

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Quarters – Internal security

62JA – Redevelopment of disciplined services quarters in Fu Tei, Tuen Mun

Members are invited to recommend to Finance Committee the upgrading of **62JA** to Category A at an estimated cost of \$413.4 million in money-of-the-day prices for the redevelopment of disciplined services quarters in Fu Tei, Tuen Mun.

PROBLEM

We need to alleviate the shortfall of departmental quarters (DQ) for disciplined services staff.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Security, proposes to upgrade **62JA** to Category A at an estimated cost of \$413.4 million in money-of-the-day (MOD) prices for the redevelopment of disciplined services quarters in Fu Tei, Tuen Mun.

/PROJECT

PROJECT SCOPE AND NATURE

3. The project site occupies an area of around 3 390 square metres (m²) at Tuen Fu Road, Fu Tei, Tuen Mun¹. The scope of the project comprises –

- (a) construction of a 21-storey quarters block for provision of 40 F-grade, 20 G-grade and 80 H-grade DQ units² with a total construction floor area (CFA) of 12 950 m²; and
- (b) ancillary facilities, including a management office, a multi-function room, 26 car-parking spaces³ and small-scale outdoor children playing facilities.

— The site plan, layout plans, section plan and artist's impression drawing are at Enclosures 1 to 6. Subject to funding approval of the Finance Committee, we plan to commence the construction works in December 2012 for completion in December 2014.

JUSTIFICATION

4. It is an established government policy to provide DQ for married disciplined services staff, subject to the availability of resources.

5. Currently, there are about 11 600 married rank and file staff who are eligible for DQ in the Correctional Services Department (CSD), Fire Services Department (FSD), Immigration Department (ImmD) and Customs and Excise Department (C&ED). However, only about 8 100 DQ units are currently available, representing a shortfall of 30%. Eligible rank and file staff of the four disciplined services have to wait for four to five years on average to be allocated a DQ unit.

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¹ The old DQs at the project site were demolished in 2006.

² F-grade, G-grade and H-grade units are DQ units with an area of 70 m², 55 m² and 45 m² respectively.

³ Including 23 spaces for private cars and three spaces for motor cycles.

6. In recent years, various disciplined services have been recruiting additional staff gradually to meet operational needs, which has given rise to a continued increase in demand for DQ from staff of the four disciplined services. Should the supply of DQ remain unchanged, we anticipate that the percentage of shortfall will rise to about 46% by 2016. To alleviate the problem of DQ shortfall, we propose to provide additional 140 units by constructing a new DQ block in Fu Tei, Tuen Mun for shared use by CSD, FSD, ImmD and C&ED.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$413.4 million in MOD prices (please see paragraph 8 below), broken down as follows –

	\$ million
(a) Site works	3.0
(b) Piling	44.4
(c) Building	161.9
(d) Building services	40.5
(e) Drainage	3.2
(f) External works	23.2
(g) Additional energy conservation measures	3.6
(h) Furniture and equipment ⁴	20.0
(i) Consultants' fees for	6.5
(i) contract administration	4.9
(ii) management of resident site staff	1.6

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⁴ This is based on an indicative list of furniture and equipment items required.

	\$ million	
(j) Remuneration of resident site staff	10.2	
(k) Contingencies	28.0	
Sub-total	344.5	(in September 2011 prices)
(l) Provision for price adjustment	68.9	
Total	413.4	(in MOD prices)

We propose to engage consultants to undertake contract administration and site supervision of the project. A breakdown of the estimates for consultants' fees and resident site staff costs by man-month is at Enclosure 7. The estimated construction unit cost, represented by the building and the building services costs, is \$15,629 per m² of CFA in September 2011 prices. We consider this unit cost comparable to that of similar projects built by the Government.

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

	\$ million (Sept 2011)	Price adjustment factor	\$ million (MOD)
2012 – 13	3.4	1.05325	3.6
2013 – 14	65.5	1.11118	72.8
2014 – 15	155.0	1.17229	181.7
2015 – 16	55.1	1.23677	68.1
2016 – 17	41.3	1.30479	53.9
2017 – 18	24.2	1.37656	33.3
	344.5		413.4

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9. 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 2012 to 2018. We will deliver the works under a lump-sum contract because we can clearly define the scope of the works in advance. The contract will provide for price adjustments.

10. We estimate the annual recurrent expenditure arising from this project to be \$4.5 million.

PUBLIC CONSULTATION

11. We consulted the Town Planning Board (TPB) on the project in October 2011. The TPB approved the application on 16 December 2011.

12. We consulted the Tuen Mun District Council on the project on 19 January 2012. Members did not raise any objection.

13. We consulted the Legislative Council Panel on Security on 3 April 2012. Members supported the proposal.

ENVIRONMENTAL IMPLICATIONS

14. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We completed the Preliminary Environmental Review (PER) in October 2011 for the proposed works. The recommended mitigation measures in the PER include suitable noise abatement measures such as incorporation of appropriate building design to mitigate road traffic noise impact, incorporation of architectural fins, fixed glazing and installation of air conditioners. We have included the cost of the above mitigation measures as part of the building works in the project estimate. With such mitigation measures in place, the project will have no long-term adverse environmental impact. We have also included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impact.

15. During construction, 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 contracts. These include the use of silencers, mufflers, acoustic lining or shields and the building of barrier walls for noisy construction activities, frequent cleaning and watering of the site, as well as the provision of wheel-washing facilities to prevent dust nuisance.

16. 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) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste to public fill reception facilities⁵. We will encourage the contractor to maximise the use of recycled/recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

17. 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 inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

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⁵ 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.

18. We estimate that the project will generate in total about 10 900 tonnes of construction waste. Of these, we will reuse about 3 300 tonnes (30.3%) of inert construction waste on site and deliver 5 500 tonnes (50.4%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 2 100 tonnes (19.3%) 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 \$411,000 for this project (based on a unit cost of \$27 per tonne for disposal to public fill reception facilities and \$125 per tonne⁶ at landfills).

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

20. The project does not require any land acquisition.

ENERGY CONSERVATION MEASURES

21. This project has adopted various forms of energy efficient features, including –

- (a) variable refrigerant volume (VRV) air-conditioning system;
- (b) automatic demand control for ventilation fans in car park;
- (c) T5 energy-efficient fluorescent tubes with electronic ballast and lighting control by occupancy sensors;
- (d) light-emitting diode (LED) type exit signs; and

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- (e) automatic on/off switching of lighting and ventilation fans

⁶ 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 per m³), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

inside lifts.

22. For renewable energy technologies, we will install a small scale solar photovoltaic system for corridor and staircase lightings.

23. For greening features, we will provide landscaping and vertical greening for environmental and amenity benefits.

24. For recycled features, we will provide a rainwater recycling system for irrigating the greenery.

25. The total estimated additional cost for adopting the energy conservation measures is around \$3.6 million (including about \$230,000 for energy efficient features), which has been included in the cost estimate for this project. The energy efficient features will achieve 13.6% energy savings in the annual energy consumption with a payback period at about 4.3 years.

BACKGROUND INFORMATION

26. We upgraded **62JA** to Category B in October 2009. We employed an architectural consultant to undertake detailed design and PER in October 2010. We engaged contractor to carry out site investigations in July 2011. We also employed a quantity surveying consultant to prepare the tender documents in April 2012. We charged the total cost of \$8.0 million to block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". The architectural consultant and the contractor have completed the detailed design, PER and site investigations. The quantity surveying consultant is finalising the tender documents.

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27. Of the 47 trees within the project boundary, 12 trees will be

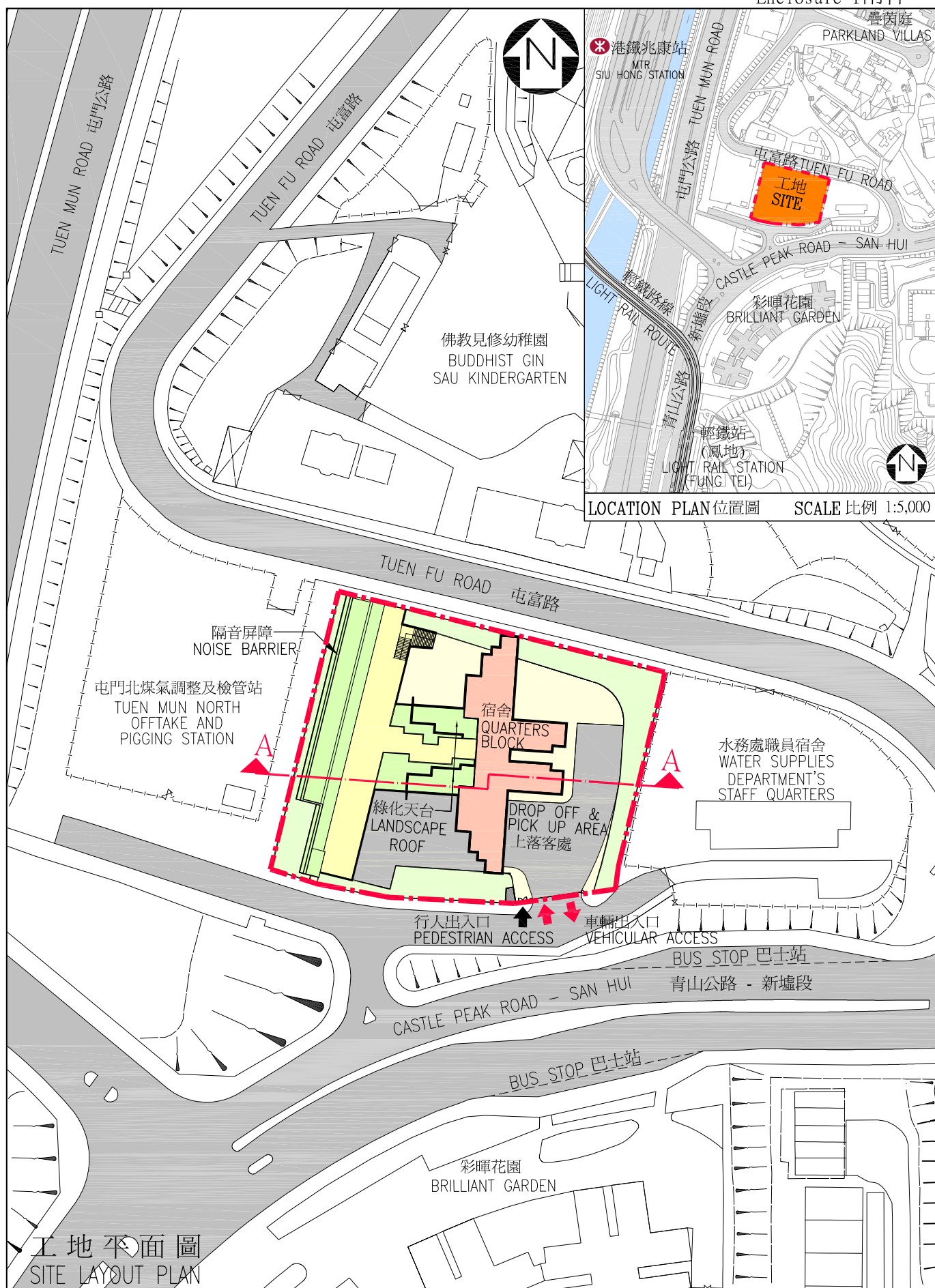
preserved. The proposed development will involve removal of 35 trees including 28 trees to be felled and seven trees to be replanted within the project site. All trees to be removed are not important trees⁷. We will incorporate planting proposals as part of the project, including planting of around 49 trees, 4 000 shrubs, 8 800 ground covers and climbers.

28. We estimate that the proposed works will create about 253 jobs (228 for labourers and another 25 for professional/technical staff) providing a total employment of 3 760 man-months.

Security Bureau
May 2012

⁷ “Important tree” 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 or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 metres.



062JA
屯門虎地紀律部隊
宿舎重建計劃
REDEVELOPMENT OF
DISCIPLINED SERVICES QUARTERS
IN FU TEI, TUEN MUN

drawn by 繪圖
S.F. YAN

date 日期
05/2012

approved 覆核
C.K. WU

date 日期
05/2012

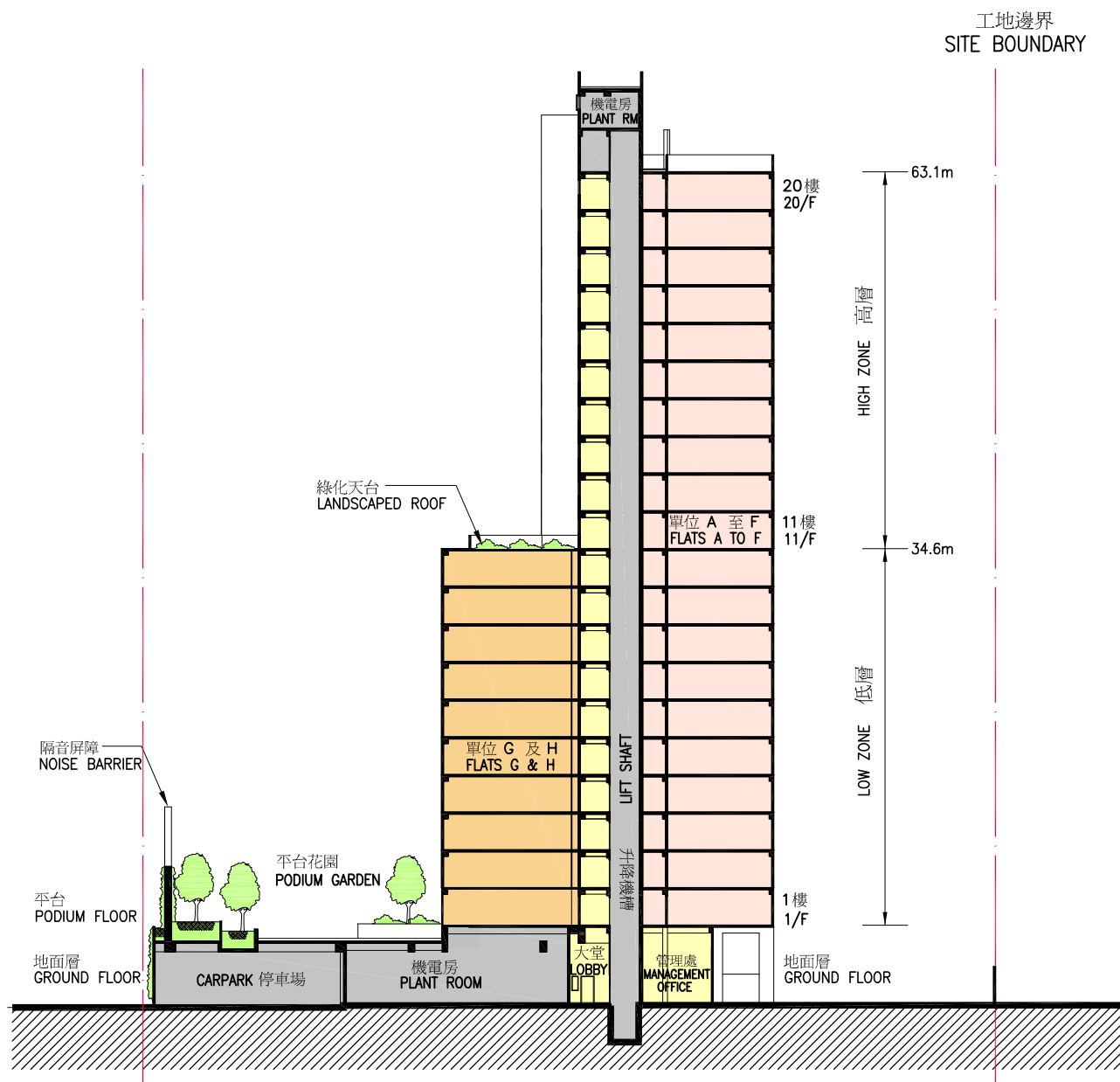
office 辦事處
PROJECT MANAGEMENT BRANCH 工程策劃管理處

drawing no. 圖則編號
PMB1/7767/XA101


scale 比例
1 : 1 000



ARCHITECTURAL
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DEPARTMENT 建築署



SECTION A-A
剖面圖 A-A

062JA 屯門虎地紀律部隊 宿舍重建計劃 REDEVELOPMENT OF DISCIPLINED SERVICES QUARTERS IN FU TEI, TUEN MUN	drawn by 繪圖 S.F. YAN	date 日期 05/2012	drawing no. 圖則編號 PMB1/7767/XA102	scale 比例 1 : 500
	approved 覆核 C.K. WU	date 日期 05/2012	 ARCHITECTURAL SERVICES DEPARTMENT 建築署	
	office 辦事處 PROJECT MANAGEMENT BRANCH 工程策劃管理處			



隔音屏障
NOISE
BARRIER



1ST TO 10TH FLOOR PLAN

1 至 10 樓平面圖

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屯門虎地紀律部隊
宿舍重建計劃
REDEVELOPMENT OF
DISCIPLINED SERVICES QUARTERS
IN FU TEI, TUEN MUN

drawn by 繪圖
S.F. YAN

approved 覆核
C.K. WU

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PROJECT MANAGEMENT BRANCH 工程策劃管理處

date 日期
05/2012

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05/2012

drawing no. 圖則編號
PMB1/7767/XA103

scale 比例
1 : 300



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11TH TO 20TH FLOOR PLAN

11 至 20 樓平面圖

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宿舍重建計劃
REDEVELOPMENT OF
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IN FU TEI, TUEN MUN

drawn by 繪圖
S.F. YAN

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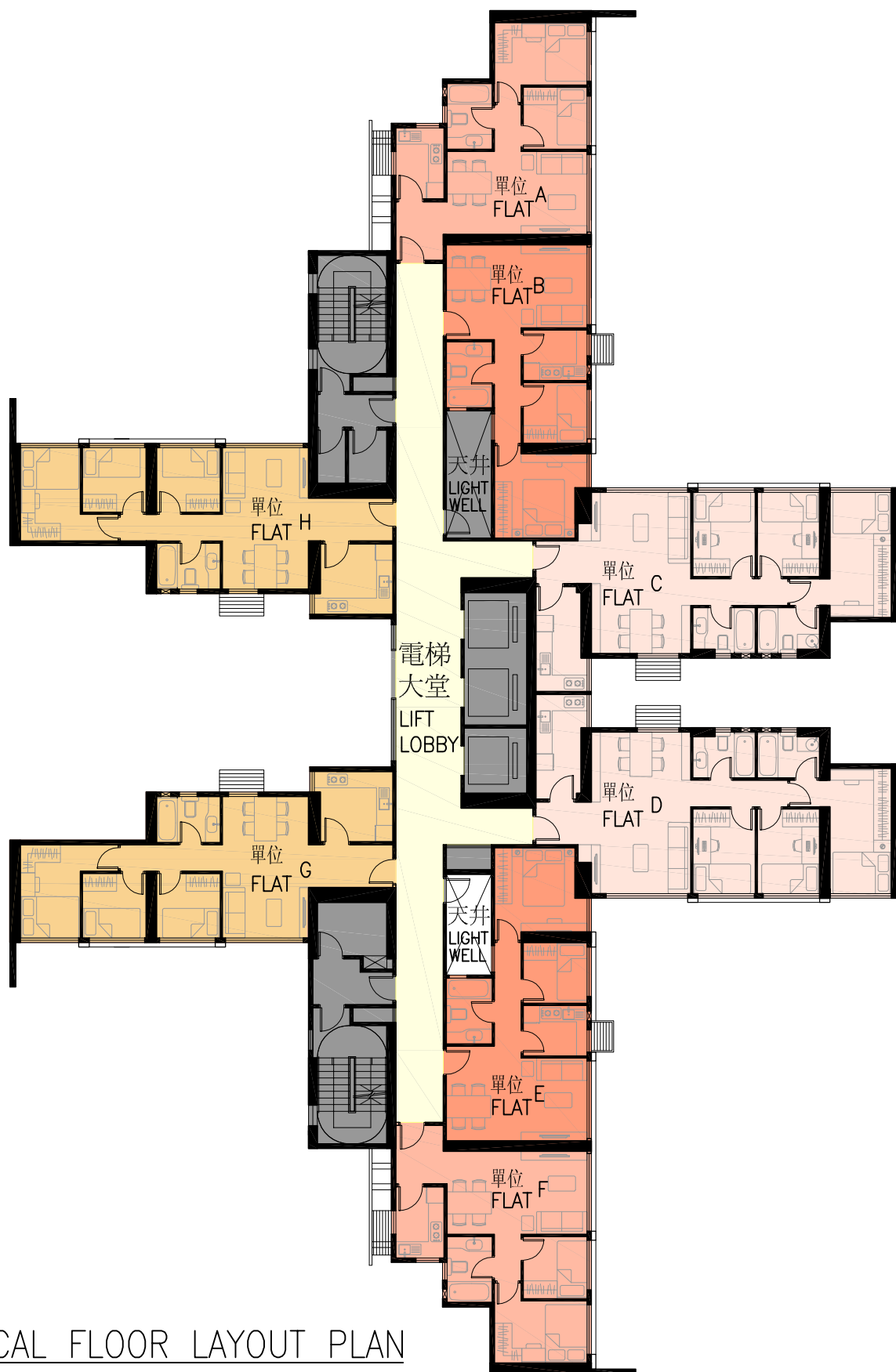
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05/2012

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PMB1/7767/XA104

scale 比例
1 : 300



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TYPICAL FLOOR LAYOUT PLAN

標準樓層平面圖

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date 日期
05/2012

drawing no. 圖則編號
PMB1/7767/XA105

scale 比例
1 : 200

approved 覆核
C.K. WU

date 日期
05/2012

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VIEW OF THE PROPOSED QUARTERS FROM SOUTHEAST (ARTIST'S IMPRESSION)

從東南面望向擬建宿舍構思圖

062JA 屯門虎地紀律部隊 宿舍重建計劃 REDEVELOPMENT OF DISCIPLINED SERVICES QUARTERS IN FU TEI, TUEN MUN	drawn by 繪圖 S.F. YAN	date 日期 05/2012	drawing no. 圖則編號 PMB1/7767/XA106	scale 比例 N/A
	approved 覆核 C.K. WU	date 日期 05/2012	 ARCHITECTURAL SERVICES DEPARTMENT 建築署	
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62JA – Redevelopment of disciplined services quarters in Fu Tei, Tuen Mun

**Breakdown of the estimates for consultants' fees and resident site staff costs
(in September 2011 prices)**

		Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$ million)
(a)	Consultants' fees for	-	-	-	3.5
	contract administration (Note 2)	-	-	-	1.4
				Sub-total	4.9
(b)	Resident site staff costs	18	38	1.6	1.8
	(Note 3)	295	14	1.6	10.0
				Sub-total	11.8
Comprising –					
(i)	Consultants' fees for management of resident site staff				1.6
(ii)	Remuneration of resident site staff				10.2
				Total	16.7

*MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of resident site staff supplied by the consultants. (As at now, MPS salary point 38 = \$62,410 per month and MPS salary point 14 = \$21,175 per month).
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **62JA**. The assignment will only be executed subject to the Finance Committee's approval to upgrade **62JA** to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.