For discussion **PWSC(2016-17)42**
on 25 January 2017

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS
Quarters – Internal security
70JA – Redevelopment of Junior Police Officers Married Quarters at Fan Garden, Fanling

Members are invited to recommend to the Finance Committee the upgrading of **70JA** to Category A at an estimated cost of $2,827.9 million in money-of-the-day prices for the redevelopment of Junior Police Officers Married Quarters at Fan Garden, Fanling.

PROBLEM

There is a substantial shortfall of departmental quarters (DQs) for married junior police officers (JPOs) in the Hong Kong Police Force (HKPF).

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Security, proposes to upgrade **70JA** to Category A at an estimated cost of $2,827.9 million in money-of-the-day (MOD) prices for the redevelopment of JPOs Married Quarters at Fan Garden, Fanling.

/PROJECT …..

PROJECT SCOPE AND NATURE

3. The project site occupies an area of about 13 850 square metres (m^2). The scope of the project includes –

(a) demolition of the existing structures and facilities located in the project site, including the two existing five-storey quarters blocks with a total of 99 DQs units, as well as the three existing huts and existing toilet;

(b) construction of five 28- to 30-storey quarters blocks with a total construction floor area (CFA) of about 95 828 m^2 for provision of 1 184 DQs units, including 180 F-grade and 1 004 G-grade DQs units[1];

(c) provision of ancillary facilities, including –

(i) a management office;

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

(iii) 149 car parking spaces and 12 motorcycle parking spaces; and

(d) re-provisioning of the three huts and toilet mentioned in item (a) above at the training area of the Tactical Training Facilities of the HKPF nearby.

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 respectively. Subject to the funding approval of the Finance Committee, we plan to commence construction in the second quarter of 2017 for completion by the fourth quarter of 2020.

JUSTIFICATION

5. It is an established government policy to provide DQs for married disciplined services staff, subject to the availability of resources. As at 1 January 2017, the HKPF had 15 046 JPOs eligible for DQs, and only 11 943 DQs units were available for allocation, representing a shortfall rate of 20.6%. Eligible JPOs have to wait for about four years on average to be allocated a DQs unit.

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[1] The reference areas of F-grade and G-grade units are DQ units of 70 m^2 and 55 m^2 respectively.

[2] Covering an area of about 30 m^2, the multi-purpose room will primarily serve as a meeting room for residents' association.

6. In the coming years, the HKPF will continue to recruit JPOs to fill existing vacancies and meet the manpower requirements of various new initiatives. We therefore envisage that the demand for DQs will continue to grow.

7. In this project, we propose to redevelop the existing JPOs Married Quarters at Fan Garden, Fanling from currently two five-storey quarters blocks with 99 DQs units to five 28- to 30-storey quarters blocks for providing in total 1 184 DQs units. In order to make available sufficient land for this redevelopment project, a portion of land adjacent to the existing JPOs Married Quarters, including three huts used as offices and workshop for the adjoining Tactical Training Facilities of the HKPF and a toilet, part of the training area of the Police Driving and Traffic Training Centre, as well as two narrow and elongated strips of unleased and unallocated government land sandwiched between the HKPF's site at Fan Garden, Fanling and Fan Leng Lau Road, will be incorporated into the project site.

8. The project site falls within an area zoned "Government, Institution or Community" on the Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/22. The project is largely an in-situ redevelopment of the HKPF's site at Fan Garden, Fanling and, except for minor adjustments of the project site boundary as mentioned in paragraph 7 above, the HKPF does not require other extra land for the project. The project is expected to attain a maximum plot ratio of 6 in order to fully utilise the development potential of the site. The numbers of car parking spaces and motorcycle parking spaces provided in this project are the maximum provision according to the Hong Kong Planning Standards and Guidelines[3].

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be $2,827.9 million in MOD prices (please see paragraph 11 below), broken down as follows –

		$ million
(a)	Site works	8.2
(b)	Demolition works	8.0
(c)	Site formation and geotechnical works	33.1

/(d) …..

[3] The Hong Kong Planning Standards and Guidelines (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	
(d)	Piling[4]		111.0	
(e)	Building[5]		1,488.0	
(f)	Building services[6]		291.3	
(g)	Drainage		30.8	
(h)	External works		43.1	
(i)	Re-provisioning of the existing facilities		9.7	
(j)	Additional energy conservation, green and recycled features		8.8	
(k)	Furniture and equipment[7]		26.2	
(l)	Consultants' fees for		5.9	
	(i) contract administration	5.6		
	(ii) management of resident site staff (RSS)	0.3		
(m)	Remuneration of RSS		2.1	
(n)	Contingencies		206.6	
	Sub-total		2,272.8	(in September 2016 prices)
(o)	Provision for price adjustment		555.1	
	Total		2,827.9	(in MOD prices)

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4 Piling works cover the construction of piles and all related tests and monitoring.

5 Building works comprise construction of substructure and superstructure of the building.

6 Building services works cover electrical installations, ventilation and air-conditioning installations, fire services installations, lift installations and other specialist installations.

7 The estimated cost is based on an indicative list of furniture and equipment required.

10. We propose to engage consultants to undertake contract administration service and site supervision of 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 $18,568 per m^2 of CFA in September 2016 prices. We consider that this unit cost is comparable to that of similar projects built by the Government.

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

Year	$ million (Sept 2016)	Price adjustment factor	$ million (MOD)
2017 – 2018	91.0	1.05750	96.2
2018 – 2019	231.0	1.12095	258.9
2019 – 2020	597.0	1.18821	709.4
2020 – 2021	867.0	1.25950	1,092.0
2021 – 2022	264.0	1.32562	350.0
2022 – 2023	106.0	1.39190	147.5
2023 – 2024	69.0	1.46150	100.8
2024 – 2025	47.8	1.52909	73.1
	2,272.8		2,827.9

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 from 2017 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 $26.6 million.

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PUBLIC CONSULTATION

14. The HKPF consulted the Social Services, Labour and Economic Affairs Committee of the North District Council on 1 September 2015. The Committee supported the project.

15. We consulted the Legislative Council Panel on Security (the Panel) on 3 January 2017. Members of the Panel had no objection for this project to be submitted to the Public Works Subcommittee.

ENVIRONMENTAL IMPLICATIONS

16. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). A preliminary environmental review (PER) for the project was completed in February 2016. The PER concluded and the Environmental Protection Department agreed that the environmental impact of the project can be controlled to within the relevant standards and criteria with appropriate mitigation measures such as noise barriers and architectural fins as studied in the PER. We shall implement the finalised mitigation measures to be identified in the detailed design stage and ensure compliance with relevant standards and criteria.

17. During construction, we will control noise, dust and site run-off nuisances to 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 and the building of barrier walls 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 …..

inert construction waste at public fill reception facilities[8]. 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.

20. We estimate that the project will generate in total about 148 550 tonnes of construction waste. Of these, we will reuse about 1 920 tonnes (1.3%) of inert construction waste on site and deliver 123 520 tonnes (83.1%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 23 110 tonnes (15.6%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be $13.4 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).

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 …..

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[8] 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.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

23. This 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, vertical greening 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 about $8.8 million (including $1.1 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 INFORMATION

26. We upgraded **70JA** to Category B in September 2014. We engaged consultants to undertake various services, including topographical survey in January 2015, ground investigation in March 2015, other environmental investigations in August 2015, and quantity surveying services in October 2015. The total estimated cost is about $6.5 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 246 trees within and adjacent to the project boundary, 105 trees will be preserved. The proposed works will involve the removal of 141 trees, including 138 trees to be felled and three trees to be transplanted within the project site subject to finalisation of design. Two important trees[9] which are not registered

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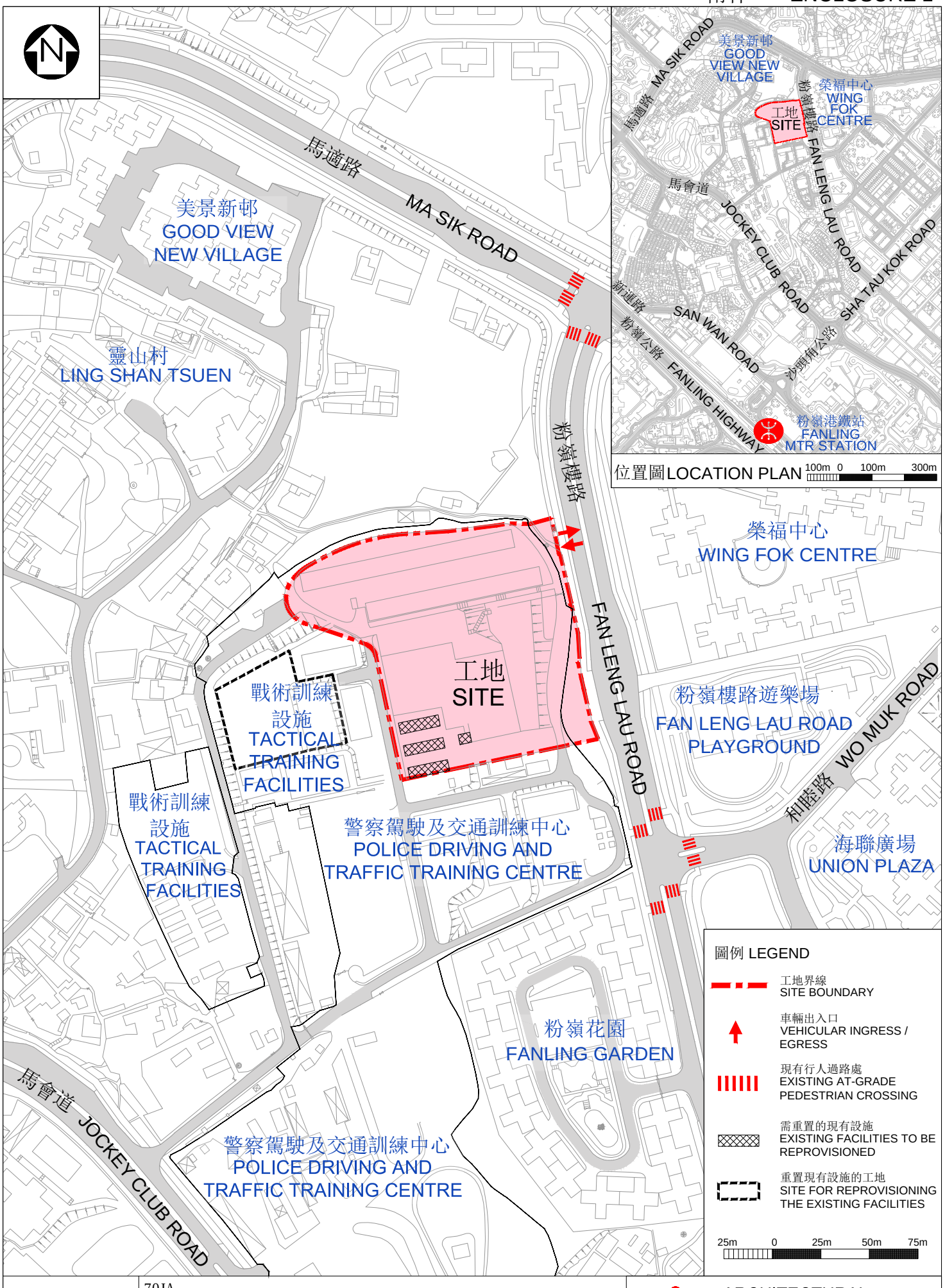
[9] "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

(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, and 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.

Old and Valuable Trees will be affected during the implementation of the project. A summary of important trees is provided at Enclosure 7. We will incorporate planting proposals as part of the project, including the planting of about 138 trees, 25 000 number of shrubs/herbaceous/groundcovers and climbers.

28. We estimate that the proposed works will create about 760 jobs (including 685 for labourers and 75 for professional or technical staff) providing a total employment of 19 500 man-months.

Security Bureau
January 2017



工地平面圖一
SITE PLAN 1

70JA
粉嶺芬園已婚初級警務人員宿舍重建計劃
REDEVELOPMENT OF JUNIOR POLICE OFFICERS MARRIED QUARTERS AT FAN GARDEN, FANLING

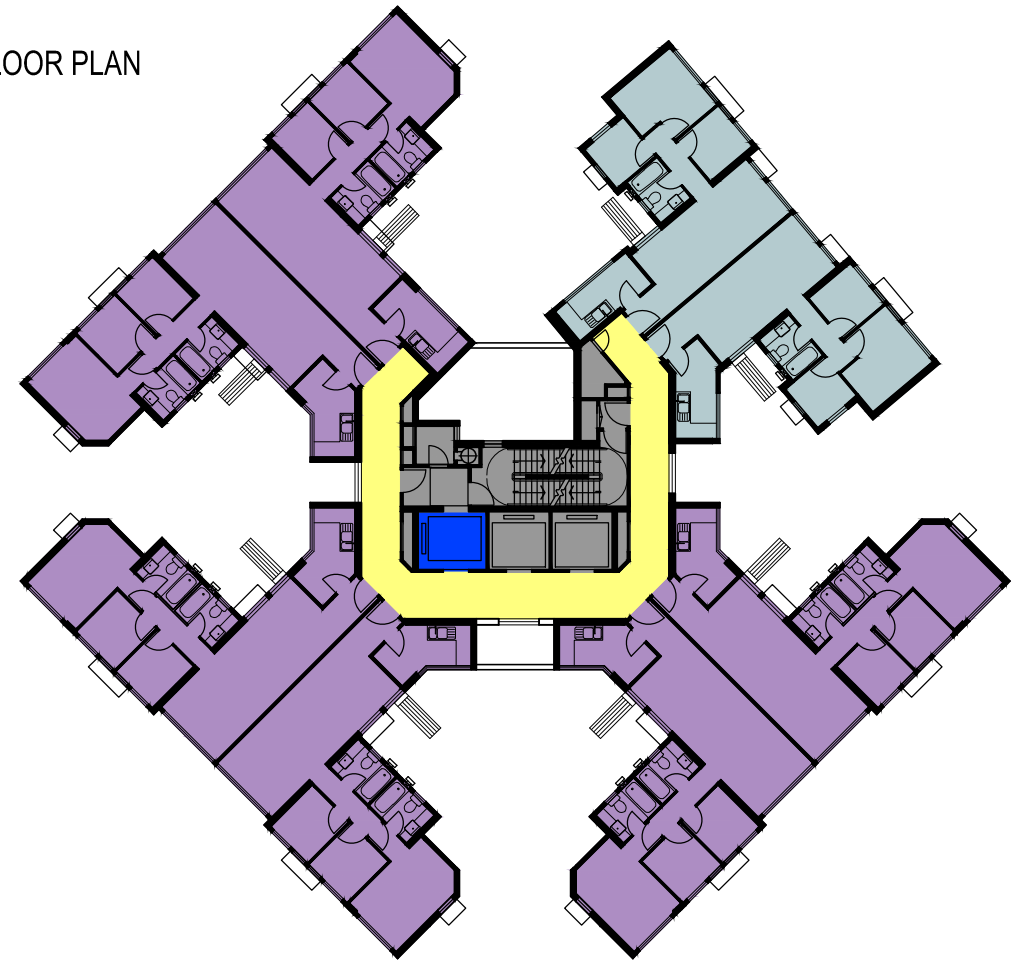
ARCHITECTURAL SERVICES DEPARTMENT 建築署

工地平面圖二
SITE PLAN 2

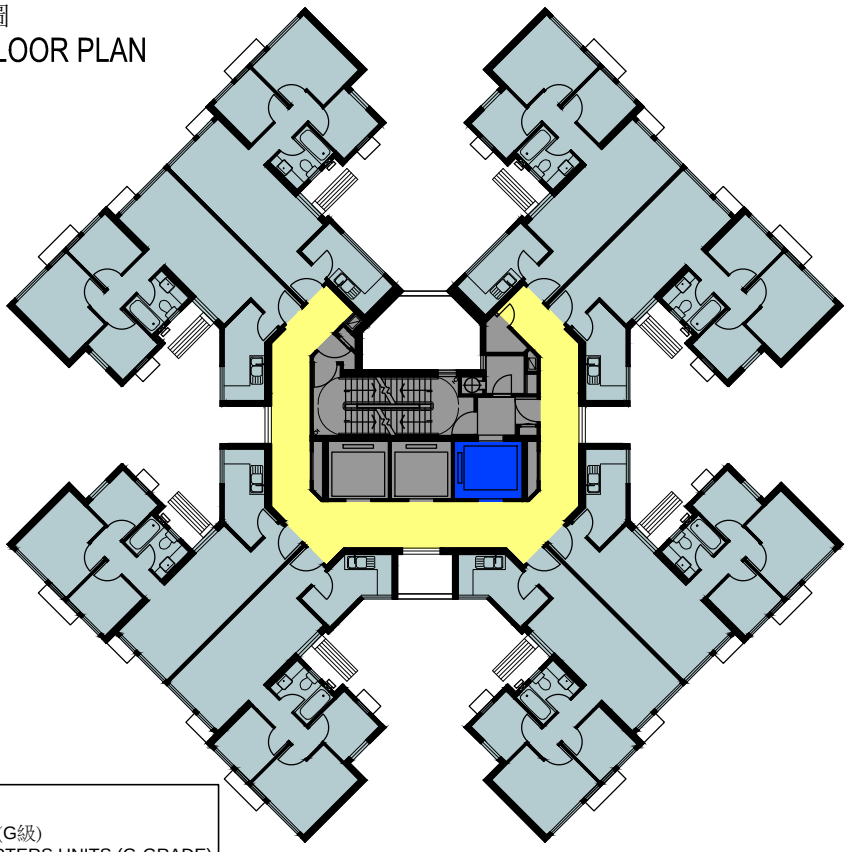
70JA
粉嶺芬園已婚初級警務人員宿舍重建計劃
REDEVELOPMENT OF JUNIOR POLICE OFFICERS MARRIED QUARTERS AT FAN GARDEN, FANLING

ARCHITECTURAL SERVICES DEPARTMENT 建築署

第二座 標準樓層平面圖
TOWER 2 TYPICAL FLOOR PLAN



第一, 三, 四及五座 標準樓層平面圖
TOWER 1, 3, 4 & 5 TYPICAL FLOOR PLAN



圖例 LEGEND

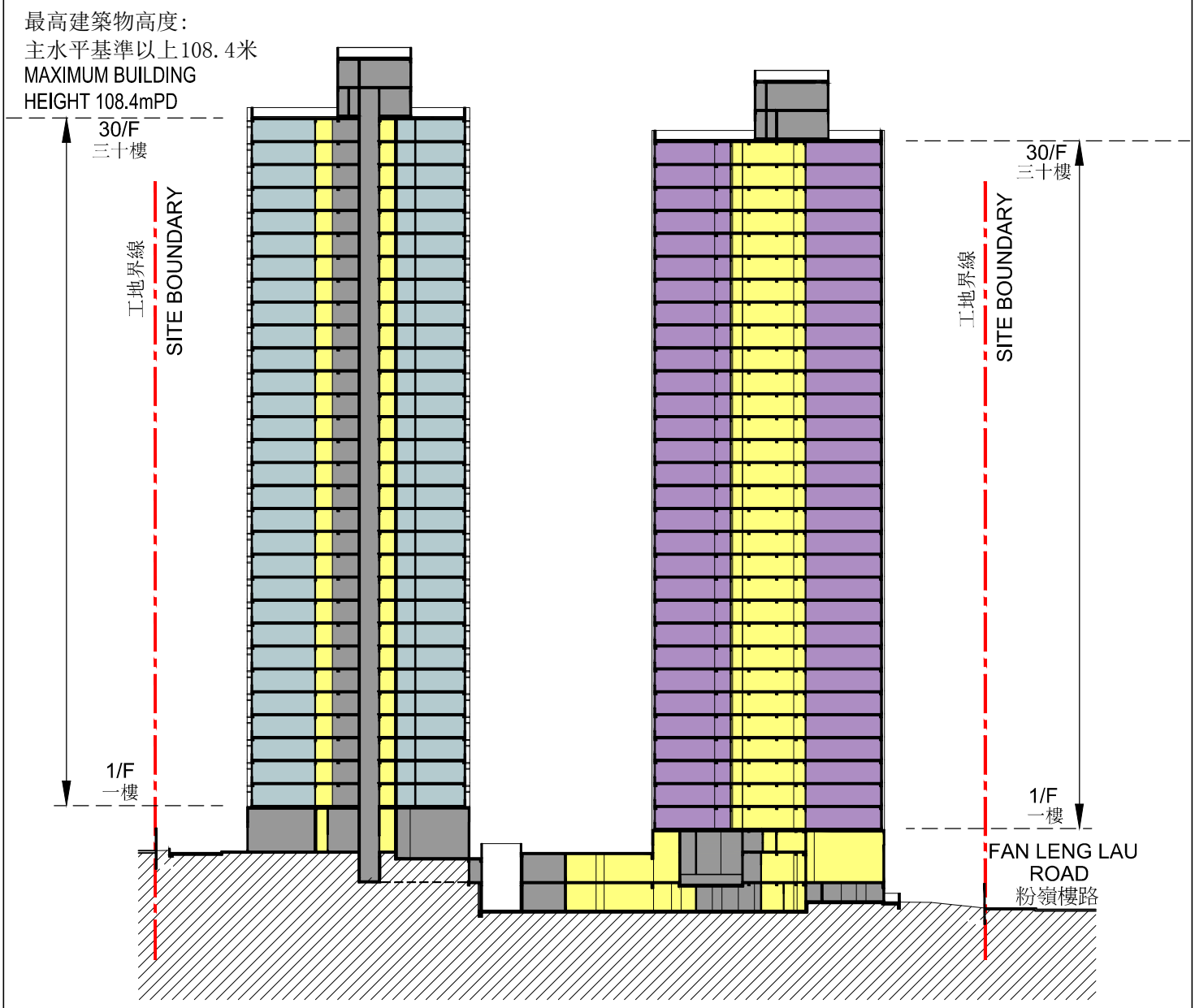
- 公用走廊 COMMON CORRIDOR
- 機房/升降機/樓梯 PLANT ROOMS/LIFTS/ STAIRCASES
- 單位 (G級) QUARTERS UNITS (G-GRADE)
- 單位 (F級) QUARTERS UNITS (F-GRADE)
- 暢通易達升降機 ACCESSIBLE LIFT

2m 0 2m 4m

標準樓層平面圖
TYPICAL FLOOR PLAN

70JA
粉嶺芬園已婚初級警務人員宿舍重建計劃
REDEVELOPMENT OF JUNIOR POLICE OFFICERS MARRIED QUARTERS AT FAN GARDEN, FANLING

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

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

5m 0 5m 10m

剖面圖
SECTION

70JA
粉嶺芬園已婚初級警務人員宿舍重建計劃
REDEVELOPMENT OF JUNIOR POLICE OFFICERS MARRIED QUARTERS AT FAN GARDEN, FANLING

ARCHITECTURAL SERVICES DEPARTMENT 建築署

PERSPECTIVE VIEW FROM FAN LENG LAU ROAD (ARTIST'S IMPRESSION)
從粉嶺樓路望向擬建宿舍的構思透視圖

構思圖 ARTIST'S IMPRESSION	70JA 粉嶺芬園已婚初級警務人員宿舍重建計劃 REDEVELOPMENT OF JUNIOR POLICE OFFICERS MARRIED QUARTERS AT FAN GARDEN, FANLING	ARCHITECTURAL SERVICES DEPARTMENT 建築署

70JA – Redevelopment of Junior Police Officers Married Quarters at Fan Garden, Fanling

Breakdown of the estimates for consultants' fees and resident site staff costs (in September 2016 prices)

			Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee ($ million)
(a)	Consultants' fees for contract administration (Note 2)	Professional	-	-	-	3.0
		Technical	-	-	-	2.6
					Sub-total	5.6
(b)	Resident site staff (RSS) costs (Note 3)	Professional	-	-	-	-
		Technical	57	14	1.6	2.4
					Sub-total	2.4
Comprising -						
	(i) Consultants' fees for management of RSS				0.3	
	(ii) Remuneration of RSS				2.1	
					Total	**8.0**

* 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 = $26,700 per month).

2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of **70JA**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade **70JA** to Category A.

3. The actual man-months and actual costs will only be known after completion of the construction works.

70JA – Redevelopment of Junior Police Officers Married Quarters at Fan Garden, Fanling

Details of "Important Tree"

Tree no.	Tree species	Tree maintenance department	Tree size			Form[2] (Good/ Fair/ Poor)	Health condition (Good/ Fair/ Poor)	Amenity value (High/ Med/ Low)	Survival rate after transplanting (High/ Med/ Low)	Recommendation (Retain/ Transplant/ Fell)	Remarks (including justification for proposed tree removal/ ecological and historical significance (if any) of affected trees, etc.)
			Overall height (m)	Trunk[1] diameter (mm)	Average crown spread (m)						
T197[3]	*Melaleuca cajuputi subsp. cumingiana*	HKPF	14	1 000	8	Poor	Poor	Low	Low	Fell	- It has poor tree form, health and structural conditions. It belongs to common exotic tree species with low amenity value. - It has multiple pruning wounds, V-shaped crotch with included bark at scaffold branches, as well as open wound (2.5m(L) x 0.5m(W) x 0.2m(D)) along trunk. It also has previous second order branch failure. - It has low survival rate after transplantation. - It will be in conflict with the proposed development.
T199[3]	*Melaleuca cajuputi subsp. cumingiana*	HKPF	18	1 200	12	Fair	Fair	Low	Low	Fell	- It has fair tree form, fair health and poor structural conditions. It belongs to common exotic tree species with low amenity value. - It has dead branches and V-shaped crotch with included bark at scaffold branches. The entire tree is covered with Ficus pumila. - It has low survival rate after transplantation. - It will be in conflict with the proposed development.

(1) Trunk diameter of a tree refers to its diameter at breast height (i.e. measured at 1.3 m above ground level).

(2) Form of a tree will take into account of the overall tree size, shape and any special feature.

(3) This tree is not a registered Old and Valuable Tree.