Task Force on Kai Tak Harbourfront Development

For discussion
on 08 September 2017

TFKT/16/2017

Proposed Establishment of Government Flying Service Kai Tak Division at Ex-Kai Tak Runway Tip

PURPOSE

This paper briefs Members on the preliminary design of the proposed Government Flying Service (GFS) Kai Tak Division at the Ex-Kai Tak Runway Tip (EKTR) under a co-location arrangement with the planned cross-boundary heliport.

BACKGROUND

2. The proposed developments along the northern shore of Lantau including the Tung Chung New Town Extension, Siu Ho Wan and Sunny Bay would block one of the GFS' four major helicopter flight routes for transiting to and from the Hong Kong International Airport (HKIA), i.e. the North Lantau Expressway (NLE, see **Annex A**), making it difficult for GFS to continue its emergency services under poor weather conditions[1]. In order to maintain GFS' emergency operations at its current level under all weather conditions while preserving the development potentials of the northern shore of Lantau, there is a need to establish a division for GFS outside the HKIA.

3. The Civil Engineering and Development Department (CEDD) commenced a technical feasibility study in May 2015 to identify a suitable site for establishing a division for GFS. Upon completion of a thorough site selection process considering technical feasibility, land use planning, compatibility with aviation safety requirements, GFS' operational needs, optimal site utilization and compliance with statutory requirements, etc., the EKTR was identified as the most suitable location for establishing the division under a co-location arrangement with the planned

[1] GFS provides emergency services, including air ambulances, search and rescue, fire-fighting and support to law enforcement agencies, in Hong Kong and the South China Sea from its headquarters in the HKIA. Under poor weather conditions, the other primary helicopter flight routes from the HKIA (i.e. the Silvermine Pass and Tung Chung Pass) are subject to low cloud level and poor visibility conditions and are unsafe for use. If the NLE is also blocked, GFS has to consider using the western coastline of Lantau as last resort, but this route is subject to much higher risk factors such as little effective visual references, high terrain and turbulence, rendering it unsafe for use under poor weather conditions and at night time, and its long distance to the other areas in the territory will further lengthen the flight time for all emergency flights, making it impractical for GFS to meet its performance commitments and emergency response effectiveness would be undermined.

cross-boundary heliport.

THE SITE

4. The site is located at the southern end of the EKTR, with a site area of approximately 7,400m^2 (See location plans in **Annex B**). The site is generally flat with an average site formation level of about +5.0mPD. It is a waterfront site facing the Victoria Harbour to the south; bounded to the northwest by the Kai Tak Cruise Terminal (KTCT) and to the northeast by the Kai Tak Runway Park (Phase 1).

5. The site has been zoned as "Other Specified Uses" annotated "Heliport" under the Kai Tak Outline Zoning Plan (OZP) S/K22/2 since 2007, primarily intended for provision of an at-grade cross-boundary heliport. The Government now proposes to co-locate the Kai Tak Division with the planned cross-boundary heliport at the EKTR. Such arrangement would maximize the use of limited land resources and preserve the synergy among the KTCT, the future Tourism Node and the commercial helicopter services.

SCOPE OF WORKS

6. With due consideration to flight safety, operational requirements for GFS' emergency services and the need to preserve the commercial viability of future cross-boundary helicopter services as planned, the scope of works includes the following elements -

(a) A take-off/landing helipad;

(b) Two parking pads with associated protection areas;

(c) A hangar to accommodate two helicopters and associated maintenance equipment;

(d) An office building accommodating an Air Command and Control Centre and Flight Planning Centre including operation room, engineering office, mission briefing and training room, aircraft and mission equipment storage etc.; and

(e) Relevant infrastructures and supporting facilities including aviation aids, communication, navigation and surveillance systems, firefighting facilities, helicopter refueling facilities, car parking spaces, downwash wall, etc.

7. A preliminary layout plan is enclosed in **Annex C**.

PROPOSED PRELIMINARY DESIGN

8. A preliminary design of the Kai Tak Division is shown in **Annex D**. The Kai Tak Division is to be developed in compatibility with the overall planning and design framework of the Kai Tak Development (KTD) as well as the integrated planning, vibrancy and accessibility of the Harbour. In addition, the Harbour Planning Principles have been taken into account when drawing up the preliminary design, in particular the following areas -

(a) Harbour Enhancement

(i) Design

The Kai Tak Division is situated within the KTD, facing the Victoria Harbour and backed by the iconic KTCT. It matches the aviation design theme of the adjacent Kai Tak Runway Park and pays homage to the aviation history of the EKTR by celebrating the memory of the old Kai Tak Airport. Given such a prominent location, the design of the Kai Tak Division, in conjunction with the cross-boundary heliport, should not only meet the operational requirements of GFS but also be in harmony with the exterior aesthetics of the KTCT. The architectural and landscape design of the Kai Tak Division acknowledges and respects the architectural features that make the KTCT iconic, taking cues from the softened corners, material palette and the elegant arched feature at the end of the cruise terminal building. In gist, the Kai Tak Division can be seen as a natural extension of the KTCT. Stepping down of the massing elaborates the landscape of KTCT and enhances visual connectivity towards the water border.

(ii) Kai Tak Public Creatives - Current of Vitality Theme

In addition to extending the features of the KTCT, the design of the Kai Tak Division/cross-boundary heliport signifies its Kai Tak identity and promotes the branding of KTD through the integration of the Kai Tak Public Creatives element into the design. Graphic motifs of the energy swirl and DNA bar of the "Current of Vitality" theme will be adopted on the downwash wall and incorporated onto the green roof of the hangar and office building respectively. The adoption of the "Current of Vitality" Theme in the design is summarized in **Annex E**.

The downwash wall of the Kai Tak Division /cross-boundary heliport is visible to the public from the Runway Park. Its transparent design would allow maximum views of the skyline and beyond.

The green roof, prominently visible from the viewing platform of KTCT Park and by the helicopter operators/passengers, aims to extend the KTCT Park landscape further towards the waterfront. The wave pattern takes reference to "air pattern" from the Kai Tak Current of Vitality DNA bar which also echoes with the future use of the site as a heliport.

(b) Public Enjoyment

The rooftop of the hangar and office building is designed at +13.0mPD which observes the building height restriction in the Kai Tak OZP. This enables the public to continue to enjoy an unobstructed view of the Harbour from the viewing platform of the KTCT Park. Besides, after the heliport is in operation, the public at the viewing platform and the adjacent Kai Tak Runway Park would be able to watch helicopters taking off and landing.

(c) Sustainable Development

The Kai Tak Division/cross-boundary heliport embraces the principle of sustainable development in the planning and design process. Passive sustainable

design principle and technology are adopted in the design. It is designed to minimize energy consumption and promote comfort within the office space by putting major office spaces at the south-facing position and using sun shading devices at the west-facing façade, which cut off excessive glare while allowing natural sun light into the office area. Light tubes are proposed to be installed on the roof to allow natural light penetrating into corridor spaces and the hangar in order to reduce artificial lighting consumption.

The hangar space is designed to allow for natural ventilation such that air-conditioning is not required. A green roof is proposed at the hangar and the office building to maximise the greening area and reduce heat gain and thermal load on the roof slab.

Furthermore, in terms of fixture and equipment, LED lighting, high efficiency air-conditioning system and water saving sanitary fixtures will be used to enhance the sustainability of the development.

(d) Stakeholder Engagement

The prominence of the EKTR is well acknowledged. Therefore, a series of public consultation exercise has been planned in order to consult the community at this early stage on the proposed development at the site. Besides this Task Force, we consulted Kowloon City, Wong Tai Sin and Kwun Tong District Councils (DCs) in June/July 2017 and obtained their general support on the proposed establishment of the Kai Tak Division at EKTR. As part of the DC consultation, DC members had paid visits to the GFS Headquarters in Chek Lap Kok to understand GFS' duties and operation. The KTCT operator was also consulted in June 2017 to discuss potential interface issues during the operation stage. All views collected during the public consultation exercise will be taken into consideration in the detailed design stage.

TEMPORARY WORKS AREA

9. A temporary works area at a separate location as shown in **Annex F** will be required for construction of the Kai Tak Division to provide accommodation for site staff and storage area for construction material and equipment. Provision of a temporary works area at this particular location at the former runway will be necessary to minimize construction traffic impact on existing local roads and to shorten the construction period. The requirements on temporary works area have been minimized (in both footprint of site area and height of temporary office building) with an aim to reduce possible impacts on the harbourfront and environment. Visual impacts during construction stage will be mitigated through beautification of site hoardings and provision of suitable greening.

ENVIRONMENTAL IMPLICATIONS

10. Based on an environmental assessment (EA) the Kai Tak Division will not have significant adverse impacts on all environmental aspects in both construction and operation stages. We will implement the mitigations measures recommended in the EA as and when appropriate

11. As there are sufficient separations between the proposed helicopter flight paths and the adjacent residential areas, the calculated helicopter noise levels at these residential areas are within the standard specified in the Hong Kong Planning Standards and Guidelines. For further noise abatement, GFS will issue operational guidelines specifying that GFS helicopters shall adopt flight paths further away from residential areas as far as practicable. Similar flight paths will also be adopted as far as practicable by the future operators of commercial helicopters. Although no noise barriers are considered necessary as noise mitigation measures under the EA, the proposed installation of downwash walls along the north-east boundary of the Heliport site will help cut down the helicopter noise that would be experienced by the users of the adjacent Kai Tak Runway Park.

IMPLEMENTATION PROGRAMME

12. The construction of the GFS Kai Tak Division is

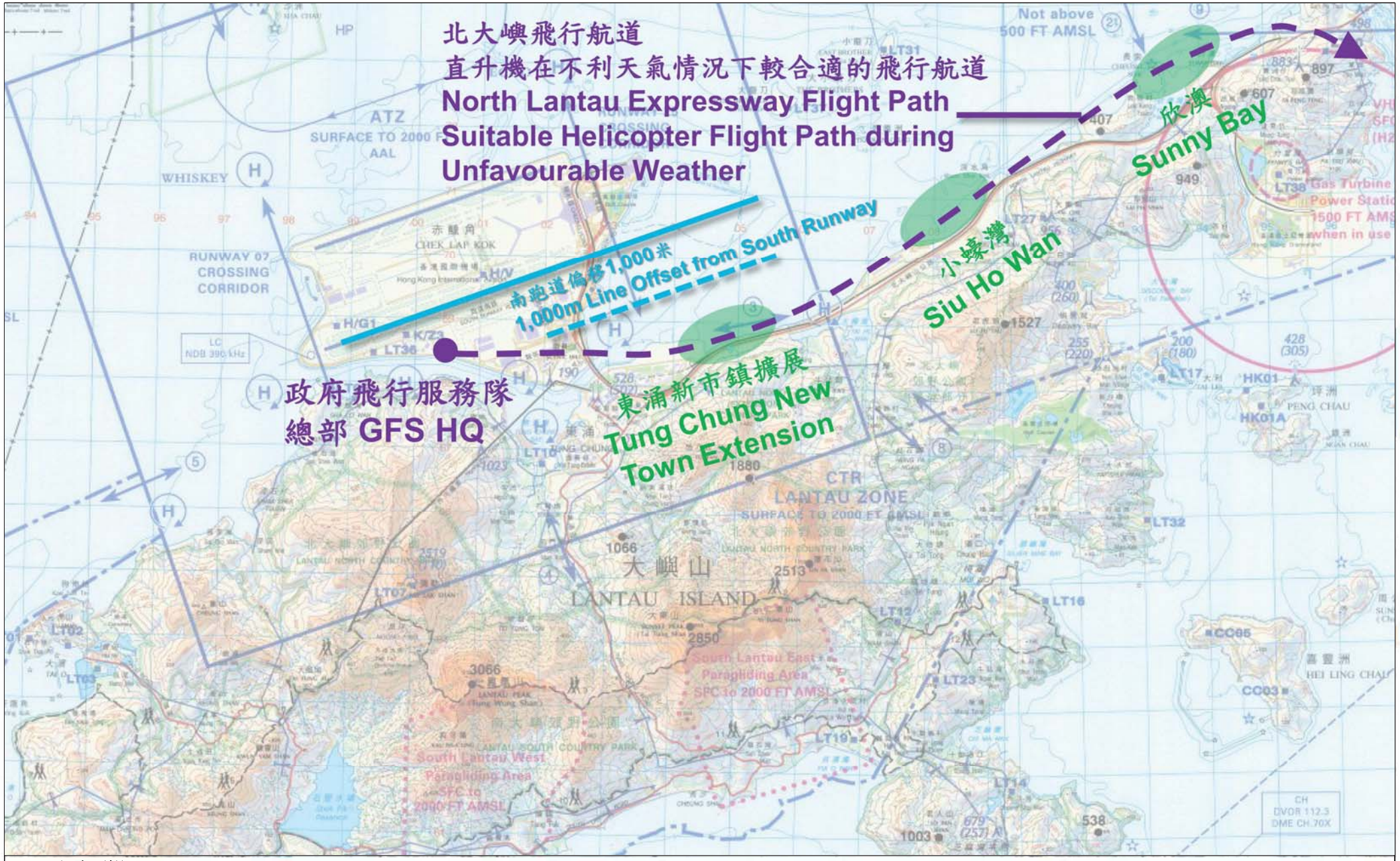
anticipated to commence in the second half of 2018.

VIEWS SOUGHT

13. Members are invited to express their views on the proposed preliminary design of the Kai Tak Division as input to the detailed design stage.

Annex A	North Lantau Expressway Flight Path and Future North Lantau Developments
Annex B	Location of Proposed GFS Kai Tak Division
Annex C	Preliminary GFS Kai Tak Division Layout Plan
Annex D	Architectural Renderings of Proposed GFS Kai Tak Division
Annex E	Adoption of Kai Tak Current of Vitality Theme
Annex F	Layout Plan during Construction Phase

Hong Kong Island and Islands Development Office
Civil Engineering and Development Department
September 2017



圖則名稱 drawing title

北大嶼飛行航道與大嶼山北岸地區未來發展
NORTH LANTAU EXPRESSWAY FLIGHT PATH AND
FUTURE NORTH LANTAU DEVELOPMENTS

土木工程拓展署
CIVIL ENGINEERING
AND DEVELOPMENT
DEPARTMENT

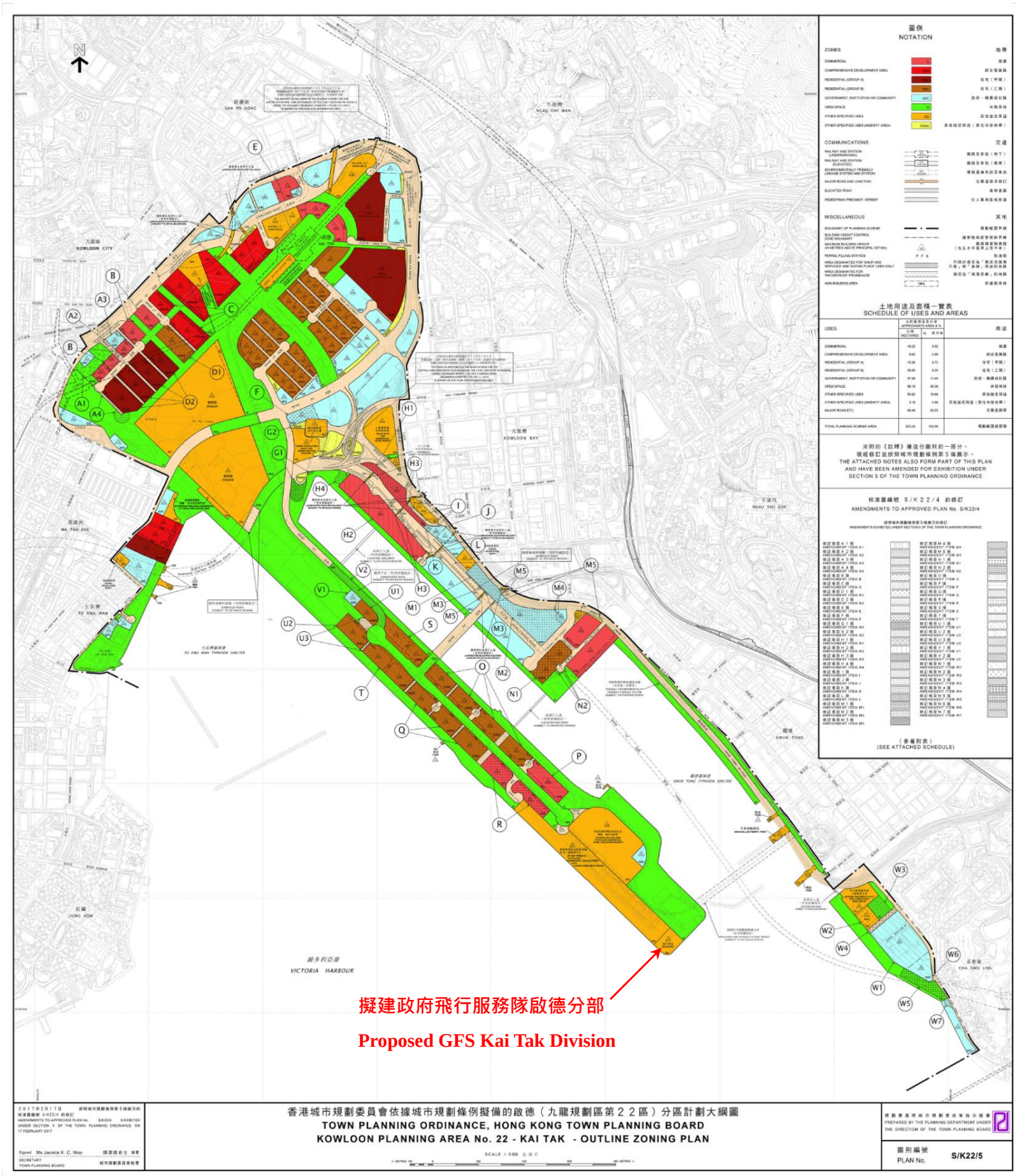
A3 420MM X 297MM

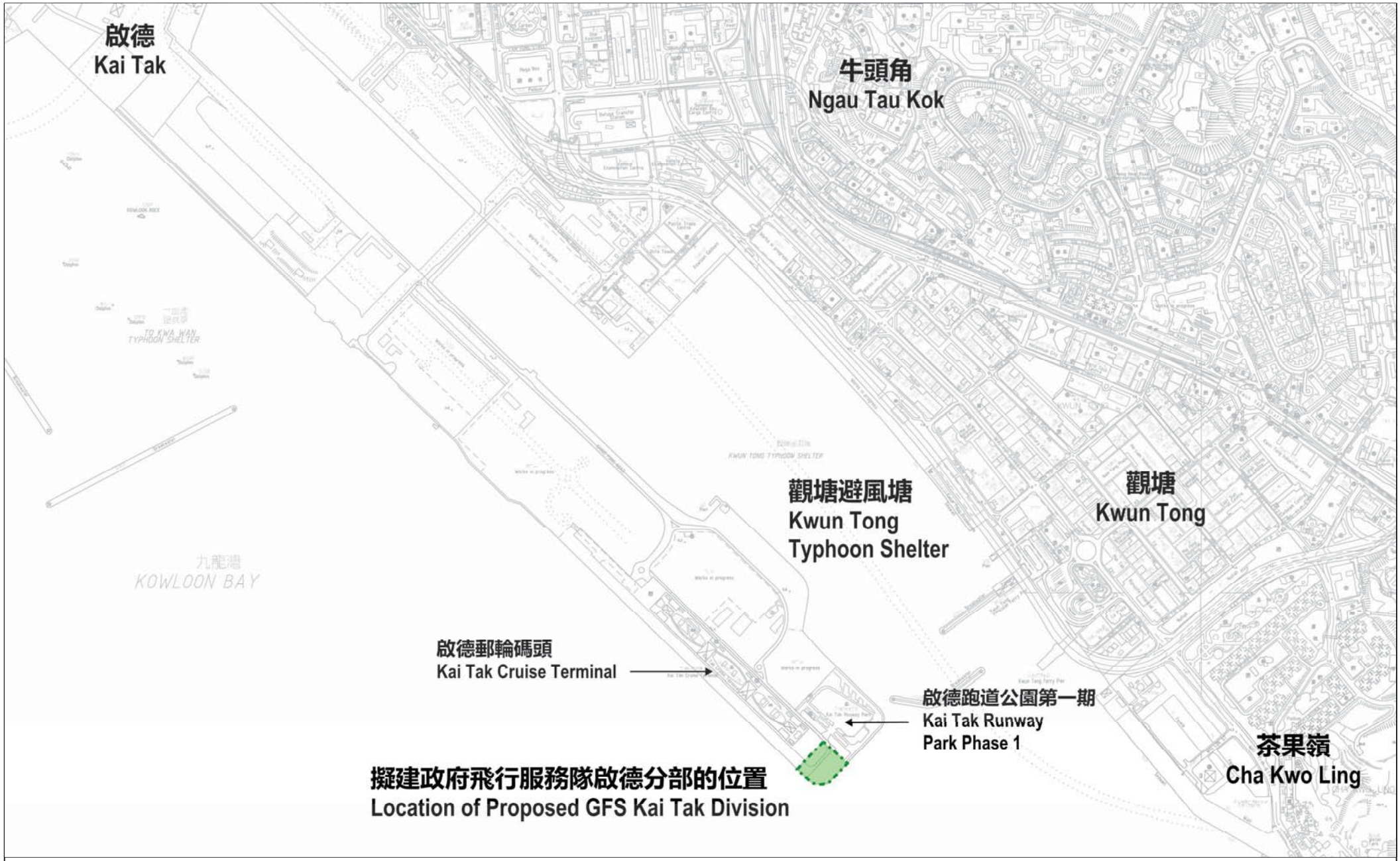
Plot File by: wooch1 3/10/2017
PATH P:\Projects\60427243\DRAWINGS\SKETCH\SK0435.dgn

Annex B

擬建政府飛行服務隊啟德分部的位置

Location of Proposed GFS Kai Tak Division





圖則名稱 drawing title

擬建政府飛行服務隊啟德分部的位置
LOCATION OF PROPOSED GFS KAI TAK DIVISION

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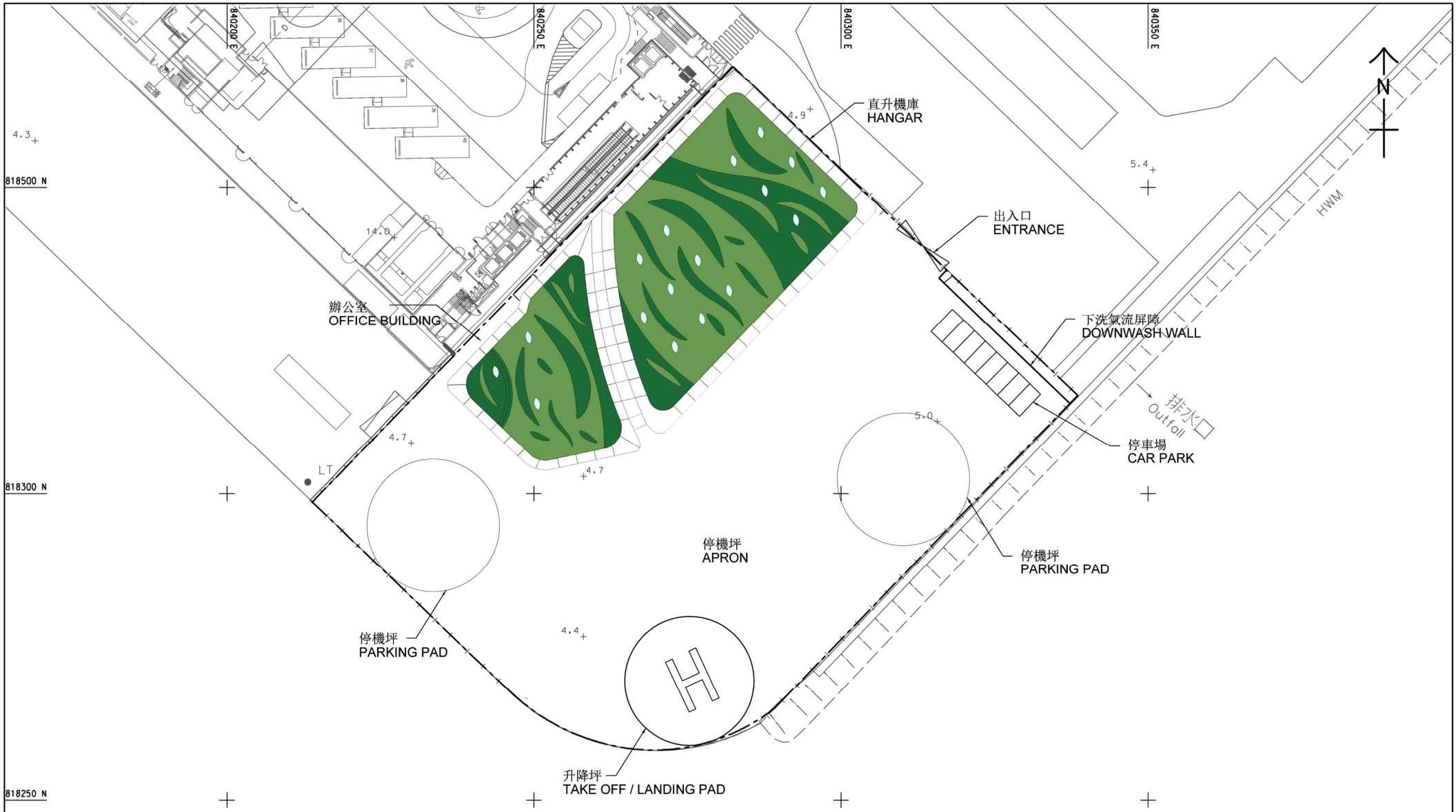

圖則名稱 drawing title

政府飛行服務隊啟德分部平面圖
PRELIMINARY GFS KAI TAK DIVISION LAYOUT PLAN

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

圖則名稱 drawing title

擬建政府飛行服務隊啟德分部建築效果圖 — 從高空俯瞰

ARCHITECTURAL RENDERING OF PROPOSED GFS KAI TAK DIVISION – AERIAL VIEW

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

A3 420MM X 297MM

圖則名稱 drawing title

擬建政府飛行服務隊啟德分部建築效果圖 — 從維港對岸遠觀啟德分部

ARCHITECTURAL RENDERING OF PROPOSED GFS KAI TAK DIVISION – VIEW FROM VICTORIA HARBOUR

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

A3 420MM X 297MM

圖則名稱 drawing title

擬建政府飛行服務隊啟德分部建築效果圖 — 正視圖

ARCHITECTURAL RENDERING OF PROPOSED GFS KAI TAK DIVISION – FRONT VIEW

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A3 420MM X 297MM

圖則名稱 drawing title

擬建政府飛行服務隊啟德分部建築效果圖 — 從跑道公園遠觀啟德分部

ARCHITECTURAL RENDERING OF PROPOSED GFS KAI TAK DIVISION – VIEW FROM RUNWAY PARK

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

A3 420MM X 297MM

圖則名稱 drawing title

擬建政府飛行服務隊啟德分部建築效果圖 — 從啟德郵輪碼頭公園俯瞰
ARCHITECTURAL RENDERING OF PROPOSED GFS KAI TAK DIVISION
– VIEW FROM KAI TAK CRUISE TERMINAL PARK

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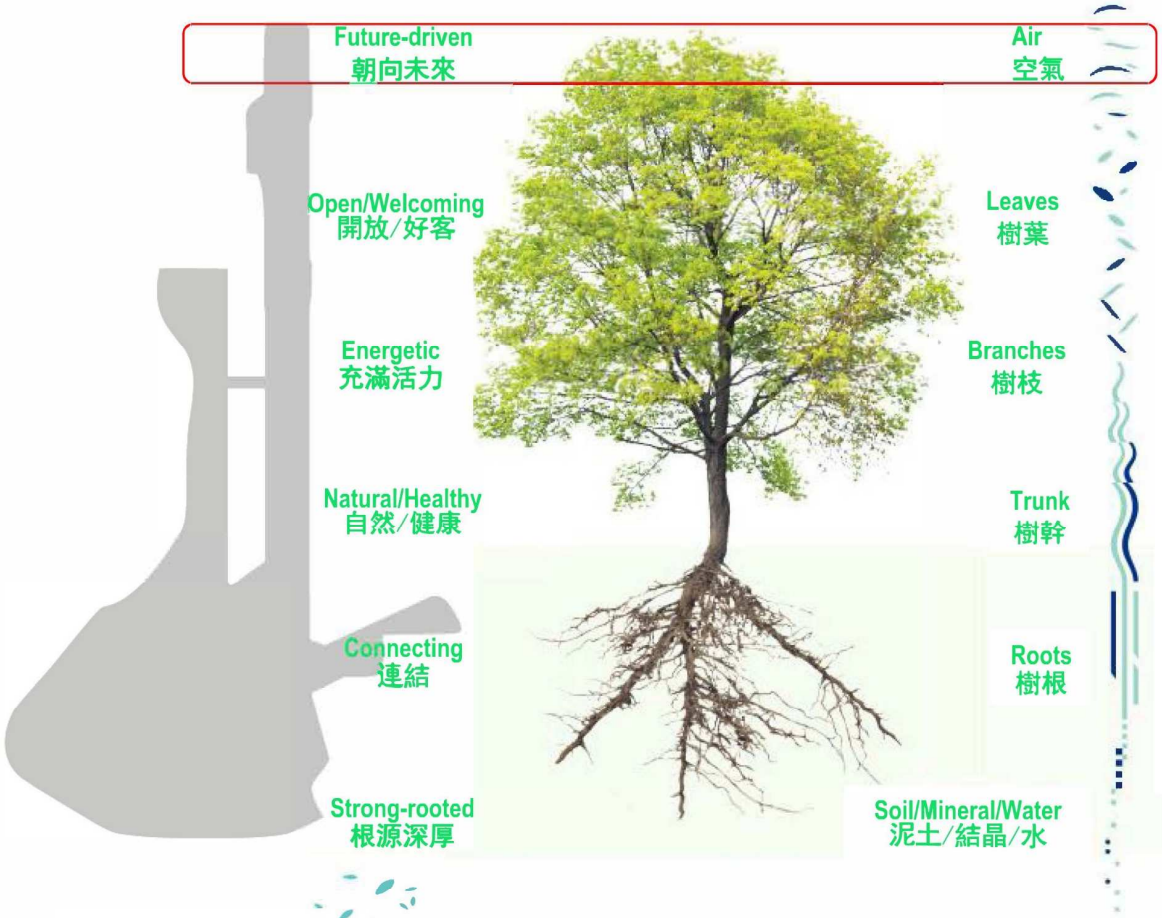
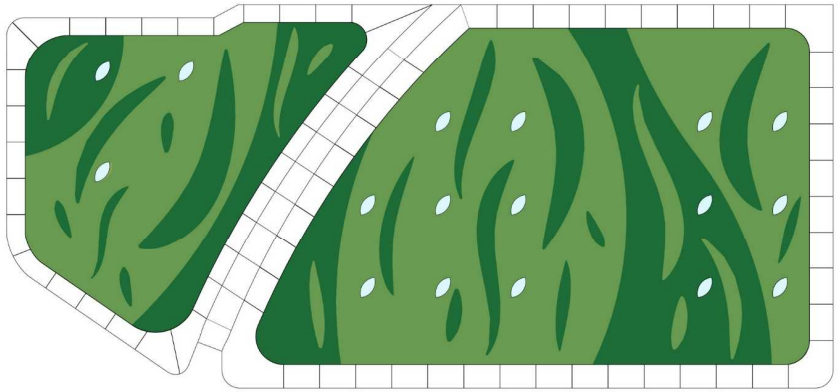
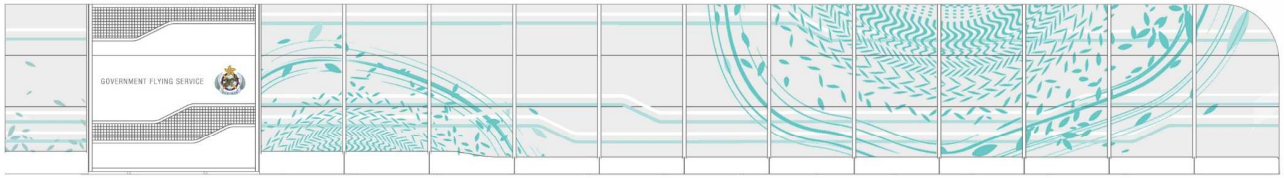
A3 420MM X 297MM



啟德 KAI TAK
活力磁場 Current of Vitality



Proposed Green Roof
擬建綠色天台



Proposed Downwash Wall
擬建下洗氣流屏障

圖則名稱 drawing title

啟德活力磁場主題的運用
ADOPTION OF KAI TAK CURRENT OF VITALITY THEME

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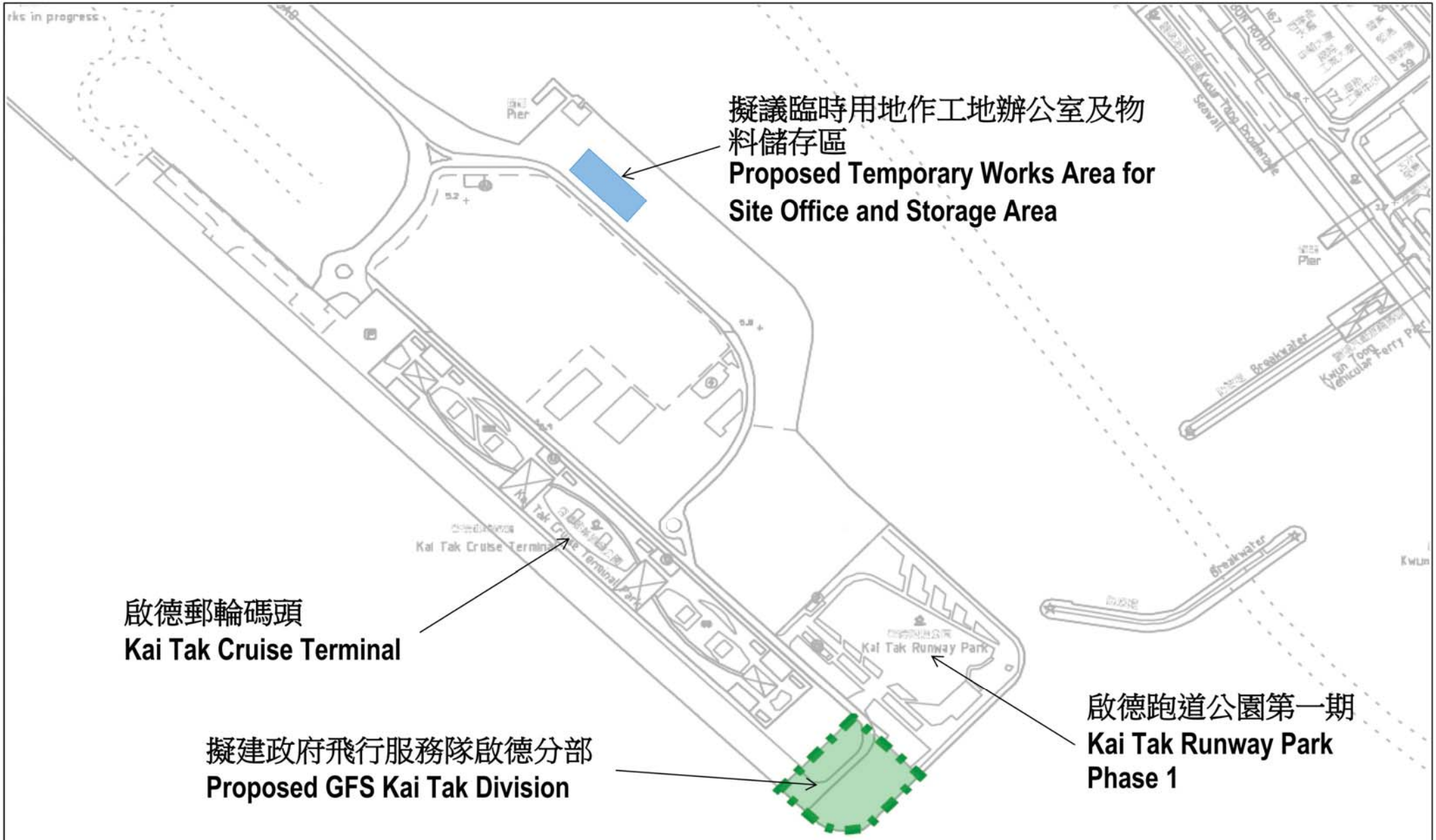
A3 420MM X 297MM



圖則名稱 drawing title

擬議建築階段平面圖
PROPOSED LAYOUT PLAN DURING CONSTRUCTION PHASE

土木工程拓展署
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