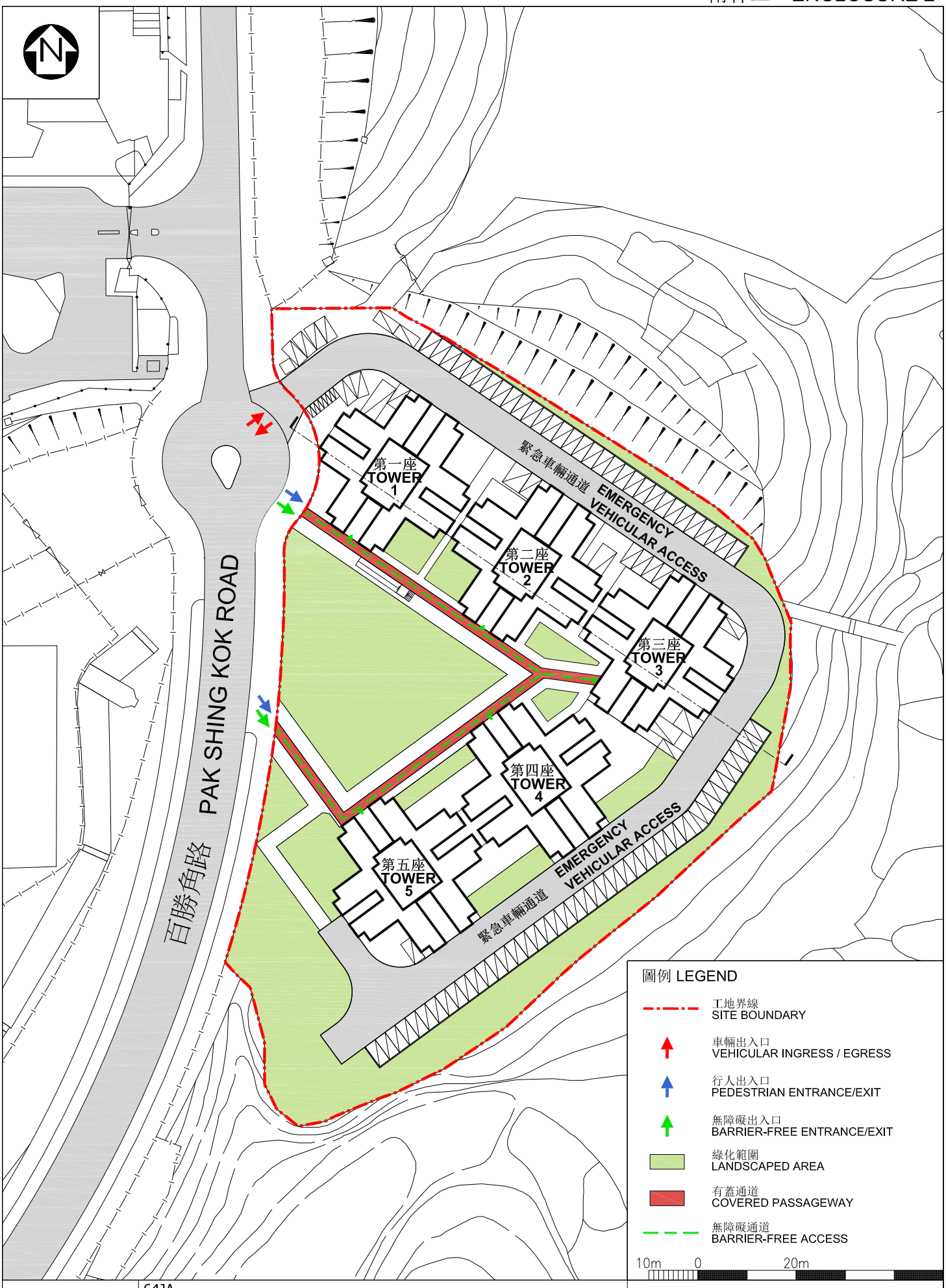
(a) trees of 100 years old or above;
(b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
(c) trees of precious or rare species;
(d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
(e) trees with trunk diameter equal to or exceeding 1.0 metre (m) (measured at 1.3 m above ground level), or with height/canopy spread equal to or exceeding 25 m.



工地平面圖一
SITE PLAN 1

64JA
將軍澳百勝角消防處紀律部隊宿舍建造工程
Construction of Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O

ARCHITECTURAL SERVICES DEPARTMENT 建築署



工地平面圖二
SITE PLAN 2

64JA
將軍澳百勝角消防處紀律部隊宿舍建造工程
Construction of Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O

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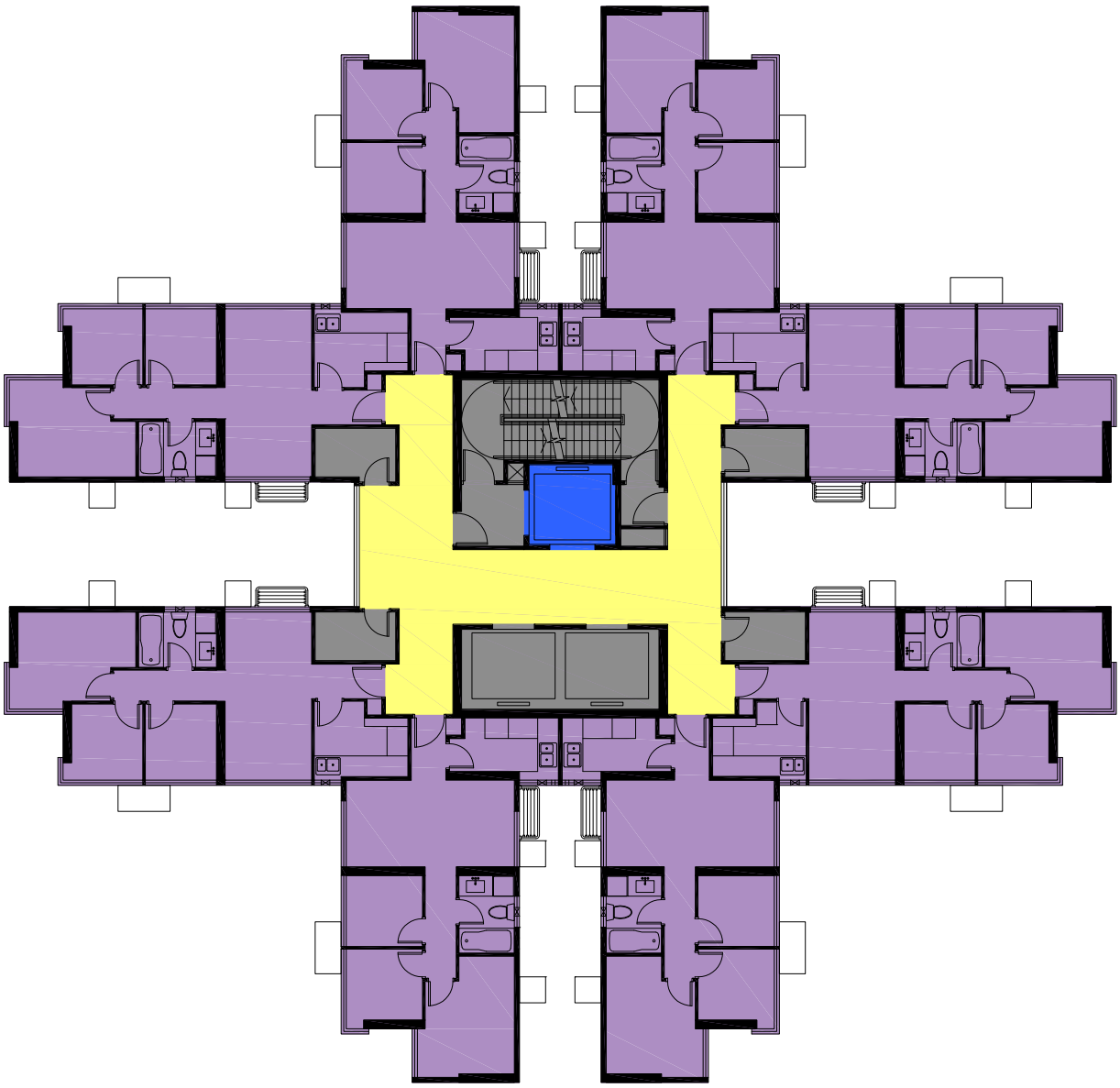

圖例 LEGEND

- 公用走廊 COMMON CORRIDOR
- 機房/升降機/樓梯 PLANT ROOMS/LIFTS/STAIRCASES
- 暢通易達升降機 ACCESSIBLE LIFT
- 單位（H級） QUARTERS UNITS (H-GRADE)

2m 0 4m

標準樓層平面圖
TYPICAL FLOOR PLAN

64JA
將軍澳百勝角消防處紀律部隊宿舍建造工程
Construction of Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O

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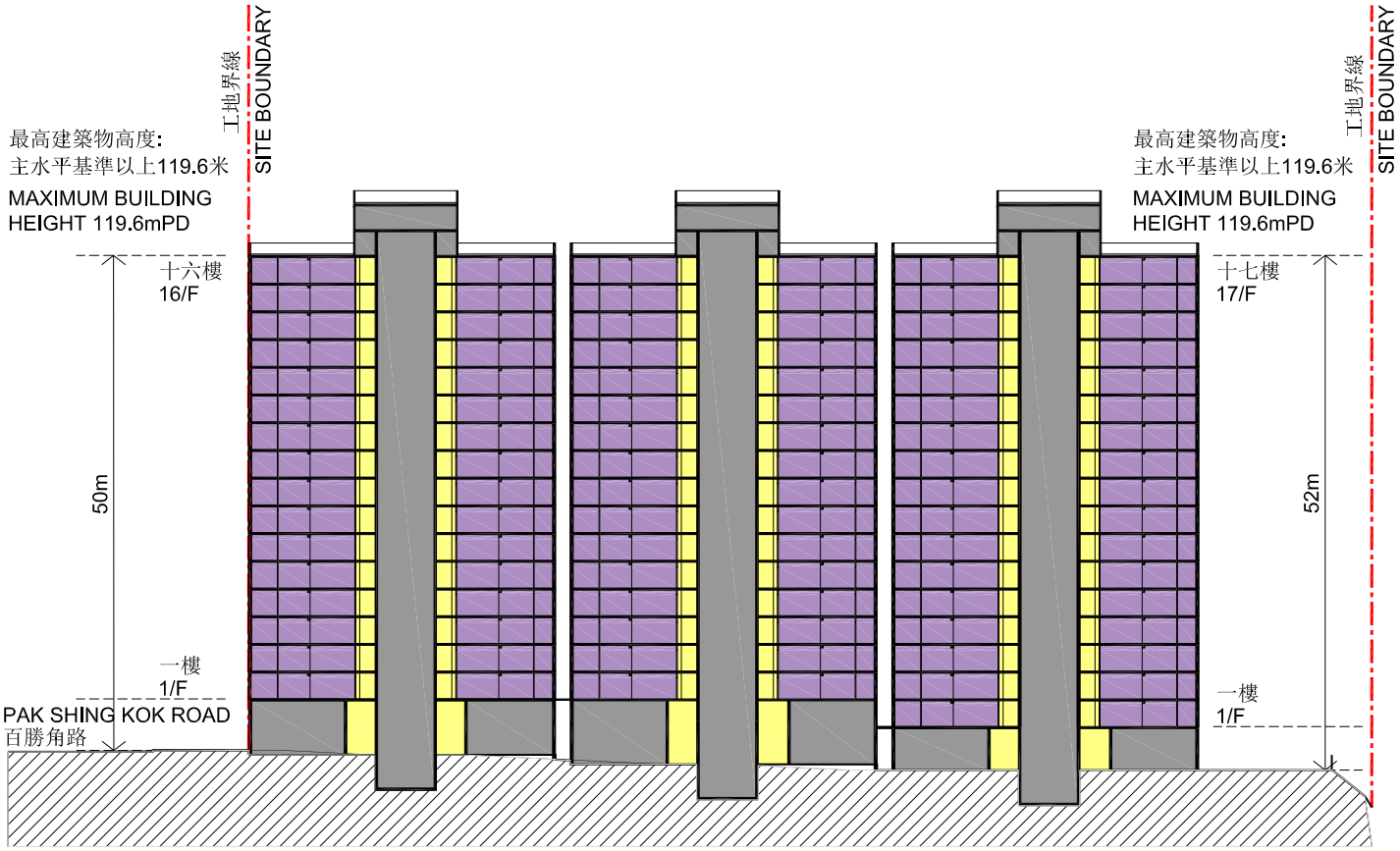

圖例 LEGEND

- 公用地方 COMMON AREA
- 機房/升降機/樓梯 PLANT ROOMS/LIFTS/STAIRCASES
- 單位 (H級) QUARTERS UNITS (H-GRADE)

7.5m 0 15m

剖面圖
SECTION

64JA
將軍澳百勝角消防處紀律部隊宿舍建造工程
Construction of Disciplined Services Quarters for the
Fire Services Department at Pak Shing Kok, Tseung Kwan O

ARCHITECTURAL SERVICES DEPARTMENT 建築署

PERSPECTIVE VIEW FROM PAK SHING KOK ROAD (ARTIST'S IMPRESSION)
從百勝角路望向擬建宿舍的構思透視圖

構思圖 ARTIST'S IMPRESSION	64JA 將軍澳百勝角消防處紀律部隊宿舍建造工程 Construction of Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O	ARCHITECTURAL SERVICES DEPARTMENT 建 築 署

64JA – Construction of Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O

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	–	–	–	1.7
		Technical	–	–	–	1.7
					Sub-total	3.4 #
(b)	Resident site staff (RSS) costs (Note 3)	Professional	–	–	–	–
		Technical	37	14	1.6	1.6
					Sub-total	1.6
	Comprising -					
	(i) Consultants' fees for management of RSS			0.2#		
	(ii) Remuneration of RSS			1.4#		
					Total	**5.0**

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is 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' fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of **64JA**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade **64JA** 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 MOD prices in paragraph 9 of the main paper.