

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

### **HEAD 703 – BUILDINGS**

#### **Quarters – Internal security**

#### **63JA – Construction of staff quarters for Correctional Services Department at Tin Wan, Aberdeen**

Members are invited to recommend to the Finance Committee the upgrading of **63JA** to Category A at an estimated cost of \$256.1 million in money-of-the-day prices for the construction of staff quarters for Correctional Services Department at Tin Wan, Aberdeen.

### **PROBLEM**

There is a substantial shortfall of departmental quarters (DQ) for married rank and file (R&F) officers in Correctional Services Department (CSD).

### **PROPOSAL**

2. The Director of Architectural Services, with the support of the Secretary for Security, proposes to upgrade **63JA** to Category A at an estimated cost of \$256.1 million in money-of-the-day (MOD) prices for the construction of staff quarters for CSD at Tin Wan, Aberdeen.

**/PROJECT .....**

## PROJECT SCOPE AND NATURE

3. The project site occupies an area of 721 square metres (m<sup>2</sup>) at Tin Wan, Aberdeen. The scope of the project comprises —

- (a) construction of a 16-storey quarters block with a total construction floor area (CFA) of 5 464 m<sup>2</sup> for provision of a total of 70 DQ units (14 G-grade and 56 H-Grade DQ units<sup>1</sup>); and
- (b) the following ancillary facilities —
  - (i) a management office;
  - (ii) amenity and communal areas including a multi-function room<sup>2</sup> and children playing fixtures and facilities; and
  - (iii) a car parking space for visitors or disabled persons and a motorcycle parking space.

4. A site and location plan, layout plans, a sectional plan 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 late 2016 with a view to completing the project in the second quarter of 2019.

## JUSTIFICATION

5. It is an established government policy to provide DQ for married disciplined services staff subject to the availability of resources. As at 1 May 2016, CSD had 2 421 R&F staff eligible for DQ and 2 100 DQ units were available for allocation, representing a shortfall of 13.3%. Eligible R&F staff have to wait for about four years on average to be allocated a DQ unit.

6. In the coming years, CSD will continue to recruit R&F staff to fill existing vacancies and meet the manpower requirement of various new initiatives. We therefore envisage that the demand for DQ will continue to rise.

**/FINANCIAL .....**

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<sup>1</sup> The reference areas of G-grade and H-grade units are DQ units of 55 m<sup>2</sup> and 45-50 m<sup>2</sup> respectively.

<sup>2</sup> Covering an area of approximately 15 m<sup>2</sup>, the multi-function room primarily serves as a meeting room for the residents' associations.

**FINANCIAL IMPLICATIONS**

7. We estimate the capital cost of the project to be \$256.1 million in MOD prices (please see paragraph 9 below), broken down as follows –

			\$ million
(a)	Site works		4.0
(b)	Site Formation		7.0
(c)	Piling		14.0
(d)	Building		99.1
(e)	Building services		24.6
(f)	Drainage		3.0
(g)	External works		11.6
(h)	Additional energy conservation, green and recycled features		3.4
(i)	Furniture and equipment <sup>3</sup>		1.5
(j)	Consultants' fees for		7.3
	(i) contract administration	6.3	
	(ii) management of resident site staff (RSS)	1.0	
(k)	Remuneration of RSS		12.8
(l)	Contingencies		18.8
	Sub-total		207.1
			(in September 2015 prices)
(m)	Provision for price adjustment		49.0
	Total		256.1
			(in MOD prices)

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<sup>3</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 6. The estimated construction unit cost, represented by the building and building services costs, is \$22,639 per m<sup>2</sup> of CFA in September 2015 prices. We consider this unit cost comparable to that of similar projects built by the Government.

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

<b>Year</b>	<b>\$ million (Sept 2015)</b>	<b>Price adjustment factor</b>	<b>\$ million (MOD)</b>
2016 – 2017	2.0	1.05775	2.1
2017 – 2018	30.0	1.12122	33.6
2018 – 2019	70.0	1.18849	83.2
2019 – 2020	64.0	1.25980	80.6
2020 – 2021	23.0	1.33539	30.7
2021 – 2022	12.0	1.40549	16.9
2022 – 2023	6.1	1.47577	9.0
	<u>207.1</u>		<u>256.1</u>

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 from 2016 to 2023. We will implement the construction works through a lump-sum contract because we can clearly define the scope of the works in advance. The contract will provide for price adjustment.

11. We estimate the annual recurrent expenditure arising from this project to be \$5.3 million.

## PUBLIC CONSULTATION

12. We consulted the District Development and Housing Committee of the Southern District Council on 1 February 2016. Members of the Committee did not object to the Project.

13. We will consult the Legislative Council Panel on Security (the Panel) on 7 June 2016. We will inform the Public Works Subcommittee (PWSC) of the views of the Panel prior to discussion at the PWSC.

## ENVIRONMENTAL IMPLICATIONS

14. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We have completed the Preliminary Environmental Review (PER) in April 2016 for the project. The PER concluded and the Director of Environmental Protection agreed that the project would not have any long-term environmental impacts.

15. During construction, we will control noise, dust and site run-off nuisances to within established standards and guidelines by implementing 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 estimate the cost of mitigation measures to control short-term environmental impact.

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 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>4</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.

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<sup>4</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.

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 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.

18. We estimate that the project will generate in total about 6 260 tonnes of construction waste. Of these, we will reuse about 1 090 tonnes (17.4%) of inert construction waste on site and deliver 3 745 tonnes (59.8%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 1 425 tonnes (22.8%) 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 \$280,000 for this project (based on a unit charge rate of \$27 per tonne for disposal at public fill reception facilities and \$125 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation).

## **HERITAGE IMPLICATIONS**

19. This 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**

20. The project does not require any land acquisition.

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

21. This project will adopt various forms of energy efficient features and renewable energy technologies, including lift power generation and photovoltaic system.

22. For greening features, planters and vertical greening will be provided.

23. For recycled features, a rainwater harvesting system for irrigation purpose will be provided.

24. The total estimated additional cost for adoption of the above energy conservation measures is around \$3.4 million (including \$15,000 for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 1.2% energy savings in the annual energy consumption with a payback period of about 8.3 years.

## BACKGROUND INFORMATION

25. We upgraded **63JA** to Category B in September 2009. The original design of the DQ block had only 13 storeys. Based on that design, we engaged consultants to undertake various services, including layout design and other environmental investigation in September 2010, Section 16 planning application under Town Planning Ordinance (Cap. 131) in March 2011, ground investigation, topographical survey and natural terrain hazard study in June 2011. Due to the revised design of a 16-storey DQ block, we engaged consultants to undertake various additional services, including Section 16 planning application under Town Planning Ordinance (Cap. 131) and other environmental investigations in December 2014, topographical survey in January 2015, updating layout design in August 2015, ground investigations in December 2015 and preparation of tender documents. The total estimated cost is about \$11.4 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”.

26. The maximum building height restriction of the project site was 70 mPD under the Aberdeen and Ap Lei Chau Outline Zoning Plan. Approval from the Town Planning Board was obtained in January 2016 for relaxing the building height restriction from 70 mPD to 76.7 mPD for the project, thereby increasing the number of storeys from 13 to 16 and increasing the plot ratio from 6.0 to 6.8.

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27. Of the six trees within the project boundary, two trees will be preserved. The proposed works will involve the felling of four trees. All trees to be removed are not important trees<sup>5</sup>. We will incorporate planting proposals as part of the project, including the planting of four trees, 1 800 shrubs and 2 100 groundcovers.

28. We estimate that the proposed works will create about 105 jobs (90 for labourers and another 15 for professional or technical staff) providing a total employment of 1 850 man-months.

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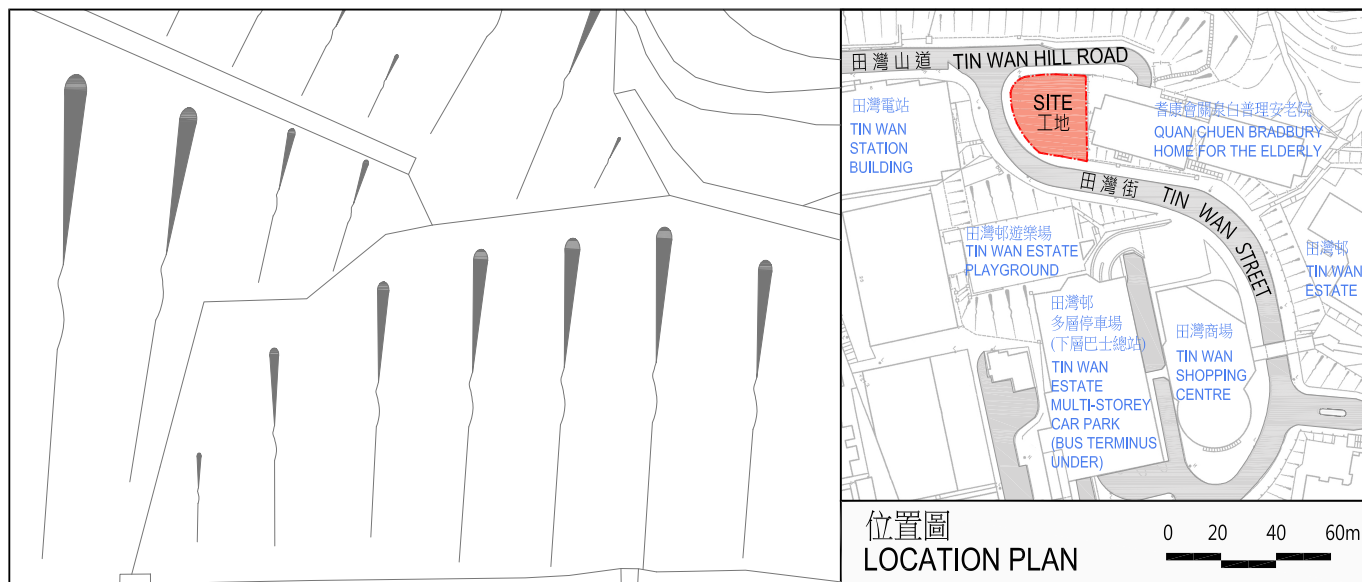
Security Bureau  
June 2016

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<sup>5</sup> “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 or exceeding 1.0 metre (m) (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.





圖例 LEGEND

- 無障礙出入口 BARRIER-FREE ENTRANCE / EXIT
- 行人出入口 PEDESTRIAN ENTRANCE / EXIT
- 車輛出入口 VEHICULAR INGRESS / EGRESS

- 工地界線 SITE BOUNDARY
- 現有行人過路處 EXISTING AT-GRADE PEDESTRIAN CROSSING

- 垂直綠化 VERTICAL GREENING
- 地面綠化 AT-GRADE GREENING
- 屋頂綠化 LANDSCAPED ROOF

0 5 10 15m

工地平面圖  
SITE PLAN

63JA  
香港仔田灣懲教署職員宿舍建造工程  
CONSTRUCTION OF STAFF QUARTERS FOR CORRECTIONAL  
SERVICES DEPARTMENT AT TIN WAN, ABERDEEN



ARCHITECTURAL  
SERVICES  
DEPARTMENT 建築署



圖例 LEGEND

- |  |                                        |  |                                                  |  |                              |  |                                         |
|--|----------------------------------------|--|--------------------------------------------------|--|------------------------------|--|-----------------------------------------|
|  | 無障礙出入口<br>BARRIER-FREE ENTRANCE / EXIT |  | 工地界線<br>SITE BOUNDARY                            |  | 垂直綠化<br>VERTICAL GREENING    |  | 裝卸貨區<br>LOADING / UNLOADING BAY         |
|  | 行人出入口<br>PEDESTRIAN ENTRANCE / EXIT    |  | 現有行人過路處<br>EXISTING AT-GRADE PEDESTRIAN CROSSING |  | 地面綠化<br>AT-GRADE GREENING    |  | 暢通易達停車位<br>ACCESSIBLE CAR PARKING SPACE |
|  | 車輛出入口<br>VEHICULAR INGRESS / EGRESS    |  | 公共地方<br>COMMON AREA                              |  | 暢通易達升降機<br>ACCESSIBLE LIFT   |  |                                         |
|  | 無障礙通道<br>BARRIER-FREE ACCESS           |  | 機房 / 樓梯<br>PLANT ROOMS / STAIRCASE               |  | 暢通易達洗手間<br>ACCESSIBLE TOILET |  |                                         |

0 2 4 6m

地下平面圖  
GROUND FLOOR  
PLAN

63JA  
香港仔田灣懲教署職員宿舍建造工程  
CONSTRUCTION OF STAFF QUARTERS FOR CORRECTIONAL  
SERVICES DEPARTMENT AT TIN WAN, ABERDEEN



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DEPARTMENT 建築署



圖例 LEGEND



公共地方  
COMMON AREA



暢通易達升降機  
ACCESSIBLE LIFT



G 級單位  
G - GRADE UNITS



機房/樓梯  
PLANT ROOMS/ STAIRCASE



H 級單位  
H - GRADE UNITS

0 2 4 6m

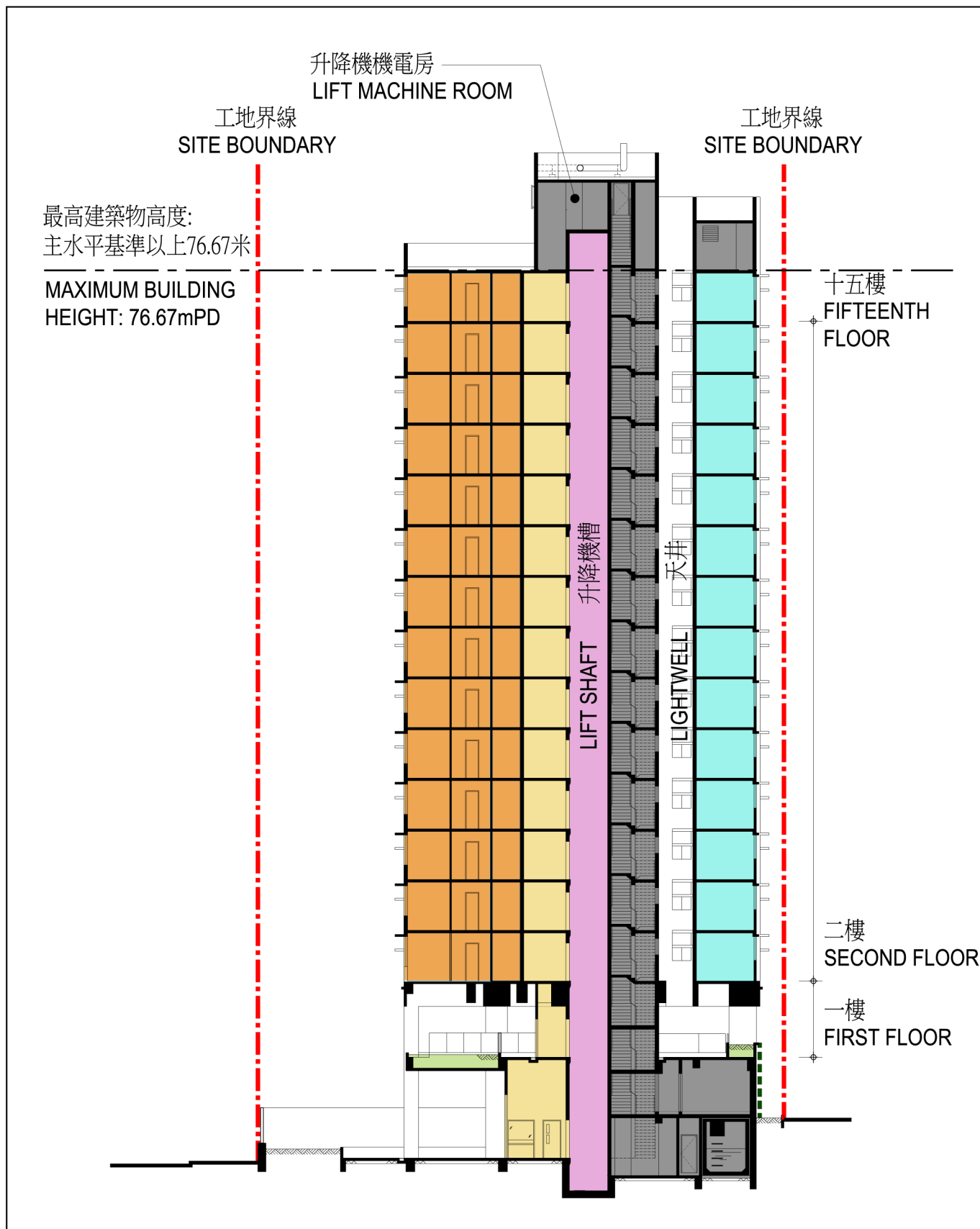


二至十五樓平面圖  
SECOND TO FIFTEENTH  
FLOOR PLAN

63JA  
香港仔田灣懲教署職員宿舍建造工程  
CONSTRUCTION OF STAFF QUARTERS FOR CORRECTIONAL  
SERVICES DEPARTMENT AT TIN WAN, ABERDEEN



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DEPARTMENT 建築署



圖例 LEGEND

--- 工地界線  
SITE BOUNDARY

公共地方  
COMMON AREA

機房/樓梯  
PLANT ROOMS/ STAIRCASE

暢通易達升降機  
ACCESSIBLE LIFT

H 級單位  
H - GRADE UNITS

G 級單位  
G - GRADE UNITS

綠化範圍  
LANDSCAPED AREA

垂直綠化  
VERTICAL GREENING

0 2 4 6m

剖面圖 A - A  
SECTION A - A

63JA

香港仔田灣懲教署職員宿舍建造工程  
CONSTRUCTION OF STAFF QUARTERS FOR CORRECTIONAL  
SERVICES DEPARTMENT AT TIN WAN, ABERDEEN



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從田灣街望向擬建宿舍的構思透視圖

PERSPECTIVE VIEW FROM TIN WAN STREET DIRECTION (ARTIST'S IMPRESSION)

構思圖  
ARTIST'S  
IMPRESSION

63JA  
香港仔田灣懲教署職員宿舍建造工程  
CONSTRUCTION OF STAFF QUARTERS FOR CORRECTIONAL  
SERVICES DEPARTMENT AT TIN WAN, ABERDEEN



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DEPARTMENT 建築署

**63JA – Construction of staff quarters for  
Correctional Services Department at Tin Wan, Aberdeen**

**Breakdown of the estimates for consultants' fees and resident site staff costs  
(in September 2015 prices)**

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fees for contract administration (Note 2)	Professional	—	—	—	4.1
	Technical	—	—	—	2.2
				Sub-total	6.3
(b) Resident site staff (RSS) costs (Note 3)	Professional	20	38	1.6	2.4
	Technical	279	14	1.6	11.4
				Sub-total	13.8
Comprising -					
(i) Consultants' fees for management of RSS				1.0	
(ii) Remuneration of RSS				12.8	
				<b>Total</b>	<b>20.1</b>

\* 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 38 = \$74,210 per month and MPS salary point 14 = \$25,505 per month).
2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of **63JA**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade **63JA** to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.