S16 PLANNING APPLICATION
APPROVED LAU FAU SHAN AND TSIM BEI TSUI OZP NO. S/YL-LFS/11

Proposed 'Government Use' (GBA Air Quality Laboratory and Meteorological Monitoring Supersite) in "Green Belt" Zone and Area shown as 'Road', on Deep Bay Road, Tsim Bei Tsui, New Territories

SUPPORTING PLANNING STATEMENT

December 2025

Applicant:
Environmental Protection Department

Consultancy Team:
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EXECUTIVE SUMMARY

This Planning Application is prepared and submitted on behalf of Environmental Protection Department ("EPD" or "the Applicant) to seek approval from the Town Planning Board ("TPB") under Section 16 of the Town Planning Ordinance for the Proposed 'Government Use' (Greater Bay Area Air Quality Laboratory and Meteorological Monitoring Supersite) on Deep Bay Road, Tsim Bei Tsui ("the Application Site" or "the Site"). The Site is currently vacant, covered by trees, and falling within an area zoned "Green Belt" ("GB") and an area shown as 'Road' on the approved Lau Fau Shan and Tsim Bei Tsui Outline Zoning Plan ("approved OZP") No. S/YL-LFS/11.

To strengthen collaboration within the Greater Bay Area ("GBA") in joint prevention and control of air pollution, as well as combating climate change, the EPD and the Hong Kong Observatory ("HKO") aim to cooperate with the academic research institutions in the Mainland and Hong Kong to develop the Supersite. Equipped with international state-of-the-art equipment, the Supersite aims to enhance Hong Kong's capability in dealing with complex air quality issues, monitoring and forecasting regional air pollution, extreme weather and related risks, while promoting scientific research and academic exchanges among Hong Kong, Macao, the Mainland and international scholars and nurturing scientific research talents.

Two individual compartment units, each is a single-storey unit with GFA not more than 230 m^2, are proposed along with outdoor ancillary facilities, incl. the emergency generator room, FS pump room and FS water tank, etc. The total development will result in an equivalent PR of about 0.2. As 'Government Use (not elsewhere specified)' is a Column 2 use in "GB" zone, a S.16 Application is required. The Proposed Supersite is fully justified due to the following reasons:

- There is a need for Supersite for accurate air quality, meteorological monitoring, and forecasting.
- The Site is at a suitable location that responds to the government policy of strengthening collaboration within the GBA in combating climate change.
- The scale and building height of the proposed development are minimised and will lead to minimal adverse visual and landscape impact.
- The Proposed Development will not lead to adverse drainage, ecological or

geotechnical impacts.

- The Proposed Development fully complies with Town Planning Board Guidelines No. 10 & No. 12C.

Based on the above, the TPB is sincerely requested to give favourable consideration to this S16 Planning Application from planning and technical points of view.

申請摘要

(內文如有差異，應以英文版本為準)

本規劃申請是代表環境保護署（下稱「環保署」或「申請人」）擬就《城市規劃條例》第 16 條向城市規劃委員會（下稱「城規會」）申請批准於尖鼻咀深灣路（下稱「申請地點」）作「政府用途」（大灣區空氣質素實驗室及氣象監測超級站）。申請地點現時為一幅空置土地，長滿樹木，位於流浮山及尖鼻咀分區計劃大綱核准圖編號 S/YL-LFS/11 上的「綠化地帶」及圖上顯示為「道路」的地方內。

為加強大灣區在區域聯防聯控空氣污染以及應對氣候變化方面的合作，環保署及香港天文台期望與內地及本港學術科研機構合作，建立是次超級站。該設施將配備國際最先進的儀器設備，旨在提升香港應對複雜空氣質素問題的能力，加強區域空氣污染、極端天氣及相關風險的監測及預測，同時促進香港、澳門、內地及國際科研學者之間的科學研究與交流，並培育科研人才。

是次申請包括兩個獨立組合式單層建築物（每個建築物的總樓面面積不超過 230 平方米），以及相關室外輔助設施，包括：緊急發電機房、消防泵房及消防水缸等。整體發展的地積比率約為 0.2。由於「政府用途（未另有列明者）」在「綠化地帶」屬第二欄用途，故須提交是次規劃申請。

擬議申請作「政府用途」（大灣區空氣及氣象監測超級站）有充份理據支持，其原因如下：

- 有需要興建超級站以進行準確的空氣質素及氣象監測與預測；
- 申請地點位置恰當，回應加強大灣區合作以應對氣候變化的政策；
- 擬議發展之規模及建築物高度已盡量縮減，以減輕對視覺及景觀的影響；
- 擬議發展不會對區內排水系統、生態及土力造成不良影響；
- 擬議發展完全符合《城規會指引》第 10 號及第 12C 號。

根據以上各點，希望是次的規劃申請在規劃及技術層面上能獲得城規會支持。

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Approved Lau Fau Shan and Tsim Bei Tsui Outline Zoning Plan
No. S/YL-LFS/11

Proposed 'Government Use' (GBA Air Quality Laboratory and Meteorological Monitoring Supersite) in "Green Belt" Zone and Area shown as 'Road' on Deep Bay Road, Tsim Bei Tsui, New Territories

Supporting Planning Statement

1. INTRODUCTION

1.1 Purpose

1.1.1 This Planning Application is prepared and submitted on behalf of Environmental Protection Department ("EPD" or "the Applicant) to seek approval from the Town Planning Board ("TPB") under section 16 of the Town Planning Ordinance for the Proposed 'Government Use' (GBA Air Quality Laboratory and Meteorological Monitoring Supersite) on Deep Bay Road, Tsim Bei Tsui ("the Application Site" or "the Site"). The Site falls within an area zoned "Green Belt" ("GB") with minor portion of land along the northern site boundary in an area shown as 'Road' on the approved Lau Fau Shan and Tsim Bei Tsui Outline Zoning Plan ("approved OZP") No. S/YL-LFS/11. This Supporting Planning Statement is to provide the TPB with the necessary information to facilitate consideration of this Planning Application.

1.2 Report Structure

1.2.1 Following this Introductory Section, the background of the Project will be briefly discussed in Section 2 while the site and planning context will be briefly set out in Section 3. The proposed development scheme is explained in Section 4 followed by planning justifications for the Planning Application in Section 5. Section 6 concludes and summarises this Supporting Planning Statement.

2. BACKGROUND OF AIR QUALITY AND METEOROLOGICAL MONITORING SUPERSITE

2.1 Background of Air Quality and Meteorological Monitoring in Hong Kong

2.1.1 The air monitoring network currently operated by the EPD comprises 18 monitoring stations distributed across the territory, with their locations and design primarily intended for local basic air monitoring.

2.1.2 Climate change is expected to bring more extreme weather events, such as heavy precipitation and flooding, rising sea levels, and increased tropical cyclone intensity. Addressing such challenges requires coordinated efforts and contributions from all countries and regions. One of the key tasks is to monitor and maintain a comprehensive understanding of the latest developments in climate change. Currently, the basic instruments installed at the King's Park Meteorological Station by the Hong Kong Observatory (HKO) and at the Cape D'Aguilar Supersite Air Quality Monitoring Station by the EPD are only capable of measuring CO_2 concentrations among greenhouse gases. Besides, as these two monitoring sites are spatially relatively remote from other GBA cities, there may be limitations in assessing and tracking the spatial distribution of greenhouse gases across the GBA.

2.1.3 O_3 is also an important indicator of regional air pollution, which is a strong irritant and can induce respiratory illnesses. To enhance monitoring work on O_3, EPD have to conduct the monitoring at a more strategic location in order to monitor more effectively the regional distribution of O_3 and its two precursor pollutants (i.e. nitrogen oxides (NOx) and volatile organic compounds (VOCs)), so as to have a better understanding of the photochemistry mechanism involved with a view to mapping out suitable emission control strategies at regional level.

2.2 Need for the Supersite

2.2.1 In the 2022 Policy Address, the Chief Executive announced that to strengthen collaboration among Guangdong, Hong Kong and Macao in the GBA in combating climate change as well as joint prevention and control of air pollution, the Government is preparing to set up a supersite for GBA air quality laboratory and meteorology monitoring in Hong Kong to provide

regional air pollution and meteorological monitoring and forecasting services[1].

2.2.2 A Supersite is equipped with the latest technology and equipment, meeting the standards of the State Key Laboratory. It provides a comprehensive range of real-time atmospheric monitoring data and serves as an educational and exchange platform. The advanced equipment of the Supersite is summarised as follows:

- **Air Quality Monitoring System:** Equipped with instruments to monitor trace levels of pollutants and VOCs species, and advanced Light Detection and Ranging (LiDAR) equipment, this system provides high-performance regional air quality monitoring and forecasting, enabling research and academic institutions to develop and validate micro-climate models.

- **Greenhouse Gases Monitoring System:** Designed to monitor greenhouse gas emissions such as methane (CH_4) and nitrous oxide (N_2O) in addition to CO_2, this system quantifies the current status of greenhouse gases to enhance monitoring capabilities, strengthening research on the technology for monitoring and analysing major greenhouse gases and their isotopes.

2.2.3 The Supersite will be equipped with Fourier transform infrared (FTIR) spectrometers, which shall be installed inside a building / mobile container cabin, vertically positioned to a solar tracker enclosed by a Dome and mounted on the roof. Additionally, a weather station (monitoring surface pressure, surface temperature and other meteorological parameters) shall be installed on the roof.

2.3 Site Requirements for the Supersite

2.3.1 The location for the Proposed Supersite will have to meet several relevant requirements.

2.3.2 Firstly, the location should be **in a sparsely populated area** without major pollution sources nearby. Tsim Bei Tsui lies within Hong Kong's frontier closed area, where the surrounding population is sparse and there are no

[1] With reference to LC Paper No. CB(1)42/2023(05) – Establishing a Guangdong-Hong Kong-Macao Greater Bay Area (GBA) Air Quality Laboratory and Meteorological Monitoring Supersite

significant pollution sources. The nearest villages, Sha Kiu Tsuen and Mong Tseng Wai, are over 900m to the south the Site, helping to avoid interference with regional monitoring work.

2.3.3 Secondly, the selected site should be **closer to the GBA** (**Figure 2.1** refers). Tsim Bei Tsui, situated right at the east of the Pearl River Estuary, is considered suitable for assessing air quality and meteorological data in the GBA. This allows for effective monitoring of air transport routes under different weather conditions, providing comprehensive and representative data on regional air pollution and meteorology.

Figure 2.1 Location of the Proposed Supersite in relation to the GBA and the NM

2.3.4 Furthermore, to ensure sustained and effective operation, the Site should **not be located within any major planned development**. According to the Lau Fau Shan New Digi Bay Broad Land Use Concept Plan, the location of the Site is designated as green belt and is adjacent to a node intended for eco-tourism. Located at the fringe of the Lau Fau Shan New Digi Bay Area, it is noted that there are no major planned developments in the vicinity of the Site. Therefore, the character and development density of the surrounding area are expected to remain unchanged.

2.3.5 In conclusion, the Site is deemed suitable for the necessary development of the Supersite for public needs, collaborative investigation and educational uses.

3. SITE AND PLANNING CONTEXT

3.1 Site Location

3.1.1 The Site is located at Deep Bay Road, Tsim Bei Tsui, to the north of Lau Fau Shan (**Figure 3.1** refers). It is bounded by a car park to its west, Deep Bay Road to its north and registered slopes 2SW-D/F 3 and 2SW-D/C 24 to its east and south, respectively. The Site is currently vacant and occupied by natural vegetation (**Photos 1 and 2** refer). The total site area is approximately 3,080m^2.

Photo 1 The Site (as viewed from the immediate west)

Photo 2 The Site (as viewed from the immediate north)

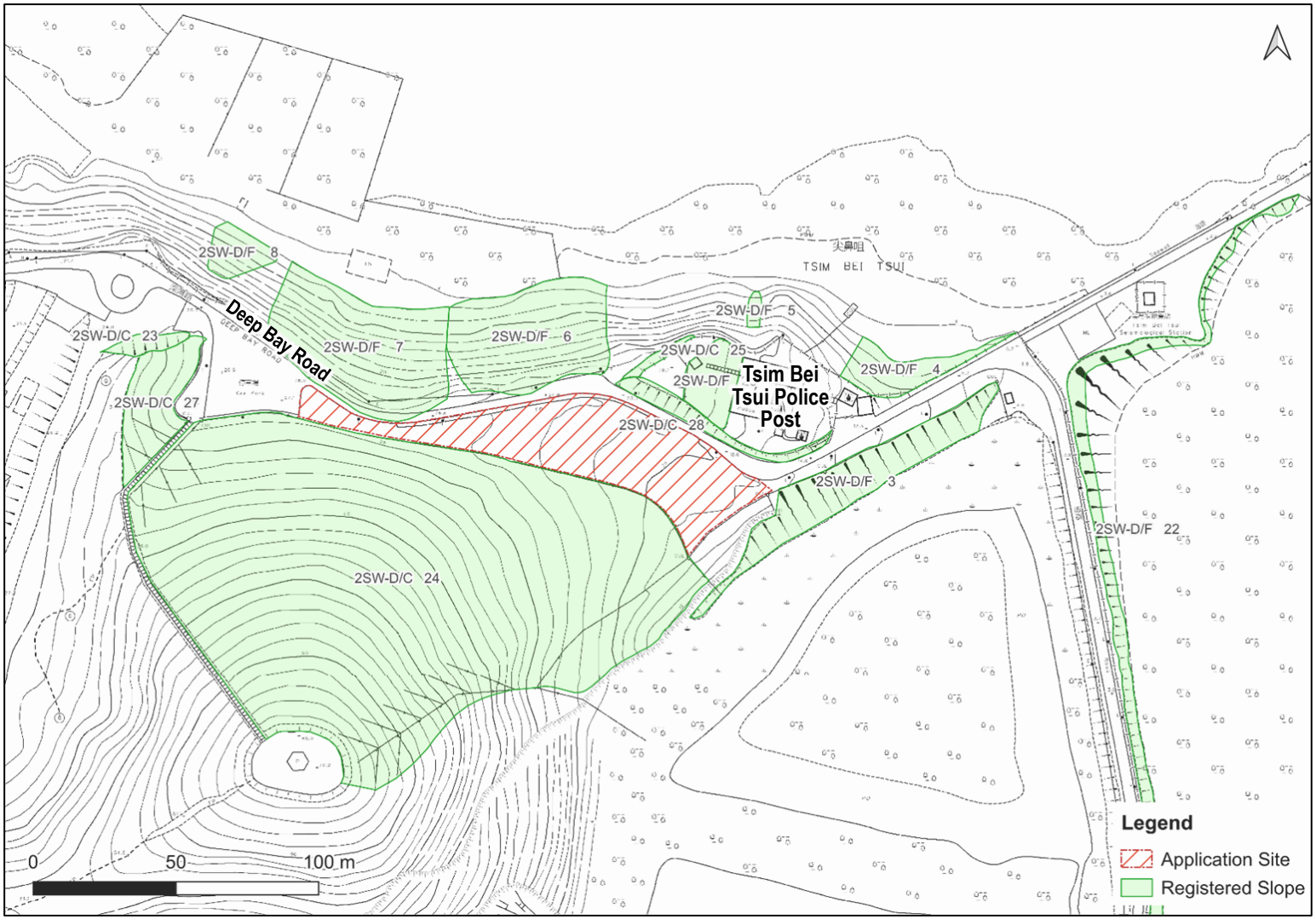


Figure 3.1 Site Location Plan

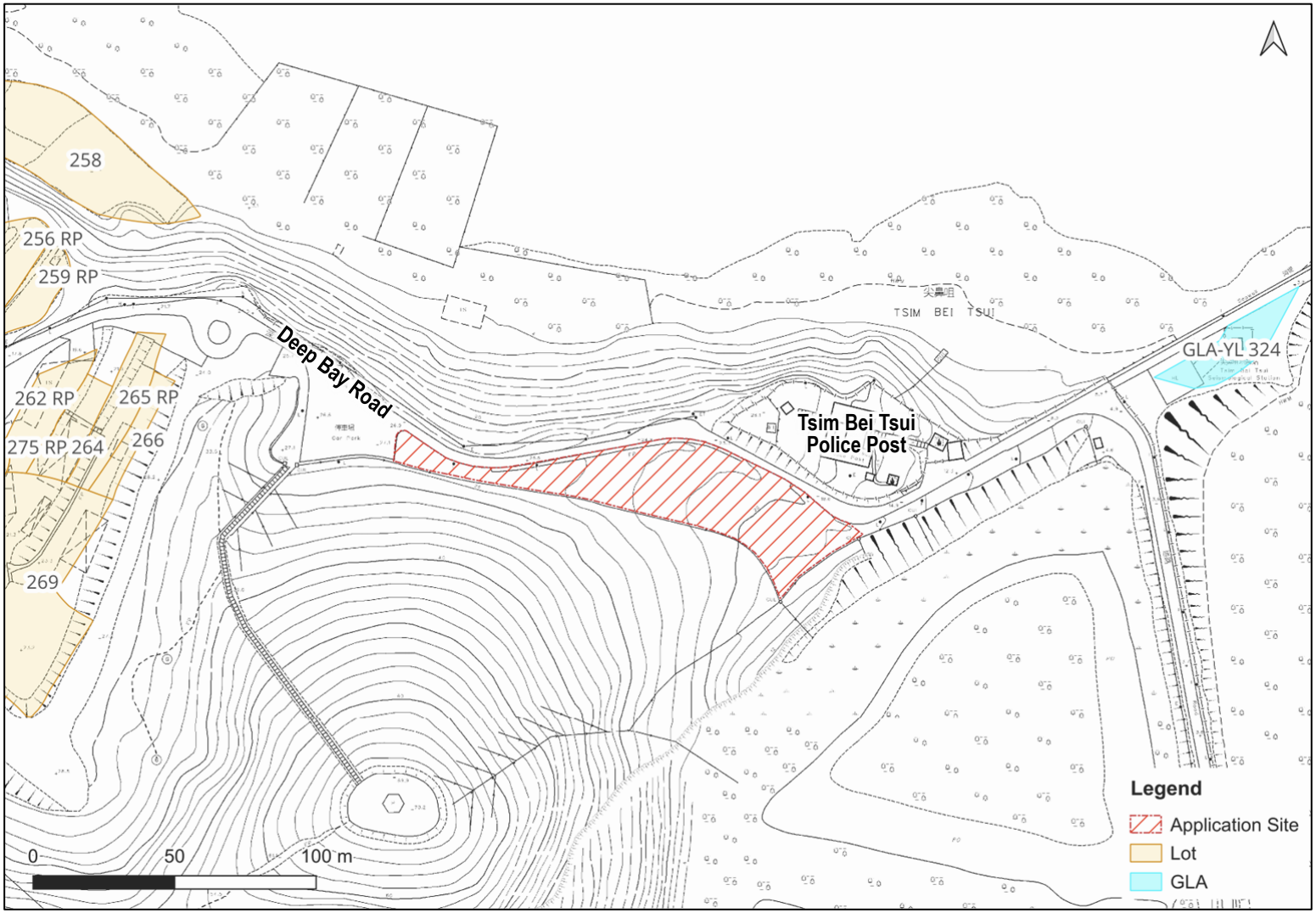


Figure 3.2 Lot Index Plan

3.2 Land Status

3.2.1 The Site comprises wholly government land (**Figure 3.2** refers).

3.3 Statutory Planning Context

3.3.1 The Site falls within an area zoned "GB" with minor portion of land along the northern site boundary in an area shown as 'Road' (about 308m^2, 10% of the Application Site) on the approved Lau Fau Shan and Tsim Bei Tsui Outline Zoning Plan ("approved OZP") No. S/YL-LFS/11 (**Figure 3.3** refers). According to the Statutory Notes of the approved OZP, the "GB" zone is intended "*primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets".* It is also stated that *"there is a general presumption against development within this zone".*

3.3.2 The proposed Supersite is classified as 'Public Utility Installation' according to the Definition of Terms of the TPB and is a column 2 use under the Statutory Notes for the "GB" zone of the approved OZP, which may be permitted on application to the TPB.

3.3.3 According to the "Remarks" that "*no new development, or addition, alteration and/or modification to or redevelopment of an existing building (including structure(s)) shall result in a total development and/or redevelopment in excess of a maximum building height specified below or the height of the existing building (including structure(s)), whichever is the greater"*. It is also stated that "*based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction may be considered by the TPB on application under section 16 of the Town Planning Ordinance*".

3.3.4 For the portion of land falling within an area shown as 'Road', according to the covering Notes of the OZP, the proposed 'Government Use' would require planning permission from the TPB .

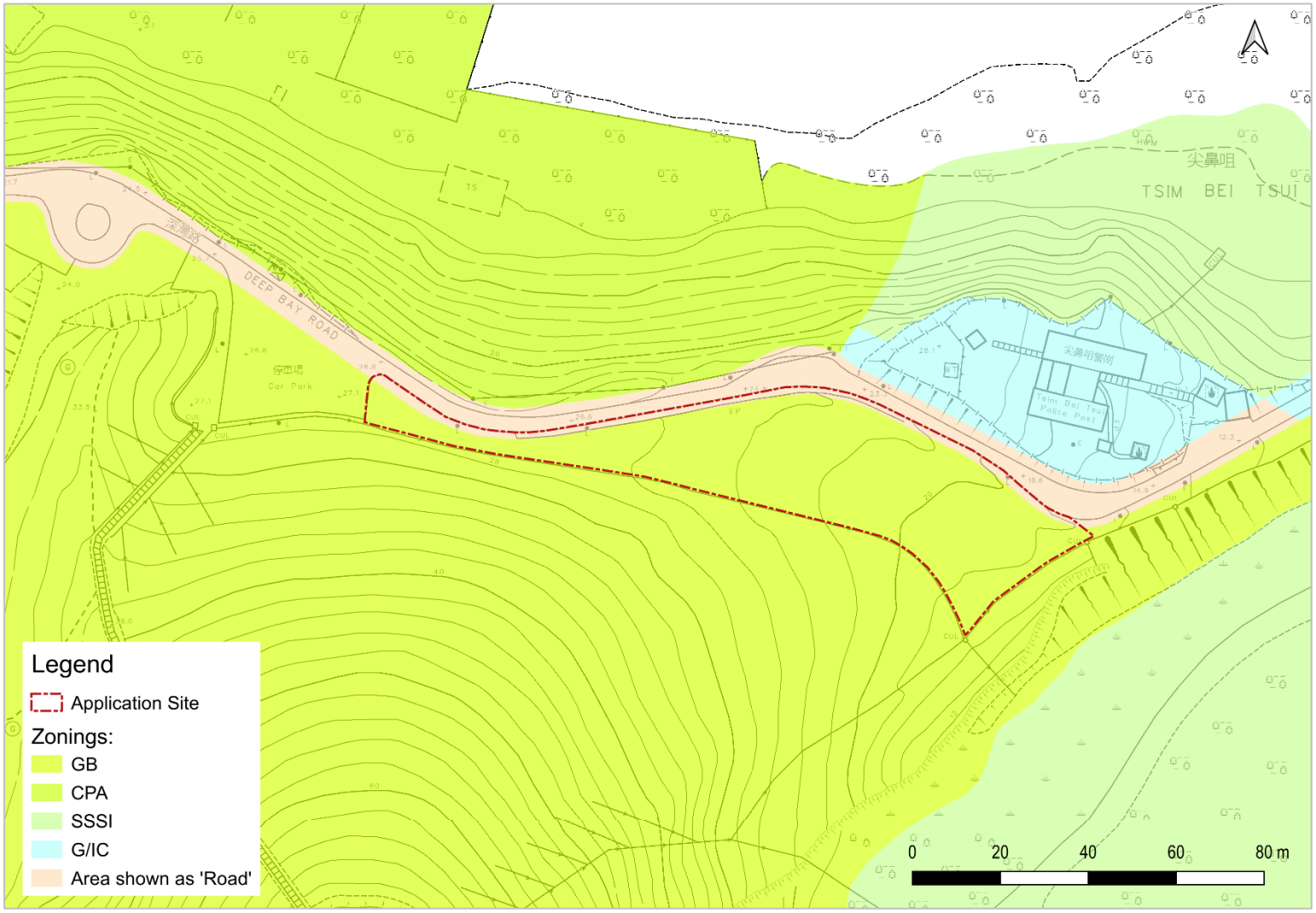


Figure 3.3 Zoning Context Plan

3.4 Surrounding Land Use Pattern

3.4.1 The Site is primarily surrounded by natural vegetation. It is bounded by Deep Bay Road to the north, a public car park to the west, and registered slopes to the east and south (**Figure 3.1** refers). Across Deep Bay Road, to the northeast of the Site, is the Tsim Bei Tsui Police Post. Some temporary uses such as storage and animals' shelter are found to the further west (**Figure 3.4** refers).

3.4.2 Further to the north and east, beyond the slopes, lie mangroves along the coastline. Mai Po Inner Deep Bay Ramsar Site is found to the north and to the east. To the south of the Site, there is a small hill with a pavilion situated at its peak at about 70mPD. There is slope feature No. 2SW-D/C 24 adjoining the south of the Site. The Site is separate from this slope feature by an existing U-channel.

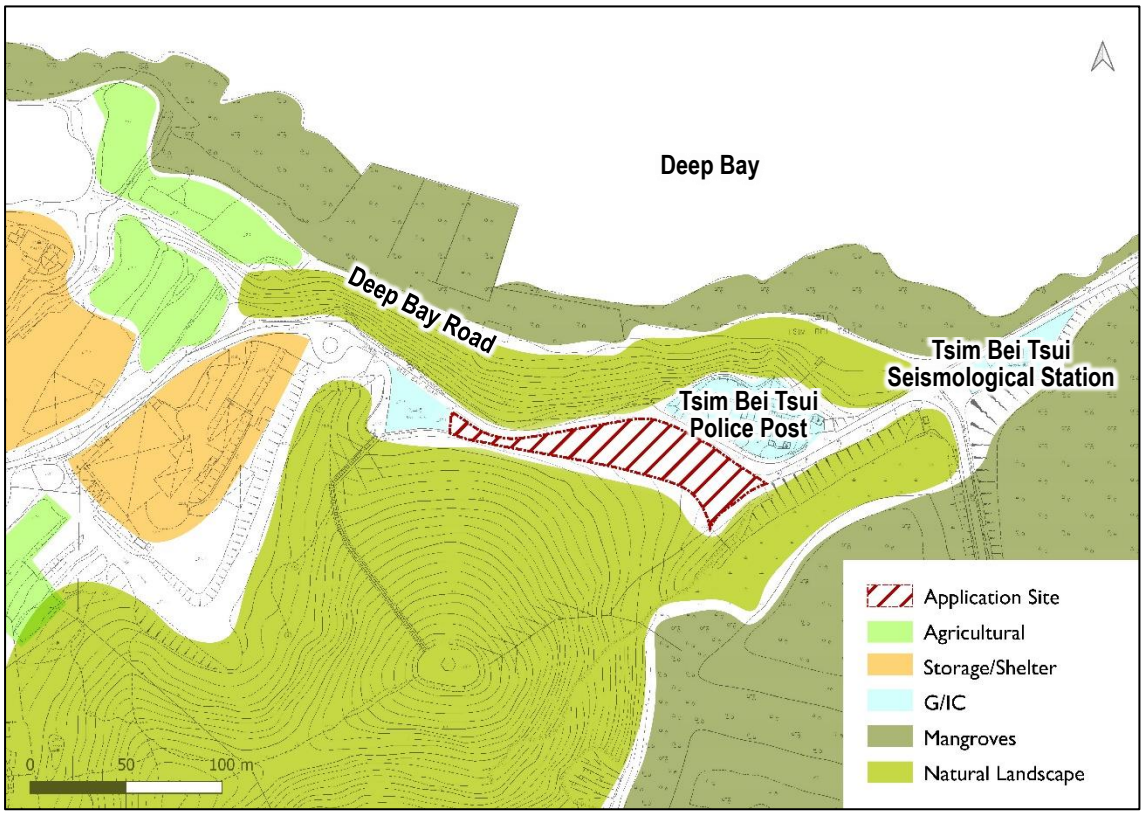


Figure 3.4 Surrounding Land Uses

3.4.3 In terms of terrain, the Site is located on a slope that rises uphill towards the south, where a lookout pavilion is situated at the top. To the northeast, a small hill forms where the Police Post stands.

3.5 Town Planning Board Guidelines No. 10

3.5.1 The planning intention of the "GB" zone is primarily to promote the conservation of the natural environment and to safeguard it from encroachment by urban-type developments. To preserve the character and nature of the "GB" zone, there is a general presumption against development, while the only uses which will always be permitted by the Town Planning Board (the Board) are compatible uses which are essential and for public purpose such as waterworks, water catchment areas, nature reserves, agriculture, forestry and certain passive recreational uses. Other uses, including government/institution/community (G/IC), residential development and public utility installations will require planning permission from the Board and each proposal will be assessed on its individual merits.

3.6 Town Planning Board Guidelines No. 12C

3.6.1 The Deep Bay, Mai Po Marshes and its adjacent area, including Hoo Hok Wai (collectively known as the Deep Bay Area) is recognised as a wetland of international importance. A two-pronged approach to landuse planning control is adopted through the designation of Wetland Conservation Area (WCA) for all existing continuous and adjoining active/abandoned fish ponds and the designation of Wetland Buffer Area (WBA) to protect the ecological integrity of the WCA.

3.6.2 The intention of the WBA is to protect the ecological integrity of the fish ponds and wetland within the WCA and prevent development that would have a negative off-site disturbance impact on the ecological value of fish ponds. Within the WBA, for development or redevelopment which requires planning permission from the Board, an ecological impact assessment would also need to be submitted.

3.6.3 As the Site stands within the WBA, yet outside of the WCA, an ecological impact assessment is carried out to demonstrate the development will not cause a net increase in pollution load to Deep Bay.

4. PROPOSED DEVELOPMENT SCHEME

4.1 The Proposed Development Scheme

4.1.1 Schematic drawings for the proposed development of the Supersite have been devised. Two single-storey blocks – Block A (5m high) and Block B (5.35m high), with a max. GFA of 230m^2 each, are designed to accommodate the specialised equipment required for the Supersite's monitoring duties, both indoors and on the rooftops. The main roof levels of Block A and Block B will be not more than 30mPD, such that the main roof level of the lower block (Block B) is higher than the platform of Tsim Bei Tsui Police Post at 28.1mPD.

4.1.2 Monitoring devices will be housed indoors with the dome for FTIR and sampling inlets proposed to be mounted on the main roofs, with an approximate height of 2m above roof level for the optimum position to take air samples and capture sunlight. A solar tracker enclosed by a dome and mounted on the roof will be installed directly on top of the spectrometer to guide direct solar radiation into the FTIR instrument in the FTIR Room.

4.1.3 In addition to the two main blocks, the outdoor area of the Site mainly consists of an outdoor equipment area on a reinforced concrete plinth to the south of the two blocks as well as a Fire Services Water Tank, a Fire Services Pump Room and an Emergency Generator Room. Two pole-type transformers (H-pole with switch-gear on a 2m-tall pole) for electricity supply as well as the electrical cut out will be set up to the west of Block A. Additionally, two private car parking spaces for staff (in case) are provided adjacent to Block B. Vehicular access to the Site is via Deep Bay Road at +22.64mPD.

4.1.4 Nevertheless, the proposed development would typically operate unmanned on a 24 x 7 basis. It is not expected to produce noise, glare and other emission during operation. Inspection and maintenance would be carried out during daytime on a need basis or at an expected frequency of not more than once a week.

4.1.5 The architectural drawings, including Master Layout Plan, Schematic Elevation and Block Layout Plans, can be found in **Appendix 1**, while the major development parameters and proposed uses are summarised in **Table 4.1** and the preliminary rendering image is shown on **Figure 4.1.**

Table 4.1 Key Development Parameters

	Total
Site Area	About 3,080m^2
Plot Ratio	About 0.2
Site Coverage	About 20%
No. of Blocks	5, incl. Blocks A & B, Emergency Generator Room, FS Pump Room and FS Water Tank
No. of Storeys	1
Total GFA	**Total: About 616m^2** Incl. Blocks A & B (230m^2 each): About 460m^2 Supporting Facilities, incl. Emergency Generator Room, FS Pump Room and FS Water Tank, etc. About 156m^2
Maximum Building Height	Main Roof level not more than +30mPD Notes: ▪ excluding rooftop monitoring devices and meteorological monitoring system ▪ total height of the blocks: about 5m (Block A) & about 5.35m (Block B) ▪ ground level of Blocks A & B: +24.63mPD and +22.79mPD respectively
Proposed Uses	Block A: ▪ G/F: Air Monitoring Equipment, Store, UPS Room, Server Room, VOC Analyser Support Room, Zone for GHGS Monitoring and Tracing, etc. ▪ R/F: Monitoring devices and meteorological monitoring system Block B: ▪ G/F: FTIR Room, Zone for Photochemical Composition Monitoring System, Zone for Particulate Matters, Zone for Standard AQMS, etc. ▪ R/F: Monitoring devices incl. FTIR device with solar tracker enclosed by a dome and sampling inlets

Existing Condition

Proposed Development

Figure 4.1 Rendering Image of the Proposed Development

4.2 Landscape Proposal

4.2.1 Existing trees are evenly distributed across the site, most of which are semi-mature and exhibit poor tree form and health conditions. No Old and Valuable Trees (OVTs) have been identified in accordance with DEVB TCW No. 5/2020 – Registration and Preservation of Old and Valuable Trees, and the Forests and Countryside Ordinance (Cap. 96). The tree species recorded within the Site are mostly common species found in Hong Kong, such as *Melaleuca cajuput Roxb. subsp. cumingiana* 白千層 (81 nos.) and *Casuarina equisetifolia* 木麻黃 (60 nos.). Although there are three nos. of *Pterocarpus indicus* 紫檀 recorded within the Site, which are protected under Cap. 586, the three trees exhibit poor tree form and health conditions in general. Signs of health deterioration, such as wilted branches, leaning forms, and restricted roots caused by structures, are found on these trees. Therefore, none of them is recommended for transplantation. Nevertheless, such tree species are cultivated, readily available from nurseries, and widely planted in Hong Kong's urban landscape.

4.2.2 Trees have a scavenging effect for gaseous pollutants, provide surfaces for particulate deposition, and may also restrict the airflow which may affect sampling. In addition, VOCs naturally released by trees and vegetation as part of their metabolic processes would become local biogenic sources that interfere with air quality monitoring. Therefore, the existing mature trees near the equipment area should be cleared to prevent obstruction of light and potential VOC emissions, which could compromise data accuracy.

4.2.3 Furthermore, due to the narrow and congested nature of the Site, the remaining space outside the indoor and outdoor equipment areas will be required for temporary construction activities, including material storage and delivery. Consequently, none of the existing trees within the Site will be retained in-situ.

4.2.4 With reference to general air quality monitoring stations, it is recommended that sample air intake probe should be separated by more than 20m from trees and vegetation to minimise impact on measurement on air pollutant. While the solar tracker and FTIR monitoring device will be installed on the eastern portion at the roof of Block B, which is the most suitable location within the Site, being away from the hill to the south, no standard tree planting is proposed in the outdoor area near the eastern tip of Block B.

4.2.5 To maintain balance between landscape and visual relief as well as accuracy on air pollutant measurement, it is proposed to provide standard tree planting along the roadside of the western and northwestern boundary; woodland mix for a mix of trees (at max. 1m tall), shrubs and groundcover in the western and southeastern corners. The portion of area closer to the pole-type transformers will be for shrubs and groundcover, with other outdoor areas surrounding the two blocks provided with grasscrete paver. Climbing plants on the boundary fence are also proposed to enhance the visual appeal of the roadside environment. The proposed site formation levels are also carefully designed to follow the natural topography of the Site to minimise the extent of site formation work, including cutting and filling, and the landscape impact.

4.2.6 The Landscape Proposal can be found in **Appendix 2**. After necessary tree felling for the development of the Supersite and compensation planting within the Site, a compensation ratio of about 1:1.06 is achieved (**Table 4.2** refers).

Table 4.2 Details on Tree Felling and Compensation

Item	Height	Quantity
Trees to be Felled	Varied	202 (excluding 23 undesirable species – *Leucaena leucocephala*)
Proposed Standard Trees	1.75m	34
Proposed Tree Whips in Woodland Mix	1m	180
Total Compensatory Trees		**214**
Compensation Ratio		***1:1.06***

4.3 The Need for the Proposed Building Height

4.3.1 The two proposed blocks will be not more than 30mPD at main roof level, with 2m-tall rooftop structures. To accommodate the required indoor equipment and monitoring system, as well as the building service zone to accommodate the air conditioning and ventilation system, each block itself will have to maintain a headroom of at least about 4.4m to 4.7m. Coupled with the depth of the floor slab and height reservation for the proposed MiC construction method, the building height of at least 5m and 5.35m is necessary for Block A and for Block B (particularly for the FTIR monitoring) respectively, and fully justified.

4.3.2 Apart from air quality monitoring, there will also be a solar tracker installed on the rooftop to guide direct solar radiation into the FTIR instrument within the block. Please refer to **Figure 4.2** for the reference image of the dome for the FTIR monitor device on the rooftop of a Supersite block in Mainland China. In particular, the dome will be raised by a structure approximately 2m tall on the roof to minimise the influence of surrounding vegetation and topography, thereby maximising the capture of sunlight and ensuring more accurate data collection.

Solar Tracker enclosed by a dome

Solar Tracker enclosed by a dome

Rooftop measurement device

Structure for raising the Dome with Solar Tracker up to 2m high above R/F

Figure 4.2 Reference Images of the Rooftop Monitoring and Measurement Device and Setup for Supersite [Source: from EPD]

4.4 Visual Appraisal

4.4.1 The height of the two blocks within the Site is about 5m with rooftop equipments of about 2m, including the dome for FTIR and sampling inlets. Metal fences of 2.5m tall will be erected at the perimeter of the Supersite. As mentioned above, compensatory planting will be provided within the development. As the proposed building height is not that significant compared with the existing surrounding vegetations, it is anticipated that the development would still be compatible with the surrounding visual context from a planning perspective.

4.4.2 Photomontages from two public sensitive viewpoints (**Figures 4.4** and **4.5**) have been prepared, representing the viewpoints (VPs) from the northwest and southwest (**Figure 4.3** and **Table 4.3** refer). As shown in the photomontages, although the existing vegetation within the Site has been cleared, with the relatively low-rise building height and proposed compensatory planting, it is anticipated that the overall visual impact is negligible.

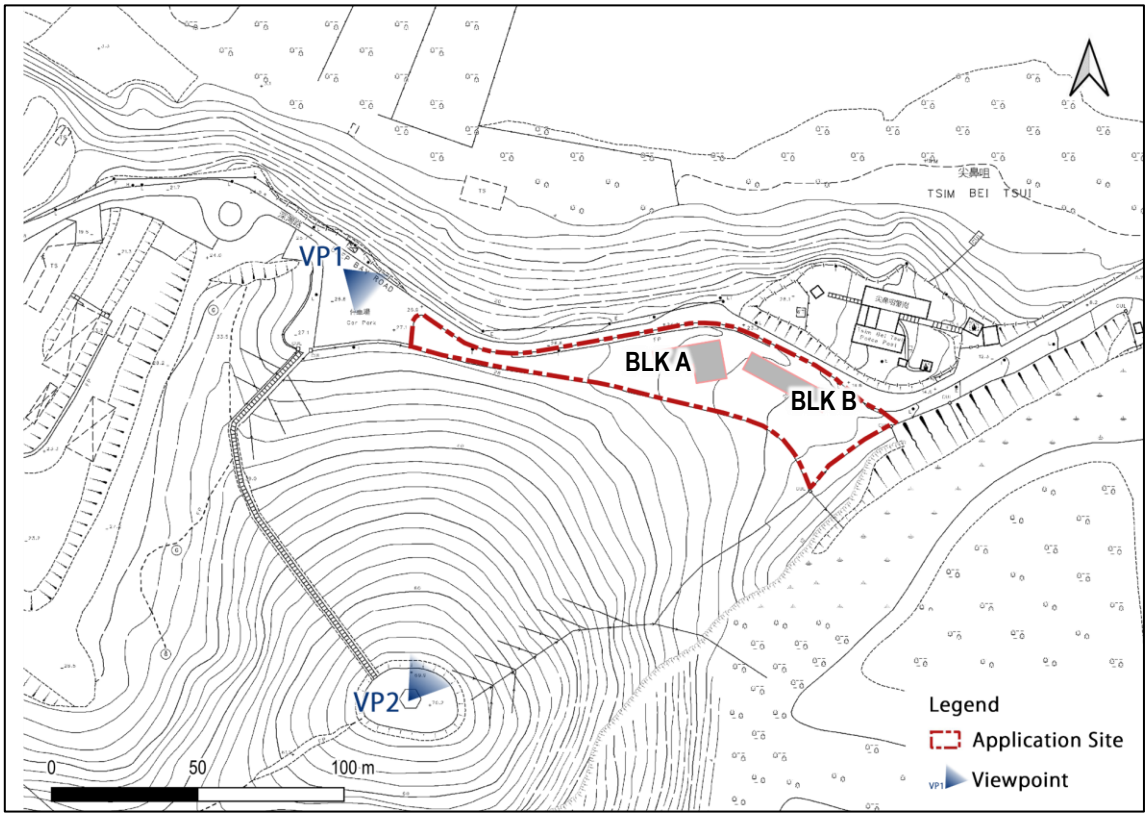


Figure 4.3 Viewpoint Location Plan

Table 4.3 Identified Visually Sensitive Viewpoints Analysis

Viewpoints	Distance / Direction (Approx.)	Height in mPD (Approx.)	Nature of VP
VP1 Public Carpark at Deep Bay Road near Lookout Pavilion	28m from the Site (106m from Block A) / Northwest	+26	Transient/ Passive Recreation
VP2 Tong Ha Liu Lookout Pavilion	118m from the Site (139m from Block A) / Southwest	+70	Passive Recreation

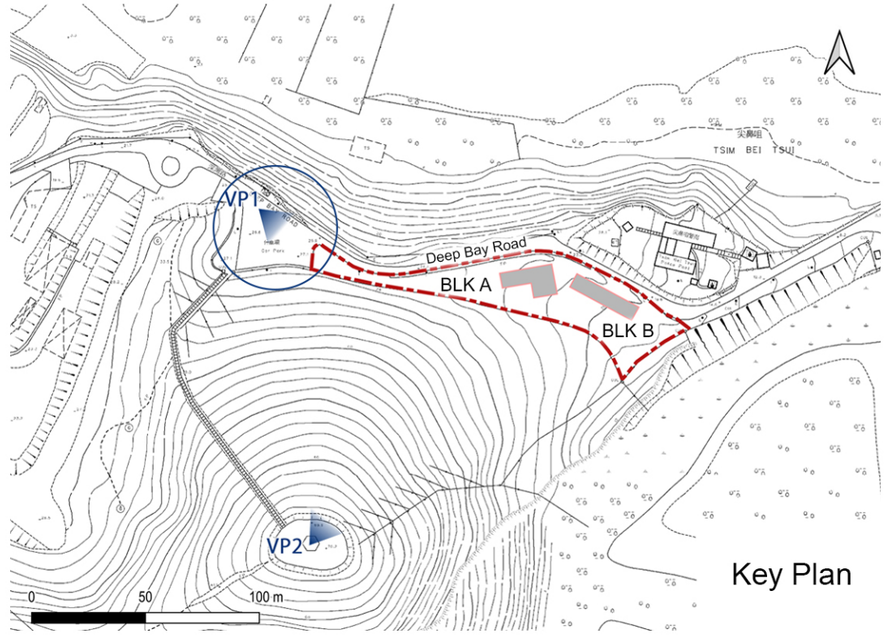
4.4.3 VP1 is taken about 28m to the northwest of the Site and about 106m from Block A. It is near the lookout pavilion adjacent to the public carpark directly adjoining the Site. Drivers and hikers are the users of the carpark and the lookout point, respectively. The existing view comprises mainly overgrown trees in the middle ground and the background, while the public carpark and Deep Bay Road dominate the foreground. As shown in **Figure 4.4**, the fencing along the perimeter and compensatory plantings within the Site are mainly visible from this VP. While the existing trees in the Site will be replaced by new trees in the western portion of the Site and along the site boundary, a more open, wider and clearer sky view will be seen, and two blocks are barely visible on the left-hand side of this VP. Therefore, it is considered that the visual impact on VP1 is **negligible**.

4.4.4 VP2 is taken at Tong Ha Liu Lookout atop a hill about 118m south of the Site and about 139m from Block A, at an elevation of about +70mPD. It is a common viewpoint and resting place for hikers and nearby residents. The VP is about 138m southwest of Block A. The existing view is mainly screened off by the existing trees on the slope of the hill. As shown in **Figure 4.5**, the proposed blocks are not visible at VP2 as the view is mainly screened off by trees. Therefore, it is considered that the visual impact on VP2 is **negligible**.

4.4.5 Based on the photomontages and analysis above, it is concluded that the overall visual impact is considered **negligible** from the two identified public sensitive viewpoints. The two proposed blocks in the Site would still be compatible with the surrounding visual context even though existing trees within the Site have to be removed to ensure accurate data collection.

Existing Condition

Proposed Development



Key Plan

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Viewpoint 1 – Public Carpark at Deep Bay Road Near Lookout Pavilion

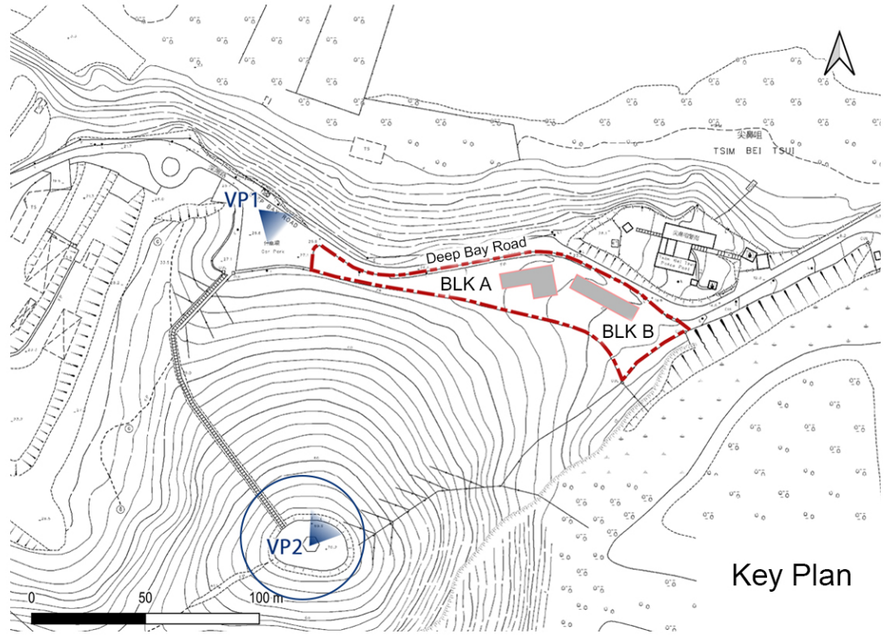
Proposed 'Government Use' (GBA Air Quality Laboratory and Meteorological Monitoring Supersite) in "Green Belt" Zone on Deep Bay Road, Tsim Bei Tsui, New Territories

Figure 4.4

Date: 8 December 2025

Existing Condition

Proposed Development



Key Plan

PLANNING LIMITED
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Viewpoint 2 – Tong Ha Liu Lookout Pavilion

Proposed 'Government Use' (GBA Air Quality Laboratory and Meteorological Monitoring Supersite) in "Green Belt" Zone on Deep Bay Road, Tsim Bei Tsui, New Territories

Figure 4.5

Date: 8 December 2025

4.5 Traffic Arrangements

4.5.1 The Supersite is designed to function as an automatic monitoring station, with maintenance personnel visiting infrequently. There will only be limited visits by prior arrangement from academic institutes for knowledge sharing purposes. Thus, it is expected that the traffic generated by the Supersite would be minimal and insignificant.

4.5.2 The road section of Deep Bay Road (to the east of the public carpark) is prohibited for motor vehicles except with permit. Considering the limited usage of this road section by vehicles and pedestrians, there is no proposed road widening nor pedestrian footpath construction in conjunction with the Proposed Development, except the widened section of Deep Bay Road close to Block B as turn around / drop off area for EVA purpose (i.e. portion shown as light grey in the MLP extracted in **Figure 4.6** below; details refer to the MLP in **Appendix 1**).

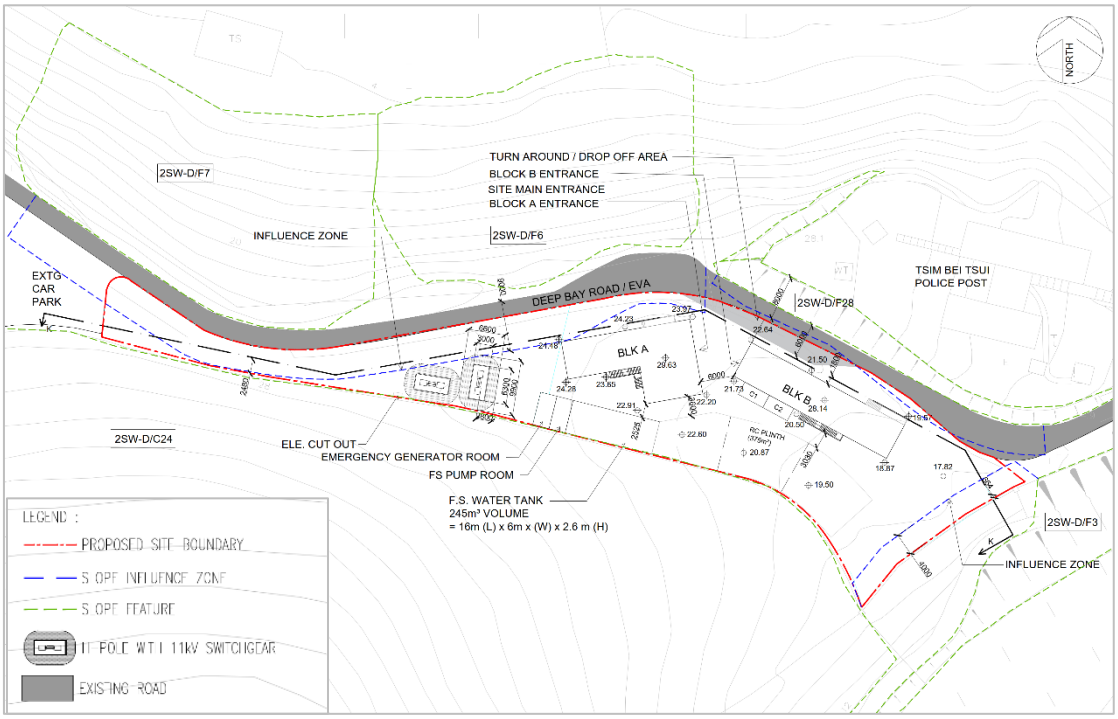

Figure 4.6 Extract of Master Layout Plan

4.6 Drainage Proposal

4.6.1 Drainage Proposal (in **Appendix 3**) has been prepared. Surface storm water at the Site will be collected and discharged through proposed surface channel to the existing catchpit in the slope crest. Surface runoff of the site will be discharged through the proposed 300mm U-channel within site, while

the surface storm water from nearby catchments is discharged through the existing U-channel along the site boundary, all towards the mangrove to the east of the Site. The allowable capacity of the downstream drainage system meets current drainage design capacity requirement for a 1 in 50 year flood for the Proposed Development.

4.7 Ecological Impact Assessment

4.7.1 An ecological impact assessment (EcoIA) (in **Appendix 4**) was conducted covering dry and wet seasons between November 2023 and October 2024. This EcoIA was submitted to AFCD for consideration as part of the Feasibility Study undertaken earlier by EPD. As revealed by the EcoIA, given that the habitat nature within the Site is anthropogenic with some degree of human disturbance, the impact significance for habitat loss is considered to be **Low to Moderate for plantation** and **Low for watercourse**. Although a nesting site of Collared Scops Owl was observed at plantation within the Site, which will be permanently removed due to the Proposed Development, it was identified to be inactive since May 2024. Considering the availability of trees in the vicinity for Collard Scops Owl to nest, direct impact on the species would be of **Low to Moderate significance**.

4.7.2 Suitable mitigation and precautionary measures are recommended in the EcoIA. Particularly related to the nesting of Collared Scops Owls, a pre-construction site check should be conducted before the development. Should any nesting behaviour of Collared Scops Owl be recorded, it should be reported to AFCD, and construction works near the nesting site should be temporarily suspended. Follow-up procedures shall be discussed and agreed with AFCD.

4.7.3 Other measures for minimisation of habitat loss and indirect disturbances to surrounding habitats and associated wildlife are also recommended in the EcoIA. On 28 April 2025, AFCD advised that they had no further comments on the EcoIA in support of the Feasibility Study. The EcoIA attached in this submission has only minor update on the project description of the EcoIA report accepted by AFCD.

4.8 Geotechnical Review Report

4.8.1 A Geotechnical Review Report (GRR) (in **Appendix 5**) was conducted (as part of the Fesasibility Study carred out by EPD earlier, with the latest revision

(Rev. 6) completed in October 2025) to identify all geotechnical factors that could impact or be impacted by the project . It is concluded that the existing registered slope features in close vicinity will not be impacted by the proposed development and no slope upgrading works is required for the proposed development. On 4 December 2025, GEO of CEDD advised that they had no further comments on the GRR in support of the Feasibility Study. The Addendum on the first page of Appendix 5 explained that there are only minor updates on the project description, development parameters and architectural drawings without any change to the evaluation of geotechnical impact in the GRR report accepted by GEO of CEDD.

5. PLANNING MERITS AND JUSTIFICATIONS

5.1 Need for Supersite for Accurate Air Quality and Meteorological Monitoring and Forecasting

5.1.1 At present, Hong Kong's monitoring network is limited in its capacity to support regional analysis. Current stations run by EPD and HKO mainly provide basic local air quality data, while greenhouse gas (GHGs) monitoring is restricted to CO_2 at Cape D'Aguilar Supersite Air Quality Monitoring Station (run by EPD) and King's Park Meteorological Station (run by HKO). The existing system is limited in capturing the spatial distribution of other major GHGs, such as CH_4 and N_2O, and regional pollutants like ozone (O_3) and its precursors.

5.1.2 The proposed Supersite will fill these gaps by consolidating advanced monitoring, forecasting, and analytical capabilities using the latest technology and equipment. Beyond monitoring, the Supersite will act as a regional scientific hub, supporting cross-boundary research collaboration. This positions Hong Kong as a significant contributor in the GBA on climate change response and air quality management, and demonstrates a clear global and wider public need for the project.

5.2 Suitable Location for the Supersite to Strengthen Collaboration within the GBA in Combating Climate Change

5.2.1 In the 2022 Policy Address, the Chief Executive announced that the Government would establish a Supersite for GBA air quality laboratory and meteorological monitoring in Hong Kong. This initiative aims to strengthen cooperation with Guangdong and Macao in addressing climate change, as well as in the joint prevention and control of regional air pollution.

5.2.2 The selected site location is considered suitable in support of this policy initiative and in meeting the strategic and technical requirements outlined in **Section 2.3**. These considerations include (i) its proximity to the GBA, (ii) the surrounding sparse population and activities, and (iii) being not in conflict with future development plans. The location at Tsim Bei Tsui minimises disturbance and interference while significantly contributing to regional collaboration on climate change response within the GBA.

5.3 Minimal Adverse Visual and Landscape Impact

5.3.1 Although the Supersite has various duties, the building footprint within the Site has been kept to a minimum. With a site coverage of only about 20%, most of the Site remains open-air, including landscaped areas. Considering the diverse equipment required for monitoring and forecasting, each with specific operational needs, the proposed GFA of about 616 m^2 is regarded as a minimised development scale.

5.3.2 In terms of building height, the proposed height of not more than 30mPD, with an additional 2m for rooftop installations, is considered minimal to accommodate the necessary equipment and monitoring systems. The solar tracker mounted on the rooftop, with an elevation of about 2m in height, is also required to balance between visual impact and data accuracy, to minimise interference by the nearby vegetation and terrain.

5.3.3 The visual appraisal from **Section 4.4** demonstrated negligible visual impacts arising from the Proposed Development. As the major open sky and natural vegetations are retained, the visual quality and character of the area are not adversely impacted by the Proposed Development. The Landscape Proposal (**Appendix 2** refers) further demonstrated efforts in terms of tree compensation and transition between the development and the adjacent natural environment, balancing between landscape impact and interference to data collection.

5.3.4 Due to the small development scale, building height, and consideration given to limiting visual and landscape impact, it is believed that the Proposed Development will remain compatible with the natural landscape and thus the overall visual impact is considered negligible.

5.4 No Adverse Drainage Impact

5.4.1 It is recommended in the Drainage Proposal (**Appendix 3** refers) that the surface runoff of the site will be discharged through the proposed 300mm U-channel within site, while the surface storm water from nearby catchments will be discharged through the existing U-channel along the site boundary, all towards the mangrove to the east of the Site. The proposed measures are sufficient to ensure that no drainage impact and flooding risk is caused to the surrounding area.

5.5 The Proposed Development Fully Complies with TPB PG No. 12C and Has No Adverse Ecological Impact

5.5.1 The Ecological Impact Assessment (in **Appendix 4**) reveals that an inactive nesting site of Collard Scops Owl within the Site was the major finding, and suitable precautionary measures have been recommended. Overall, since the habitat nature within the Site is anthropogenic with some degree of human disturbance, the impact significance for habitat loss is considered to be **Low to Moderate** for plantation and **Low** for watercourse. With the implementation of the proposed mitigation and precautionary measures, residual ecological impacts of the Proposed Development would be acceptable. No decline in both "area" and "function" of the wetland would be occurring during both construction and operation phases, thus the Project would comply with the "no-net-loss in wetland principle" in compliance with TPB PG No. 12C.

5.6 The Proposed Development Has No Geotechnical Impact

5.6.1 The GRR in **Appendix 5** concludes that the existing registered slope features in close vicinity will not be impacted by the proposed development and no slope upgrading works is required for the proposed development.

5.7 The Proposed Development Fully Complies with TPB PG No. 10

5.7.1 Since the Site is located within "GB" zone, the Proposed Development has paid due consideration to TPB PG No. 10 on application for development within the zone. The Proposed Development fully complies with the relevant guidelines as illustrated in **Table 5.1** below.

Table 5.1 Proposed Development in Compliance with TPB PG No. 10

Applicable Main Planning Criteria from TPB Guidelines No. 10		The Proposed Development
(a)	There is general presumption against development in "GB" zone	The development of the Supersite is for the wider public needs. The Supersite will address the limitations of Hong Kong's current air monitoring network and support the government's policy of collaboration in combating climate change within the GBA. The carefully thought-out landscape measures are effective in limiting significant

Applicable Main Planning Criteria from TPB Guidelines No. 10		The Proposed Development
		impact to the surrounding, seamlessly blending the Development Site and the surrounding natural environment.
(b)	An application for new development in a "GB" zone will only be considered in exceptional circumstances and must be justified with very strong planning grounds. The scale and intensity incl. the plot ratio, site coverage and building height should be compatible with the character of surrounding areas. With the exception of NTEH, a PR up to 0.4 for residential development may be permitted.	As the development is not for residential use, the development scale and intensity restrictions are not applicable. Nonetheless, the Proposed Development has a PR of about 0.2, still far lower than the recommended PR of 0.4.
(e)	Applications for G/IC uses and public utility installations must demonstrate that the proposed development is essential and that no alternative sites are available. The plot ratio of the development site may exceed 0.4 so as to minimise the land to be allocated for G/IC uses	Due to the site strategic and technical requirements of the Supersite, a sparsely populated area is required to minimise interference to data collection. To respond to the government policy of collaboration within the GBA, the location of the Supersite should be close to the heart of the GBA. As a result, the strategic location of Tsim Bei Tsui is determined to be the most suitable. As mentioned, the Proposed Development has a PR of about 0.2 and, therefore, does not exceed 0.4.
(g)	The design and layout of any proposed development should be compatible with the surrounding area. The development should not involve extensive clearance of existing natural vegetation, affect	The clearance of existing natural landscape for the development is unavoidable due to the technical requirements of the Supersite (Section 4.2 refers). It is emphasised that the existing overgrown trees within the Site pose a great interference to the monitoring

Applicable Main Planning Criteria from TPB Guidelines No. 10		The Proposed Development
	the existing natural landscape, or cause any adverse visual impact on the surrounding environment.	of air quality and have to be removed for accurate data collection. Despite this, new tree planting opportunities have been optimised, based on a compensation ratio of about 1:1.06. Landscaped areas of woodland mix, standard trees, shrubs and groundcover, as well as grasscrete pavings proposed in the Landscape Proposal help screen off the development and blend in with the surrounding natural environment. The visual appraisal also indicated negligible visual impact on the surroundings.
(h)	The vehicular access road and parking provision proposed should be appropriate to the scale of the development and comply with relevant standard	Two private car parking spaces for staff on a maintenance and needed basis are provided adjacent to Block B, while the existing Deep Bay Road will act as the EVA to the Supersite. Run-in/out to the Site is located at Deep Bay Road.
(i)	The proposed development should not overstrain the capacity of existing and planned infrastructure such as sewerage, roads and water supply. It should not adversely affect drainage or aggravate flooding in the area.	The Drainage Proposal demonstrated that the Proposed Development will not overstrain the drainage capacity of the area. The landscaped area and use of grasscrete within the Site retained infiltration, minimising additional runoff and flooding risk induced by the development.
(l)	The proposed development should not be susceptible to adverse environmental effects from pollution sources nearby such as traffic noise, unless adequate	PER is not required for the Proposed Supersite Development as advised by EPD.

Applicable Main Planning Criteria from TPB Guidelines No. 10		The Proposed Development
	mitigating measures are provided, and it should not itself be the source of pollution.	
(m)	Any proposed development on a slope or hillside should not adversely affect slope stability	The Proposed Development does not encroach onto any registered slope and their influence zone and will not adversely affect their stability. GRR (Appendix 5) has been conducted, confirming no slope upgrading works for the proposed development is needed.

6. SUMMARY AND CONCLUSION

6.1.1 This Planning Application is prepared and submitted on behalf of EPD, to seek approval from the TPB under section 16 of the Town Planning Ordinance for the Proposed 'Government Use' (GBA Air Quality Laboratory and Meteorological Monitoring Supersite) at the Site. The Site is currently zoned "GB" on the approved OZP.

6.1.2 To enhance collaboration within the GBA on the joint prevention and control of air pollution and the fight against climate change, the Supersite equipped with state-of-the-art international instruments for GBA air quality and meteorological monitoring in Tsim Bei Tsui is proposed, for monitoring and forecasting regional air pollution, extreme weather, and associated risks.

6.1.3 In the Proposed Supersite, two individual blocks are proposed along with outdoor ancillary facilities. The total development will result in an equivalent PR of about 0.2 and a BH of not more than 30mPD (at main roof level), with an additional 2m for rooftop monitoring devices. The Proposed Supersite is fully justified due to the following reasons:

- There is a need for Supersite for accurate air quality, meteorological monitoring, and forecasting.
- The Site is at a suitable location that responds to the government policy of strengthening collaboration within the GBA in combating climate change.
- The scale and building height of the proposed development are minimised and will lead to minimal adverse visual and landscape impact.
- The Proposed Development will not lead to adverse drainage, ecological or geotechnical impacts.
- The Proposed Development fully complies with Town Planning Board Guidelines No. 10 & No. 12C.

6.1.4 Based on the above, the TPB is sincerely requested to give favourable consideration of this S16 Planning Application from planning and technical points of view.