For discussion **PWSC(2017-18)37**
on 28 March 2018

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT
Support – Others
188GK – Government Flying Service Kai Tak Division

Members are invited to recommend to the Finance Committee the upgrading of **188GK** to Category A at an estimated cost of $469.1 million in money-of-the-day prices for the establishment of the Government Flying Service Kai Tak Division.

PROBLEM

We need to establish a Kai Tak Division (KTD) for the Government Flying Service (GFS) in order to clear the North Lantau Expressway (NLE) flight route to enable timely construction of new housing units under the Tung Chung New Town Extension (TCNTE), and to maintain the effectiveness and efficiency of GFS's emergency services under all-weather conditions.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development and the Secretary for Security, proposes to upgrade **188GK** (the Project) to Category A at an estimated cost of $469.1 million in money-of-the-day (MOD) prices to establish the KTD for GFS.

/PROJECT …..

PROJECT SCOPE AND NATURE

3. The site of the Project occupies an area of about 7 400 square metres (m^2) at the tip of the Ex-Kai Tak Runway (EKTR). The proposed scope of works under **188GK** includes –

(a) construction of an apron to provide a helicopter take-off/landing pad, two helicopter parking pads and the associated safety/protection areas[1];

(b) construction of an office building to accommodate an Air Command and Control Centre, a Flight Planning Centre and ancillary facilities including offices for GFS's aircrew, engineering and administration staff, a multi-purpose function room for mission planning, briefing, training and meeting, and an aircraft and mission equipment storage area;

(c) construction of a hangar to accommodate two helicopters and the associated maintenance equipment;

(d) provision of supporting facilities for helicopter operation including radio and communication facilities, navigation, security and surveillance systems, helicopter refueling facilities and firefighting facilities; and

(e) associated civil, drainage, sewerage, water supply, building and landscaping works, etc.

4. A layout plan and two architectural renderings showing the proposed works are attached at Enclosures 1 and 2 respectively.

5. Subject to funding approval of the Finance Committee (FC), we plan to commence the construction works of the Project in the fourth quarter of 2018 for completion by the first quarter of 2021. To meet the programme, the Civil Engineering and Development Department plans to invite tenders for the construction contract in May 2018 tentatively to facilitate timely commencement of the construction works, but the construction contract will only be awarded upon FC's funding approval.

/**JUSTIFICATIONS** …..

[1] The take-off/landing pad can be shared use by GFS and the future commercial operator(s) of a possible cross-boundary heliport when it is pursued. There will be two parking pads, with one dedicated for GFS's use and the other for use by the future commercial operator(s).

JUSTIFICATIONS

6. GFS was established under the Government Flying Service Ordinance (Cap. 322) in 1993 to provide a wide range of flying services, including search and rescue, air ambulance, fire-fighting, aerial survey and support for law enforcement, for various departments of the Government and people in need. Currently, GFS deploys emergency flights from its Headquarters at the Hong Kong International Airport (HKIA) in Chek Lap Kok. The NLE (see Enclosure 3) is one of the four major helicopter flight routes[2] used by GFS's helicopters for transiting to and from its Headquarters. It is also the primary flight route used by GFS's helicopters in response to emergency call-outs under unfavourable weather conditions. With developments under the TCNTE project coming up along the northern shore of Lantau, the NLE flight route would be hampered by new buildings below the flight path, making it difficult for GFS to continue using that route for supporting its emergency services under unfavourable weather conditions[3]. Hence, there is a need to establish an operational base for GFS outside its Headquarters at the HKIA in order to maintain the effectiveness and efficiency of GFS's emergency services under all-weather conditions.

7. An extensive site search process, having regard to key factors such as GFS's operational needs, compatibility with aviation safety requirements, land use planning, technical feasibility, optimal site utilisation and compliance with statutory requirements, etc., was conducted between 2015 and 2016. Following the site search and technical feasibility assessments, a site at the tip of the EKTR (the Site) was identified as the most suitable location for establishing an operational base for GFS outside its Headquarters. The Site has been zoned as "Other Specified Uses" annotated "Heliport" under the Kai Tak Outline Zoning Plan (OZP) S/K22/2 since 2007, taking into account the possible provision of an at-grade cross-boundary heliport. Co-location of the proposed GFS KTD with the possible cross-boundary heliport on the Site will maintain GFS's performance commitments and emergency response effectiveness, as well as maximise the use of limited waterfront land resources.

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[2] The other routes are the Silvermine Pass, Tung Chung Pass and western coastline of Lantau.

[3] Under unfavourable weather conditions, other primary helicopter flight routes to and from the HKIA (i.e. the Silvermine Pass and Tung Chung Pass) are often subject to low cloud level and poor visibility conditions and are unsafe for use. If the NLE is also hampered, GFS has to consider using the western coastline of Lantau as the last resort, but this route is subject to much higher risk factors such as little effective visual references for pilots, presence of high terrain and turbulence, rendering it unsafe for use under poor weather conditions or at night time. In addition, its longer travelling distance to any part of Hong Kong will adversely lengthen the flight time for all emergency response flights, further compromising GFS's effectiveness in responding to emergency call-outs.

8. Upon the establishment of the proposed KTD, the existing GFS Headquarters at Chek Lap Kok will continue to provide support for other scheduled flying services and routine training, as well as emergency responses depending on the call-out location, resources (including helicopters, aircrew and equipment) available for deployment during the specific situation, weather conditions, etc.

9. In undertaking the design of the proposed GFS KTD, every care has been taken to ensure the feasibility of the co-location with the cross-boundary heliport when it is pursued in future. The proposed works at the apron area (item (a) under paragraph 3 above) will be able to meet the operational needs of both GFS and the possible cross-boundary heliport, thereby minimising the need for carrying out additional works after the GFS KTD has started operation.

10. The TCNTE is one of the major initiatives to increase land supply to meet housing and other development needs of Hong Kong. The timely commissioning of the proposed GFS KTD is thus crucial to ensure that the supply of over 40 000 new housing units (with over 60% for public housing) in Tung Chung East under the TCNTE project would be made available starting from 2023-24 to meet the strong demand for housing in the short to medium term. To enable construction of the housing units in a timely manner and to maintain GFS's emergency services at its current level, we need to commence the construction works of the Project in the fourth quarter of 2018 for commissioning of the KTD in 2021, in order to allow construction of the superstructure of the housing blocks in Tung Chung East which falls within GFS's NLE flight path. GFS will endeavor to gear up the required manpower, including aircrew and engineering professionals, to cope with the proposed commencement of the KTD.

FINANCIAL IMPLICATION

11. We estimate the capital cost of the Project to be $469.1 million in MOD prices (see paragraph 13 below), broken down as follows –

			$ million (in MOD prices)
(a)	Construction of an apron		62.2
(b)	Construction of an office building		56.5
(c)	Construction of a hangar[4]		161.3
(d)	Provision of supporting facilities		54.7
(e)	Associated civil, drainage, sewerage, water supply, building and landscaping works		45.4
(f)	Consultants' fee for		6.5
	(i) contract administration	5.1	
	(ii) management of resident site staff (RSS)	1.4	
(g)	Remuneration of RSS		37.7
(h)	Contingencies		44.8
	Total		469.1

12. A breakdown of the estimates for the consultants' fees and RSS costs by man-months is at Enclosure 4.

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

/**$ million** …..

[4] Construction of the hangar includes foundation, reinforced concrete and steel structures, green roof, facade, etc.

Year	$ million (MOD)
2018 – 2019	24.2
2019 – 2020	178.7
2020 – 2021	202.2
2021 – 2022	38.6
2022 – 2023	25.4
	469.1

14. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period from 2018 to 2023. Subject to funding approval, we will deliver the proposed works under a re-measurement contract because the quantity of works described in paragraph 11(a), (b), (c) and (e) may vary depending on the actual ground conditions. The contract will be prepared in the New Engineering Contract (NEC) form[5] with the provision of price adjustments.

15. We estimate the annual recurrent expenditure arising from the Project to be $69.7 million.

PUBLIC CONSULTATION

16. We consulted the Housing and Infrastructure Committee of the Kowloon City District Council (DC), the Food and Environmental Hygiene Committee of the Wong Tai Sin DC and the Environment and Hygiene Committee of the Kwun Tong DC on 15 June, 27 June and 20 July 2017 respectively. Members of the three DCs generally supported the Project.

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[5] NEC is a suite of contracts developed by the Institution of Civil Engineer, United Kingdom. It is a contract form that emphasises cooperation, mutual trust and collaborative risk management between contracting parties.

17. We also consulted the Task Force on Kai Tak Harbourfront Development (KTTF) of the Harbourfront Commission on 8 September and 1 November 2017. Members of the KTTF generally supported the Project.

18. We consulted the Panel on Security on the Project on 9 January 2018, with members from the Panel on Development invited to join the discussion. Members supported the submission of the funding proposal of the Project to the Public Works Subcommittee for consideration.

ENVIRONMENTAL IMPLICATIONS

19. The Project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We have carried out a Preliminary Environmental Review (PER) under the technical feasibility study and revealed that the Project, together with the planned cross-boundary heliport to be co-located at the Site, will not cause long-term adverse environmental impacts. The Project will be designed and implemented in accordance with the requirements of the Hong Kong Planning Standards and Guidelines. GFS will also adopt specific flight paths and procedures to minimise potential helicopter noise impact.

20. We will also incorporate into the relevant works contract the mitigation measures recommended in the PER to control the environmental impacts arising from the construction works within established standards and in accordance with relevant guidelines. These include use of silencers, mufflers, acoustic linings or shields and building of temporary barriers for noisy construction activities, frequent cleaning and watering of the site, and provision of wheel-washing facilities. We have included in the project estimates the cost to implement these mitigation measures.

21. We have considered the site formation arrangement in the planning and design stages to reduce generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated materials) on site or in other suitable construction sites as far as possible, in order to minimise disposal of inert construction waste to public fill reception facilities[6]. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimise generation of construction waste.

/22. …..

[6] 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.

22. At the construction stage, we will also 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. Besides, we will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

23. We estimate that the Project will generate in total 17 000 tonnes of construction waste. Of these, we will reuse 1 500 tonnes (9%) of inert construction waste on site and deliver 14 900 tonnes (88%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 600 tonnes (3%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at public fill reception facilities and landfill sites for the Project is estimated to be $1.2 million (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 IMPLICATION

24. This Project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded heritage site or buildings, sites of archeological interest and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

25. The Project does not require any land acquisition.

BACKGROUND

26. We engaged consultants in May 2015 to undertake a technical feasibility study (at a cost of about $10.8 million in MOD prices) to identify a suitable site and to ascertain the technical feasibility of establishing on that site a GFS Division outside the HKIA. Upon confirming the technical feasibility of the Site, we engaged consultants in June 2017 to carry out the detailed design and site investigation works for the Project (at a cost of about $9.4 million in MOD prices). These pre-construction tasks were funded under block allocation Subhead **7100CX** "New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme".

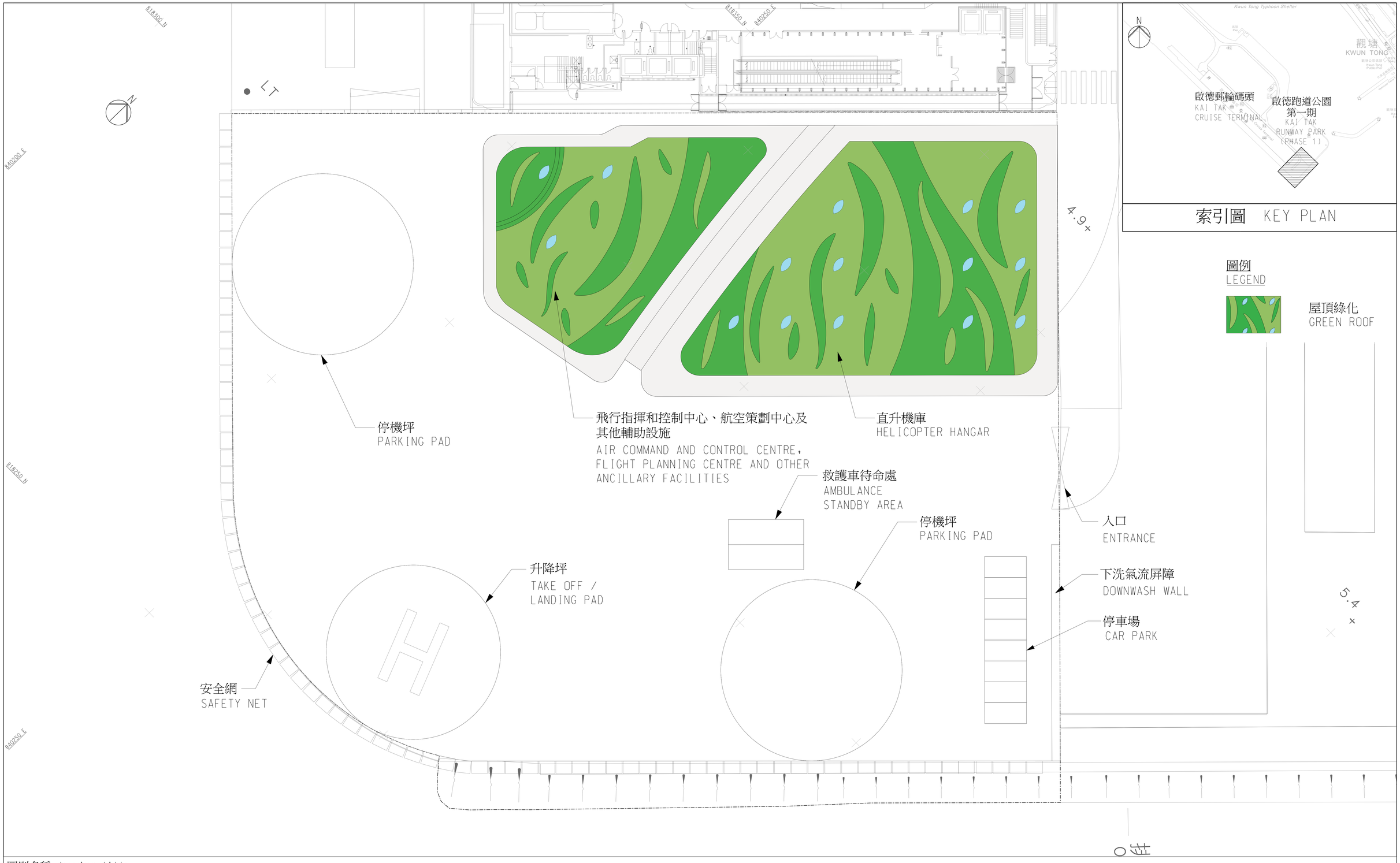
/27. …..

27. We upgraded **188GK** to Category B in September 2016.

28. No old and valuable trees have been identified in the Site. The proposed works will not involve any tree removal. While no tree planting is proposed due to operational constraints, a green roof of approximately 1 500 m^2 is proposed at the office building and hangar for environmental and amenity benefits.

29. We estimate that the proposed works will create about 190 jobs (160 for labourers and 30 for professional or technical staff), providing a total employment of 4 000 man-months.

Security Bureau
Development Bureau
March 2018



索引圖 KEY PLAN

圖例
LEGEND

屋頂綠化
GREEN ROOF

圖則名稱 drawing title

工務計劃項目第188GK號 — 政府飛行服務隊啟德分部 — 平面圖

P.W.P. ITEM NO. 188GK - GOVERNMENT FLYING SERVICE KAI TAK DIVISION - LAYOUT PLAN

附件一 ENCLOSURE 1

A4 297MM X 210MM

圖則名稱 drawing title

工務計劃項目第188GK號 — 擬建政府飛行服務隊啟德分部建築效果圖 — 從高空俯瞰

P.W.P. ITEM NO. 188GK - ARCHITECTURAL RENDERING OF PROPOSED GOVERNMENT FLYING SERVICE KAI TAK DIVISION - AERIAL VIEW

附件二（兩頁中的第一頁） ENCLOSURE 2 (PAGE 1 OF 2)

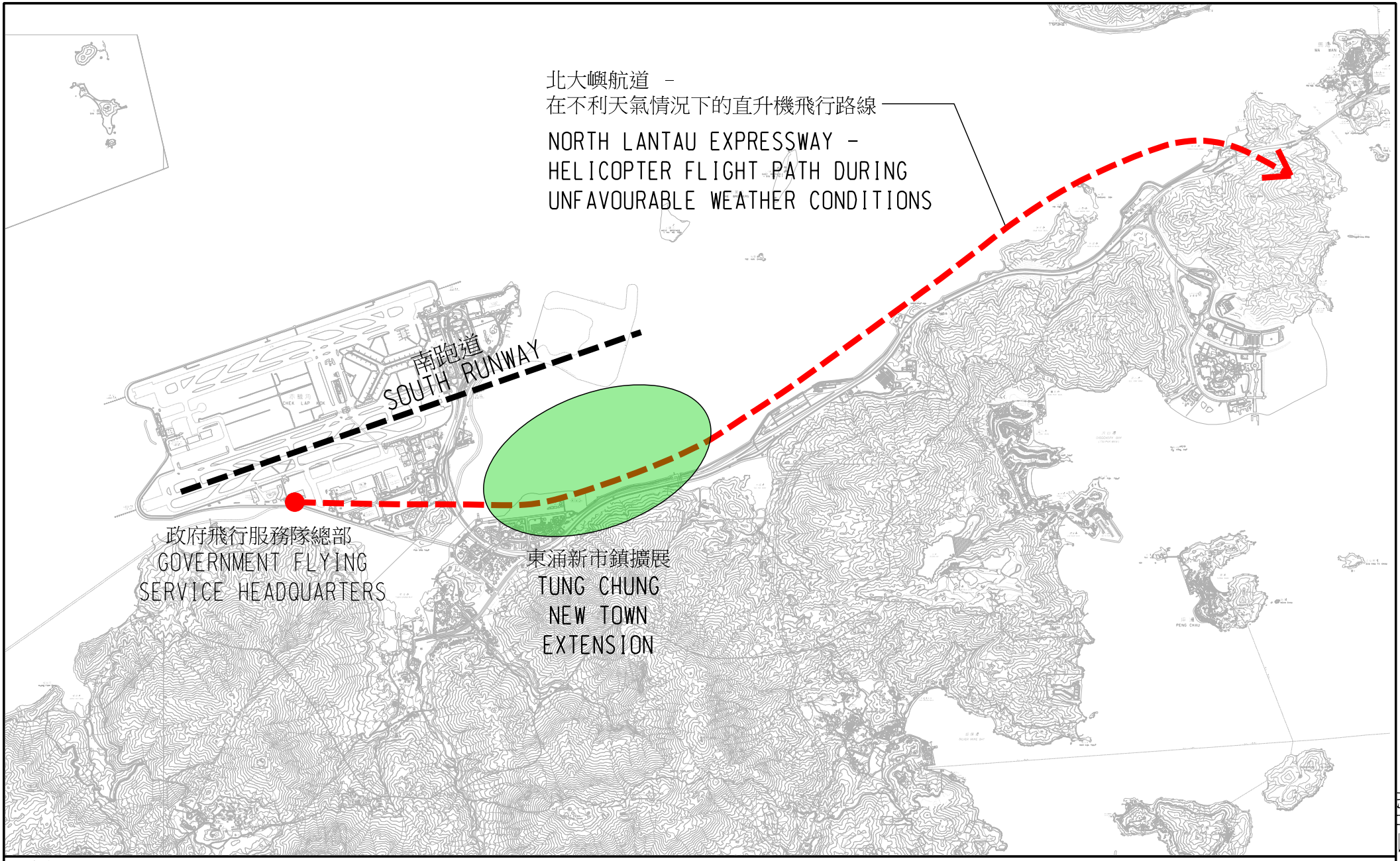
A4 297MM X 210MM

圖則名稱 drawing title

工務計劃項目第188GK號 — 擬建政府飛行服務隊啟德分部建築效果圖 — 正視圖

P.W.P. ITEM NO. 188GK - ARCHITECTURAL RENDERING OF PROPOSED GOVERNMENT FLYING SERVICE KAI TAK DIVISION - FRONT VIEW

A4 297MM X 210MM



圖則名稱 drawing title

北大嶼航道 – 在不利天氣情況下的直升機飛行路線

NORTH LANTAU EXPRESSWAY – HELICOPTER FLIGHT PATH DURING UNFAVOURABLE WEATHER CONDITIONS

附件三 ENCLOSURE 3

A4 297MM X 210MM

188GK – Government Flying Service Kai Tak Division

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	--	--	--	2.6
		Technical	--	--	--	1.8
					Sub-total	4.4#
(b)	Resident site staff (RSS) cost (Note 3)	Professional	135	38	1.6	17.0
		Technical	393	14	1.6	17.3
					Sub-total	34.3
	Comprising -					
	(i) Consultants' fees for management of RSS				1.2#	
	(ii) Remuneration of RSS				33.1#	
					Total	**38.7**

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of RSS supplied by the consultants (as at now, MPS point 38 = $78,775 per month and MPS point 14 = $27,485 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 **188GK**. The construction phase of the assignment will only be executed subject to the Finance Committee's approval to upgrade **188GK** 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 11 of the main paper.