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ENVIRONMENTAL IMPACT ASSESSMENT PROJECT PROFILE

FOR

CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI

Prepared by

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COMMERCIAL-IN-CONFIDENCE

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Table of Contents

List of Tables

List of Figures

1. Purpose of Project Profile

1.1.1. This project profile is prepared in accordance with Annex 1 of the *Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)*. It sets out the scope of the environmental issues associated with the construction and operation of the new Annex Block and refurbishment works of the Red House at Hong Kong Observatory Headquarters (HKOHQ), for the application for an Environmental Impact Assessment (EIA) study brief.

2. Basic Information

2.1. Project Title

2.1.1. Construction of Annex Block at Hong Kong Observatory Headquarters, Tsim Sha Tsui (hereinafter referred to as "the Project")

2.2. Purpose and Nature of the Project

2.2.1. The project is for the construction of a new Annex Block, and refurbishment of the existing Red House at HKOHQ in Tsim Sha Tsui to:

- meet the existing shortfall in office space and functional areas for operational needs of the Hong Kong Observatory (HKO);
- provide space for developing HKO's essential operation and services; and
- provide space for organising public education and outreach activities relating to HKO's work.

2.3. Name of Project Proponent

2.3.1. Hong Kong Observatory, The Government of the Hong Kong Special Administrative Region

2.4. Location of the Project

2.4.1. The Project Site is located at the southern side of HKOHQ which is a Declared Monument under the *Antiquities and Monuments Ordinance (Cap.53)* at 134A Nathan Road, Tsim Sha Tsui. An open car park, a Red House (being used as an electronics laboratory at present) and an access road are found in the Project Site as shown in ***Figure 2.1***. The site area for the construction of the Annex Block is about 3,250 m^2.

2.5. Scope of the Project

2.5.1. The Project involves the construction of a new Annex Block at HKOHQ, for meeting the existing shortfall in office space and functional areas, providing space for further developing HKO's essential operation and services and enhancing HKO's public education and outreach efforts. Other associated and supporting facilities such as rest rooms for shift duty officers, tentatively about 7 open car parking spaces for the Annex Block, etc. will be provided to meet HKO's operational needs and to support the round-the-clock uninterrupted operations of HKO's mission-critical services. The proposed building height is capped at +45 metres above Hong Kong Principal Datum (mPD) as stipulated in the Tsim Sha Tsui Outline Zoning Plan (OZP) No. S/K1/28 for providing a total Gross Floor Area of approximately 3,800 m^2. Since the existing car park is situated at around +24.4 mPD, the building height measured from the car park level should not exceed about 20.6 m. Design details will be provided later during the EIA stage.

2.5.2. The Project also covers the refurbishment works to convert the existing Red House into a History Room for showing the history of HKO, the upgrading works for emergency vehicular access (EVA), and other associated works. The location of Red House is shown in ***Figure 2.1***.

2.5.3. Road widening works for EVA at the existing access road will be covered in the Project. The existing access road is not a public road and is only for use by departmental vehicles as well as other vehicles for operations related to HKO. It is neither expressway, trunk road, primary distributor road, district distributor road nor a fully enclosed road. No Designated Project item of Schedule 2 of EIA is identified for the road widening works for EVA at the existing road, particularly under Category A, Part I, Schedule 2 of EIAO. Its alignment will be kept as far as practicable and significant change is not expected. There will be no new access road. The proposed EVA is indicated in ***Figure 2.1***.

2.5.4. Installation of utilities connection will be covered in the Project. The connection works are expected to be carried out at the existing access road connecting the Annex Block and the Red House to the rear gate of HKOHQ (to Observatory Road). The location/ scope/ area of the proposed utilities connection works is subject to detailed design at later stage.

2.5.5. The Project covers the following construction processes and activities:

- Site clearance;
- Site formation works;
- Foundation works;
- Superstructure works and external works;
- Refurbishment works (including reinstatement works) of the Red House;
- Slope upgrading and improvement works if any substandard non-registered slope feature is identified;

- Utilities connection works within HKOHQ;
- Tree management works;
- Construction of open car parking spaces for the Annex Block; and
- Road widening works for EVA at the existing access road in HKOHQ in compliance with relevant rules and regulations.

2.5.6. Upon project completion, the Red House will become a history room to display the history of HKO, while the Annex Block will comprise the following major functional areas:

- Integrated Forecasting and Warning Centre – for providing weather forecasting and warning services, radiation monitoring and assessment, and earthquake monitoring and tsunami warning services in an integrated manner;
- Meteorological Data and Computation Centre – for housing and operating HKO's computer systems which support HKO's round-the-clock mission-critical weather services;
- Calibration Laboratory and Electronics Workshop – for calibration, maintenance and storage of equipment, such as those for meteorological observation monitoring;
- Studio – for production of HKO's television and online weather programmes and educational programmes;
- News Briefing Room – for holding weather briefings and press conferences and organising public talks;
- Public Information and Education Concourse – for organising exhibitions for public education purposes;
- Radar and Satellite Operation Centre – for reception, processing and display of data collected from radars and satellites;
- Rest Rooms - for shift duty officers to facilitate them to stay at HKOHQ under inclement weather situations to sustain round-the-clock essential weather services; and
- Offices – for normal office work of HKO's staff.

2.6. History of HKOHQ

2.6.1. Setting up of a meteorological observatory in Hong Kong was proposed by the Royal Society in 1879, as Hong Kong was considered geographically favourable for the study of meteorology. The proposal was approved and the Observatory was established in 1883 as HKO. It was granted the title "Royal Observatory, Hong Kong" in 1912 before reverting to the original name in 1997.

2.6.2. Early operations of HKO included meteorological observations, geomagnetic observations, time service based on astronomical observations, and tropical cyclone warning service. With the expansion of HKO's services over the years, the technical and operational units of HKO originally located in the 1883 Building of the HKOHQ were moved to the Centenary Building in 1983, leaving the 1883 Building housing the offices for the directorates and the administration division.

2.6.3. Based on the available information from the Project Proponent and the historical aerial photos from the website of Lands Department shown in ***Figure 2.2***, the entire Project Site was occupied by HKO since 1883 and was originally covered by natural vegetation. The Red House was situated since 1926. It was first established for operating as a wireless station, and was then used as a store room (for storing equipment spare parts and records) years before its current use as the electronics laboratory. The rest of the Project Site was converted to an open carpark and an access road since 1960s until now.

2.7. Statement of Significance

2.7.1. Hong Kong is a coastal city in southern China. With its well-developed shipping industry, Hong Kong served as an important entrepot in the region since the 19th century. Being one of the earliest government institutions set up in the Kowloon Peninsula, HKO was established in 1883 with its Headquarters located on the top of Mount Elgin in the Kowloon Peninsula. In 1984, HKOHQ was listed as a Declared Monument in Hong Kong. Early operations of HKO were all relevant to the shipping industry at the time, including meteorological observations, time service, geomagnetic observations and tropical cyclone warning service. HKO has been conducting meteorological measurements at HKOHQ since 1884, and is one of the earliest meteorological observing stations in Asia. The long-term weather observations collected in HKOHQ document the climate variations in Hong Kong over time. In 2017, HKOHQ was recognised by the World Meteorological Organization as one of the first batch of centennial observing stations in the world. Apart from monitoring and forecasting weather as well as issuing warnings on weather-related hazards, HKO also monitors and assesses radiation levels in Hong Kong, and provides other meteorological and geophysical services to meet the needs of the public, special users, and the shipping and aviation communities, in order to reduce loss of life and damage to property during hazardous weather. HKO adopts advanced technologies in the continuous development of its services.

2.7.2. Buildings at HKOHQ are the first constructions built on the Mount Elgin filled with trees and vegetations, of which the setting has remained largely unchanged since their establishment. The 1883 Building and its adjacent Annex Building are very rare and fine examples of Victorian Colonial buildings in Hong Kong. Later added buildings and structures including Quarters No. 2 and No. 3 (1921), the cellar (1923) for housing seismographs and pendulum clocks, the Red House (1926) and Quarters No. 1 (1934) each plays an instrumental role in providing supplementary facilities to support the operation of HKO. The buildings at HKOHQ are the only examples of architecture and structures for the Observatory's operation in Hong Kong, thus they are exceptional.

2.7.3. The northeast corner of HKOHQ, where the 1883 Building is located, is the heart of HKO. Supporting facilities are basically built around the 1883 Building, including the Red House at the south side of the site.

2.7.4. The Red House adopted a utilitarian design to suit its original function as a wireless station. It is a simple L-shaped fair-faced red brick building with pitched roof of timber structures. Although it has served multiple uses, the original structure and layout are believed to be largely retained in good condition.

2.8. Number and Types of Designated Project Covered by the Project Profile

2.8.1. HKOHQ is a Declared Monument under the *Antiquities and Monuments Ordinance (Cap. 53)* with its boundary given in ***Figure 2.1***. Since the Project involves earthworks and building works within a Declared Monument, it is classified as a designated project under Q1, Part I, Schedule 2 of the *Environmental Impact Assessment Ordinance (Cap. 499*).

2.9. Name and Telephone Number of Contact Person

2.9.1. For enquires concerning this Project, please contact the following persons: -

The Applicant

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The Project Coordinator

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3. Outline of Planning and Implementation Programme

3.1. Project Planning and Implementation

3.1.1. HKO is the project proponent and is responsible for the future operation of the Annex Block and the refurbished Red House. Architectural Services Department (ArchSD) is the works agent of the Project. Allied Environmental Consultant Limited (AEC) is appointed by ArchSD to carry out the EIA for the Project in accordance with the EIAO. A separate architectural lead consultant will be engaged by ArchSD to undertake investigation, planning, design and construction supervision of the Project. Construction works under the Project will be carried out by the Contractor engaged by ArchSD.

3.2. Project Programme

3.2.1. Subject to the availability of funding, findings of the EIA study and other constraints, the tentative programme for the Project is listed below for reference.

Table 3.1 Tentative Programme

Task	Tentative Timeline
Investigation and EIA Study	2019 Q3 – 2022 Q4
Construction	2024 Q1 – 2027 Q4
Commissioning	2027

3.3. Interfacing with Other Projects

3.3.1. Based on information gathered thus far, the Project may have interface with two projects listed below:

Table 3.2 List of Concurrent Projects

	Project
i.	Agreement No. CE 41/2018 (DS) Drainage Improvement Works in Tsim Sha Tsui – Investigation, Design and Construction
ii.	Project 3075RE “Expansion of Hong Kong Science Museum and Hong Kong Museum of History”

3.3.2. ***Figure 3.1*** shows the location of the two concurrent projects.

4. Major Elements of the Surrounding Environment

4.1. General

4.1.1. The surrounding areas are currently zoned as “Commercial” and “Government, Institution, Community” according to the Tsim Sha Tsui OZP No. S/K1/28.

4.1.2. Major developments in the vicinity include the Tsim Sha Tsui District Kaifong Welfare Association, Mira Place, St. Andrew’s Church Compound (a Grade 1 historic building), Antiquities and Monuments Office (AMO) Head Office (a Declared Monument, former Kowloon British School), and Knutsford Terrace, etc.

4.2. Air Quality

4.2.1. The local air quality is mainly influenced by traffic emissions from the road network (in particular Nathan Road, Kimberley Road and Hillwood Road) in the vicinity of HKOHQ. The closest Air Sensitive Receivers (ASRs) comprise residential and commercial premises along Hillwood Road, Kimberley Road and Austin Avenue.

4.2.2. The study area for air quality impact assessment is defined as within 500 m from the Project Site boundary. Some of the representative ASRs within the assessment area and their shortest horizontal distances to the Project Site boundary are presented in ***Table 4.1***, with their respective locations shown in ***Figure 4.1***. The representative ASRs identified within the assessment area include residential developments, commercial buildings, hotel, hospital, school, worship center, shopping centre, sports and community facilities. No existing chimneys are identified within 500 m from the Project Site boundary. The list of representative ASRs in ***Table 4.1*** is not exhaustive and will be reviewed during the EIA stage in accordance with Annex 12 of the *EIAO-TM, Guidelines for Air Quality Assessment*.

Table 4.1 List of Representative ASRs

ASR ID	Name	Use	Approximate Shortest Horizontal Distance to Project Site Boundary* (m) (Tentative)
ASR01	HKO Quarters No.2&3 (Within HKOHQ)	Residential	16
ASR02	HKO Quarters No.1 (Within HKOHQ)	Residential	7
ASR03	King's Mansion	Residential	62
ASR04	New Knutsford House	Residential	29
ASR05	Lok Fun Mansion	Residential	10
ASR06	Carlton Building	Residential	10
ASR07	St. Andrew's Church	Place of worship	40
ASR08	Tsim Sha Tsui District Kaifong Welfare Association	Community	8
ASR09	Ramada Hong Kong Grand	Hotel	131
ASR10	St. Mary's Canossian School and College	Educational	202
ASR11	Kowloon Bowling Green Club	Recreational	179
ASR12	People's Liberation Army Garrison Hospital	Hospital	403
ASR13	Mira Place	Commercial	14
ASR14	Kowloon Park Swimming Pool	Recreational	152
ASR15[#]	Annex Block (Within Project Site)	Government, Institution, Community	Not Applicable
ASR16[#]	Red House (Within Project Site)	Government, Institution, Community	Not Applicable

Remarks:
*The southern boundary of the Project Site is immediately adjacent to a slope on which the Annex Block cannot be built. As such, the Annex Block will be constructed behind the slope, and the actual horizontal distance between the Annex Block and the ASRs to the South of the Project site will be larger than the figure listed above. The actual setback of the Annex Block from the southern boundary will be subject to the Project's detailed design.

[#] Planned ASRs under this Project

4.3. Noise

4.3.1. Traffic noise is the major noise source (in particular from Nathan Road, Kimberley Road and Hillwood Road) to HKOHQ and the area in its vicinity. Residential premises along Hillwood Road, Kimberley Road and Austin Avenue have been identified to be the closest representative Noise Sensitive Receivers (NSRs).

4.3.2. The study area for noise impact assessment is defined as within 300 m from the Project Site boundary. Some of the representative NSRs within the assessment area and their shortest horizontal distances to the Project Site boundary are presented in ***Table 4.2***, with their respective locations shown in ***Figure 4.2***. The list of representative NSRs in ***Table 4.2*** is not exhaustive and will be reviewed during the EIA stage in accordance with Annex 13 of the EIAO-TM, Guidelines for Noise Assessment.

Table 4.2 List of Representative NSRs

NSR ID	Name	Use	Approximate Shortest Horizontal Distance to Project Site Boundary* (m) (Tentative)
NSR01	HKO Quarters No.2&3 (Within HKOHQ)	Residential	16
NSR02	HKO Quarters No.1 (Within HKOHQ)	Residential	7
NSR03	King's Mansion	Residential	62
NSR04	New Knutsford House	Residential	29
NSR05	Lok Fun Mansion	Residential	10
NSR06	Carlton Building	Residential	10
NSR07	St. Andrew's Church	Place of worship	40

Remarks:
*The southern boundary of the Project Site is immediately adjacent to a slope on which the Annex Block cannot be built. As such, the Annex Block will be constructed behind the slope, and the actual horizontal distance between the Annex Block and the NSRs to the South of the Project site will be larger than the figure listed above. The actual setback of the Annex Block from the southern boundary will be subject to the Project's detailed design.

4.4. Water Quality

4.4.1. There is no water sensitive receiver in the vicinity (within 500 m) of the Project Site.

4.5. Cultural Heritage

4.5.1. The Project is located within the boundary of HKOHQ which is a Declared Monument. Direct and indirect impacts with respect to the Declared Monument and other built heritage items in the vicinity of the Project Site could potentially be resulted from the Project.

4.5.2. As approved by AMO, the study area for cultural heritage impact assessment is defined as within 150 m from HKOHQ. ***Table 4.3*** shows an exhaustive list of cultural heritage items within the assessment area and their shortest horizontal distances to the Project Site boundary, with their respective locations shown in ***Figure 4.3***. It is expected that the cultural heritage items within 50 m from the Project Site boundary may be affected by the Project.

Table 4.3 List of Cultural Heritage Items

ID	Name	Approximate Shortest Horizontal Distance to Project Site Boundary (m) (Tentative)
Within HKOHQ (Declared Monument)		
CH01	Red House (Within Project Site)	Not Applicable
CH02	1883 Building*	28
CH03	Annex of 1883 Building	49
CH04	HKO Quarters No.1	7
CH05	HKO Quarters No.2&3	16
Outside HKOHQ		
CH06	AMO Head Office (Declared Monument; former Kowloon British School)	90
CH07	St. Andrew's Church Compound (Grade 1 historic building)	40
CH08	Kowloon Bowling Green Club (Grade 3 historic building)	179
CH09	No. 190 Nathan Road (Grade 3 historic building)	189

Remarks:

* 1883 Building Includes the cellar and its underground tunnel

4.6. Ecology

4.6.1. The Project Site is located in an urbanised area of which ecological value is expected to be low. It is a mixture of two habitats including a developed area (e.g. road and car park) and a plantation area which supports planted trees and vegetation. Kowloon Park, where diverse bird and vegetation species can be found, is located in the vicinity of the Project Site.

4.6.2. Collared Crow (*Corvus torquatus*), a bird species of conservation importance, was recorded at the Project Site by the Agriculture, Fisheries and Conservation Department (AFCD) in November 2018. No bird species were observed within the Project Site during the field survey conducted in August 2019. Field survey will be conducted during the EIA stage to verify the record of Collared Crow and identify if there are other bird species of conservation interest.

4.6.3. During the field survey conducted in August 2019, one mammal species of conservation importance, the Short-nosed Fruit Bats (*Cynopterus sphinx*) as well as palms which support their roosting, were recorded and identified within HKOHQ, yet outside the Project Site boundary.

4.7. Landscape and Visual Impact

4.7.1. The study area for landscape impact assessment is defined as within 500 m from the Project Site boundary. ***Table 4.4*** shows a list of existing Landscape Resources (LRs) within the assessment area, with their respective locations shown in ***Figure 4.4.*** The Landscape Character Areas (LCAs) are also identified in ***Table 4.5*** and shown in ***Figure 4.5***.

Table 4.4 Existing LRs

Code	LRs
Physical LR	
LR1	**Park/Recreational**
LR1.1	Kowloon Park
LR1.2	Kowloon Park Drive Children's Playground
LR1.3	Urban Council Centenary Garden
LR1.4	Kowloon Cricket Club and Bowling Green Club
LR1.5	Cox's Road Children's Playground
LR2	**Roadside Planting**
LR2.1	Nathan Road
LR2.2	Observatory Road
LR2.3	Jordan Road
LR2.4	Scout Path
LR2.5	Austin Road
LR2.6	Tak Shing Street
LR2.7	Haiphong Road
LR2.8	Chatham Road South
LR2.9	Hanoi Road
LR2.10	Jordan Path
LR2.11	Access road connecting Project Site to Nathan Road
Human LR	
LR3	**Institutional Buildings, Cultural and Historic Features**
LR3.1	HKOHQ
LR3.2	Tsim Sha Tsui Police Station
LR3.3	Kowloon Mosque and Islamic Centre
LR3.4	St. Andrew's Church Compound and AMO Head Office (former Kowloon British School)
LR3.5	No. 190 Nathan Road
LR3.6	Built Heritage within Kowloon Park

Table 4.5 Identified LCAs

Code	LCA	Description of Landscape Character
LCA1	Park Landscape	Kowloon Park and Urban Council Centenary Garden
LCA2	Medium/High-rise Mixed Urban Landscape	Jordan Mixed Urban Landscape and Tsim Sha Tsui Commercial / Retail Complex Landscape
LCA3	Historic Landscape	HKOHQ, Kowloon Mosque and Islamic Centre, St. Andrew's Church Compound and AMO Head Office (former Kowloon British School), No. 190 Nathan Road, Built Heritage within Kowloon Park

4.7.2. The study area for visual impact assessment (VIA) covers the general view sheds formed by natural or man-made features such as ridgeline or buildings. Key visual elements that could be seen from the Project Site include the plantation area and heritage buildings within HKOHQ to the north. Towards the east and south are high-rise commercial and residential buildings. Towards the west are institutional and historic buildings and structures including the Tsim Sha Tsui District Kaifong Welfare Association, St. Andrew's Church Compound and AMO Head Office (former Kowloon British School).

4.7.3. The Project Site is located in an urban area, mainly surrounded by high-rise commercial and residential buildings. The views to the Project Site from VSRs are limited, despite their close proximity to the Project Site. Some of the representative Visual Sensitive Receivers (VSRs) are presented in ***Table 4.6***, with their respective locations shown in ***Figure 4.6***. The list of representative VSRs in ***Table 4.6*** is not exhaustive and will be reviewed during the EIA stage in accordance with Annex 18 of the *EIAO-TM, Guidelines for Landscape and Visual Impact Assessment*.

Table 4.6 List of Representative VSRs

VSR	Description
Residential VSRs	HKO Quarters No. 1 to 3, King's Mansion, Lok Fun Mansion, Universal Mansion, Carlton Building, New Knutsford House and the adjacent residential buildings
Commercial VSRs	Mira Place, Stanford Hillview Hotel, Knutsford Commercial Building and the adjacent commercial buildings
Institutional VSRs	HKOHQ, Tsim Sha Tsui District Kaifong Welfare Association, St. Andrew's Church , AMO Head Office (former Kowloon British School)
Recreational VSRs (e.g. open space)	Kowloon Park
Transient VSRs	Travellers at Observatory Road, Nathan Road and the access road at the western part of the Project Site

4.7.4. Representative viewpoints of the VIA will be selected according to EIAO Guidance Note No. 8/2010 *Preparation of Landscape and Visual Impact Assessment Under the Environmental Impact Assessment Ordinance* during the EIA stage. Photomontages at the selected representative viewpoints will be prepared to evaluate the visual impacts, residual impacts after adoption of the proposed mitigation measures, and effectiveness of the proposed mitigation measures.

5. Possible Impacts on the Environment

5.1. General

5.1.1. The process and activities involved in this Project and upon completion of this Project identified in Section 2.5.5 and 2.5.6 may cause the following potential environmental impacts.

5.2. Air Quality

Construction Phase

5.2.1. During the construction phase, the principal potential source of air quality impact is expected to be fugitive dust generated from various land-based construction activities, including site formation, filling and temporary stockpiling of dusty construction materials. Exhaust emissions from construction plant and equipment is also another potential source of air quality impact.

Operational Phase

5.2.2. Uses of the Annex Block and the refurbished Red House are similar to other typical cultural, office and institution uses in Hong Kong, including normal office work and public visits. Areas in HKOHQ for public education, including the History Room, will be open to registered visitors. In this connection, dust generation or gaseous emissions are not expected. While about 7 open car parking spaces for the Annex Block will be provided tentatively, there will be no public car parking space, and the majority of visitors are expected to travel to the Project Site by public transport or on foot. Additional traffic flow induced by the Project is considered insignificant.

5.2.3. There is no chimney identified within 500 m from the Project Site boundary. This will be verified by additional site surveys during the EIA stage. Vehicular emission from the surrounding road networks is considered the dominant source of air pollutants affecting the Project Site.

5.2.4. The Annex Block will be equipped with central air condition for daily operation and will not rely on opened windows for ventilation. Also, the location of fresh air intake will be carefully designed with sufficient separation distance from nearby roads for compliance with different Air Quality Objectives (AQOs) set out by the *Air Pollution Control Ordinance (Cap. 311)*. In light of the above, adverse air quality impact on the Annex Block is not anticipated in the operational phase.

5.3. Noise

Construction Phase

5.3.1. Construction noise is expected to arise from the use of powered mechanical equipment and piling activities on-site. Subject to technical and cost assessments, different piling methods will be considered to minimise the piling noise generated during the construction stage. Construction noise is considered a short-term impact which can be reduced to an acceptable level with the implementation of appropriate mitigation measures as outlined in Section 6.3.1.

Operational Phase

5.3.2. Uses of the Annex Block and the refurbished Red House are similar to other typical cultural, office and institution uses in Hong Kong, which is not expected to generate significant noise. As no public car parking space will be provided, it is expected that the majority of visitors will travel to the Project Site by public transport or on foot. As a result, the operation of the Annex Block and the refurbished Red House is not envisaged to generate significant additional vehicular traffic, thus the traffic noise impact induced by the Project is considered minimal.

5.3.3. The Annex Block will be equipped with central air condition and will not rely on opened windows for ventilation. Noise impact on the Annex Block is expected to be insignificant.

5.3.4. Fixed plants, such as water pumps and mechanical ventilation equipment, may cause noise impact on the nearby NSRs. Acoustic provisions shall be adopted as appropriate for full compliance with the corresponding noise criterion recommended under the *EIAO-TM*.

5.4. Water Quality

Baseline Water Quality Condition

5.4.1. The Project Site falls within the Victoria Harbour Water Control Zone (WCZ) according to the *Water Pollution Control Ordinance (Cap. 358)* (WPCO). According to the *Marine Water Quality in Hong Kong in 2019* issued by the Environmental Protection Department (EPD), the overall Water Quality Objectives (WQO) compliance rate of the Victoria Harbour WCZ in 2019 was 97%. The WQO compliance rates for Dissolved Oxygen and Unionised Ammonia Nitrogen (NH3-N) were both 100%. 90% of the monitoring stations in the WCZ met the Total Inorganic Nitrogen WQO.

Construction Phase

5.4.2. Construction site surface runoff and domestic sewage from construction workers and site management staff will be the major sources of water quality impacts associated with the entirely land-based construction activities. As HKOHQ is connected to existing public drainage and sewerage infrastructures, the land-based construction activities are not envisaged to cause adverse water quality impacts with the implementation of general good site practice in accordance with EPD's *Professional Persons Environmental Consultative Committee Practice Note on Construction Site Drainage (ProPECC PN 1/94)*.

Operational Phase

5.4.3. Domestic sewage generated by future staff and visitors at the Annex Block and the refurbished Red House will be the key discharges from the Project Site. The additional quantity of sewage will be evaluated during the EIA stage. Adverse impact on water quality is not expected, as the Project's detailed drainage design shall follow EPD's *Professional Persons Environmental Consultative Committee Practice Note on Drainage Plans subject to Comment by the Environmental Protection Department (ProPECC PN 5/93)*.

5.5. Waste Management

Construction Phase

5.5.1. Construction and demolition (C&D) materials generated from construction activities will be re-used and recycled on site as far as practicable. Small quantities of chemical waste and general refuse are also envisaged.

5.5.2. Provided that standard waste management practices are strictly followed, no unacceptable environmental impacts are expected to arise from the handling, storage, transport and disposal of construction waste.

Operational Phase

5.5.3. Waste generated during the operational phase will be primarily from typical office activities, such as waste paper and general refuse. Chemical waste are not expected.

5.5.4. Provided that waste are stored and handled properly and disposed of at regular intervals, environmental impacts associated with waste management are not expected during the operation of the Annex Block and the refurbished Red House.

5.6. Land Contamination

5.6.1. As discussed in Section 2.6.3, the past and present land use of the Red House does not involve potential land contamination activities and no chemical storage is identified. The Project Site was previously a vegetated area and has been converted to an open carpark and the access road since 1960s until now. Land contamination is not expected.

5.6.2. According to the visual site inspection on 7 December 2020, the open car park and access road within the Project Site were paved in good condition and no ground crack was observed. Moreover, no oil stain, smell, chemical container or site keeping waste was found in the Project Site. Land contamination within the Project Site is considered unlikely. The photolog of the visual site inspection is shown in ***Figure 5.1***.

5.7. Hazard to Life

5.7.1. No Potentially Hazardous Installation (PHI) is identified in the vicinity of the Project Site and within the Project Site. The Project Site is also not within any PHI Consultation Zone. There will be no storage of chemical goods or dangerous goods in relation to HKO's operations in the Annex Block and the refurbished Red House, and there is no hazardous source found in the vicinity of the Project Site (e.g. LPG station). Hazard to life issue is not anticipated during the construction and operational phase. If fuel gas or dangerous gas storage in the vicinity of the Project Site was identified, hazard assessment would be performed accordingly.

5.8. Cultural Heritage

Construction Phase

5.8.1. The Project Site is highly urbanised and has undergone extensive underground disturbance from construction of roads, buildings, underground utilities and other infrastructure throughout the years. Accordingly, archaeological potential within the Project Site is considered extremely low.

5.8.2. Any heritage resources, located inside and within 50m from the Project Site boundary mentioned in ***Figure 4.3*** and ***Table 4.3*** may be impacted through:

- Direct impact to historic building/structure (refurbishment works of converting the existing Red House into a history room);
- Indirect vibration impact on historic buildings/structures due to drilling and piling activities during construction that might cause vibration and minor ground settlement; and
- Indirect visual impact to historic buildings/structures due to construction works.

5.8.3. The refurbishment works of converting the existing Red House into a history room will involve the removal of existing internal fittings which have been identified as later additions. Such conversion is considered as a beneficial impact which could enhance the preservation of the Red House in revealing its original character-defining elements.

Operational Phase

5.8.4. Impacts on cultural heritage during operation phase include:

- Indirect visual impact associated with alteration in surrounding environment of the

historic buildings/structures due to the above-ground structures of the Project.

5.9. Ecology

Construction Phase

5.9.1. The Project Site is a mixture of a developed area and a plantation area. During the construction phase, there is a potential loss of trees and vegetation within the Project Site. Based on the field survey conducted in August 2019, the affected species are expected to be common planted species with relatively low ecological value. Thus, the adverse impact on ecological value during the construction phase is considered insignificant.

5.9.2. On the other hand, Chinese Fan-palms located within HKOHQ are potential roosting sites for Short-nosed Fruit Bats, yet they are out of the Project Site. The bats may also be disturbed by noise generated by construction machinery during day time, which may affect their roosting behaviours. However, considering the species is commonly found in urban areas associated with palm trees and human buildings, the bats are expected to recolonise upon completion of construction works. The overall indirect impact on the bats species is deemed to be low.

5.9.3. As mentioned in Section 4.6.2, Collared Crow (*Corvus torquatus*) was recorded by AFCD at the Project Site. Nevertheless, since no roosting and breeding behaviours of Collared Crow were recorded within the Project Site, the impact of construction works on Collared Crow is expected to be transient and localised.

5.9.4. Other animals including other birds and bats species may also be potentially affected by the Project due to loss of their potential roosting habitats. Having said that, these species are widespread in Hong Kong based on field studies and researches. The adverse impact on ecology due to the reduction in plantation area within the Project Site is considered insignificant.

5.9.5. Additionally, HKOHQ is situated in a highly disturbed urban area of limited ecological value, in which species identified are subject to frequent human disturbances, and are commonly found in other urban areas in Hong Kong. Consequently, the construction's overall impact to the surrounding urban environment and the species identified therein is considered insignificant.

Operational Phase

5.9.6. The Project Site is located in a highly disturbed urban area, in which species identified are subject to frequent human disturbances. The increase in number of HKO's staff and visitors during operation of the Annex Block and the refurbished Red House is not anticipated to cause significant ecological impacts.

5.10. Landscape and Visual Impact

Construction Phase

5.10.1. Some existing trees and shrubs located within the Project Site will potentially be removed. Tree Preservation and Removal Proposal will be prepared during the detailed design stage.

5.10.2. During construction, scaffolding and hoardings may be erected on the external façade of the Red House and around the Project Site. The construction works are anticipated to be typical of other building works in Hong Kong. Any landscape and visual impact will be transient, and can be minimised by good housekeeping such as good on-site materials storage management.

Operational Phase

5.10.3. As discussed in Section 2.5.1, the height of the Annex Block is capped at about 20.6 m above the existing car park. Since HKOHQ is surrounded by high-rise buildings, the Annex Block is not expected to create significant visual intrusion or obstruction to VSRs.

6. Environmental Protection Measures

6.1. General

6.1.1. The EIA Study will investigate environmental impacts during both construction and operational phases and propose appropriate mitigation measures, if any, to alleviate such impacts. Environmental monitoring and auditing of potential impacts that may arise from the Project will also be conducted during the construction and operational phases. Subject to the findings of the EIA study, the following mitigation measures will be incorporated in the design and construction of the Project.

6.2. Air Quality

Construction Phase

6.2.1. The Contractor shall implement good site practices and dust control and suppression measures as stipulated in the *Air Pollution Control (Construction Dust) Regulation (Cap. 311R)* wherever applicable. With the implementation of dust suppression measures, the air quality impact to the ASRs in close proximity to the Project Site is expected to be minor. The key measures of dust control include:

- Regular watering on all exposed and unpaved surface, particularly during dry weather;
- Frequent watering for particularly dusty construction areas and areas close to ASRs;
- Covering all excavated or stockpile of dusty materials on the top and 4 sides by impervious sheeting, or spraying the dusty materials with water to maintain the entire surface wet;
- Spraying all dusty materials with water immediately prior to any loading, unloading or transfer operation to maintain the dusty materials wet;
- Covering of any dust materials on vehicles with clean and water-proof sheet when leaving the site;
- Ensuring stockpiles of dusty materials do not extend beyond site boundaries;
- Provision of wheel washing facilities at the exit points of the site; and
- Control of travelling speeds of operating trucks to reduce traffic induced dust dispersion and re-suspension within the site.

6.2.2. The Contractor shall adhere to the *Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap. 311Z)* and the *Air Pollution Control (Fuel Restriction) Regulations (Cap. 311I)* to control the exhaust emissions from construction plant and equipment. Requirements stipulated therein should be incorporated into the specifications for the works contract.

6.2.3. The Contractor shall also adhere to the two following Development Bureau (DEVB) Technical Circulars (TC):

- *DEVB TC no. 13/2020 - Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts*; and
- *DEVB TC (Works) No. 1/2015 - Emissions Control of Non-road Mobile Machinery in Capital Works Contracts of Public Works*.

Operational Phase

6.2.4. Uses of the Annex Block and the refurbished Red House are similar to other typical cultural, office and institution uses in Hong Kong. While about 7 open car parking spaces for the Annex Block will be provided tentatively, no public car parking space will be provided. Hence, dust generation or gaseous emissions are not expected to be significant and no mitigation measure is deemed necessary.

6.2.5. Subject to verification during the EIA Stage, there is no chimney identified within 500 m from the Project Site boundary. Vehicular emission from the surrounding road networks is considered the dominant source of air pollutants affecting the Project Site. The Annex Block will be equipped with central air condition and will not rely on opened windows for ventilation. Sufficient separation distance shall be provided for the Annex Block and any sensitive uses associated with the Project in order to avoid adverse air quality impact and for compliance with AQOs during its operational phase.

6.3. Noise

Construction Phase

6.3.1. To minimise potential construction noise impacts, the contractor will implement appropriate noise mitigation measures in accordance with *EIAO-TM* where required, such as the use of quieter equipment and noise barriers, and avoiding concurrent noisy operations. Additionally, different piling methods will be considered to minimise the piling noise generated.

Operational Phase

6.3.2. Traffic noise impact induced by operating the Annex Block and the refurbished Red House is minimal. On the other hand, impact of surrounding noise on the Annex Block is insignificant as it will be equipped with central air condition and will not rely on opened windows for ventilation. No mitigation measure is considered necessary in both respects.

6.3.3. Acoustic provisions will be suitably applied to fixed noise sources within the Project Site to ensure full compliance with the corresponding noise criterion recommended under the *EIAO-TM*.

6.4. Water Quality

Construction Phase

6.4.1. During the works, control measures will be planned and implemented to reduce site discharges and surface runoff according to EPD's *ProPECC PN 1/94*. The Contractor will provide appropriate on-site treatment to discharges, and is required to apply and obtain from EPD an effluent discharge licence issued under the WPCO. The Contractor shall also ensure all effluent discharge from the Project Site meets the standard of *Technical Memorandum Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (WPCO-TM)* and is in compliance with the requirements stipulated in the effluent discharge licence.

Operational Phase

6.4.2. The Project's detailed drainage design shall follow EPD's *ProPECC PN 5/93*. All sewage arising from the operation of the Annex Block and the refurbished Red House shall be collected and diverted to the public sewerage system via proper connections to minimise water quality impacts from operation and ensure compliance with the *WPCO-TM*.

6.5. Waste Management

Construction Phase

6.5.1. Mitigation measures and good site practices will be implemented to manage waste generated from the Project. These include preparation of a Waste Management Plan, on-site sorting and reuse of C&D materials, implementation of a trip-ticket system to track the offsite transportation of waste, and appropriate handling, storage and disposal of chemical waste in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)* and the *Code of Practice on Packaging, Labelling and Storage of Chemical Waste*.

Operational Phase

6.5.2. Standard waste management practices will be implemented to minimise waste generation and maximise materials recovery and recycling. All wastes generated shall be disposed of in compliance with the *Waste Disposal Ordinance (Cap. 354)*.

6.6. Land Contamination

6.6.1. Since land contamination within the Project Site is not anticipated, mitigation measures to cope with land contamination are not required. The Project Site will be paved, and other good site practices, such as proper storage and proper cleaning for any spillage or leakage of chemicals, will be implemented.

6.7. Hazard to Life

6.7.1. The Project Site is not within any PHI Consultation Zone, and there will be no storage of chemical goods or dangerous goods in relation to HKO's operation in the Annex Block and the refurbished Red House. Hazard to life issue is not anticipated during the construction and operational phase, therefore mitigation measures in this regard are not required.

6.8. Cultural Heritage

6.8.1. Works within the Project Site will be planned and implemented with necessary permits granted by the Antiquities Authority (i.e. the Secretary for Development) under Section 6(1) of the *Antiquities and Monuments Ordinance (Cap. 53)*. The construction method will be carefully chosen to ensure there will be no adverse impact on the existing historic buildings and structures.

Construction Phase

6.8.2. Photographic survey, cartographic survey and condition survey on surrounding historic buildings, structures, elements and landscape shall be carried out before the commencement of works.

6.8.3. Detailed study and site investigation shall be carried out in order to identify fittings which are later additions at the Red House, with a view to reinstating its original character-defining elements. Refurbishment works shall not substantially alter the existing structure of the Red House. Its original layout, brick wall structure and roof structure shall be kept.

6.8.4. The foundation works shall take into account the existing historic buildings and structures within and in the vicinity of the Project Site, and shall not incur ground settlement and impose vibration to such historic buildings and structures. The foundation works shall also induce minimum disturbance to existing historic buildings and structures and landscape.

6.8.5. Monitoring measures will be implemented during construction to ensure the structural integrity of the historic buildings and structures. A vibration control and monitoring scheme will be imposed in compliance with the Building Department's requirements for vibration-sensitive and dilapidated buildings. In this connection, different sets of monitoring points shall be set up at historic buildings and structures in the vicinity of the Project Site and within HKOHQ, with locations and monitoring frequency agreed by AMO.

6.8.6. Periodic condition surveys on surrounding historic buildings, structures and elements, as well as periodic visual inspections of the historic buildings and structures shall be conducted by the Contractor during the course of construction works. Monitoring data shall be submitted to the project team and AMO for information, comment and record.

6.8.7. AMO will be informed immediately in case of discovery of antiquities or supposed antiquities in the course of the works, so that appropriate mitigation measures, if needed, can be timely formulated and implemented in agreement with AMO.

6.8.8. Indirect visual impact on historic buildings and structures nearby due to construction works can be addressed by good housekeeping such as good on-site materials storage management.

Operational Phase

6.8.9. To minimise the Annex Block's indirect visual impact on historic buildings and structures within HKOHQ, its design should be sympathetic to HKOHQ's monumental nature in terms of proportion, form, design and materials. The Annex Block shall be physically and visually compatible with other historic buildings and structures within HKOHQ.

6.9. Ecology

Construction Phase

6.9.1. The Project is expected to reduce the plantation area in HKOHQ. If any flora species of conservation interest is identified within the Project Site, proper protection measures will be suitably adopted such as on-site protection or transplantation.

6.9.2. The plantation area within the Project Site may be potential roosting sites for birds and bats. Precautionary measures such as inspection of the presence of any birds and bats roosting within the Project Site shall be performed before conducting site clearance works. If any bats or bird species of conservation interest is observed roosting on a tree, a suitably sized buffer area shall be established around the tree to minimise human or machinery disturbance until they have left.

6.9.3. The impact of construction works on Collared Crows is assessed to be insignificant due to their high mobility. Thus, mitigation measures for Collared Crow are considered unnecessary. Appropriate noise mitigation measures for bats species, such as use of quieter equipment and noise barriers, will be implemented to minimise the adverse noise impacts on bats species during the construction phase.

Operational Phase

6.9.4. If birds or bats species is identified to be roosting within the Project Site, appropriate tree species shall be planted on-site after completion of all the construction works in order to allow for their re-colonisation.

6.10. Landscape and Visual Impact

Construction Phase

6.10.1. A Tree Preservation and Removal Proposal which covers tree protection and management proposal during construction shall be prepared in accordance with *DEVB TC (Works) No. 4/2020 Tree Preservation* during the project design stage.

6.10.2. A tree specialist shall be engaged to monitor the condition of existing trees during construction. Due care and attention under expert advice will be given to trees within the Project Site to minimise unnecessary disturbance and damage during construction.

6.10.3. For any tree removal, transplanting the affected trees locally will be first considered. Trees to be retained adjacent to the works area will be carefully protected to avoid damage by any construction activities. Compensatory planting which matches the species nearby will also be carried out in the Project Site and/or other HKO sites to compensate for the loss of any vegetation.

6.10.4. Landscape and visual impacts attributed to the temporary erection of scaffolding and hoardings in the Project Site during construction will be mitigated by good housekeeping such as good on-site materials storage management.

Operational Phase

6.10.5. Aesthetic consideration will be taken into account in the design of the Project to enhance the appearance of the Annex Block. Architectural and landscaping works will be undertaken to enhance the general landscape.

6.10.6. As mentioned in Section 6.8.9, the design of the Annex Block should be sympathetic to HKOHQ's monumental nature. The Annex Block shall be physically and visually compatible with but distinguishable from HKOHQ, such that it will not overwhelm the site while still be identified as a new building.

6.11. Possible Severity, Distribution and Duration of Environmental Effects

6.11.1. It is anticipated that most potential environmental impacts identified will last for the construction period only and be localised. With the implementation of appropriate mitigation measures, the Project is not expected to cause adverse environmental impacts which are insurmountable.

6.12. Further Implications

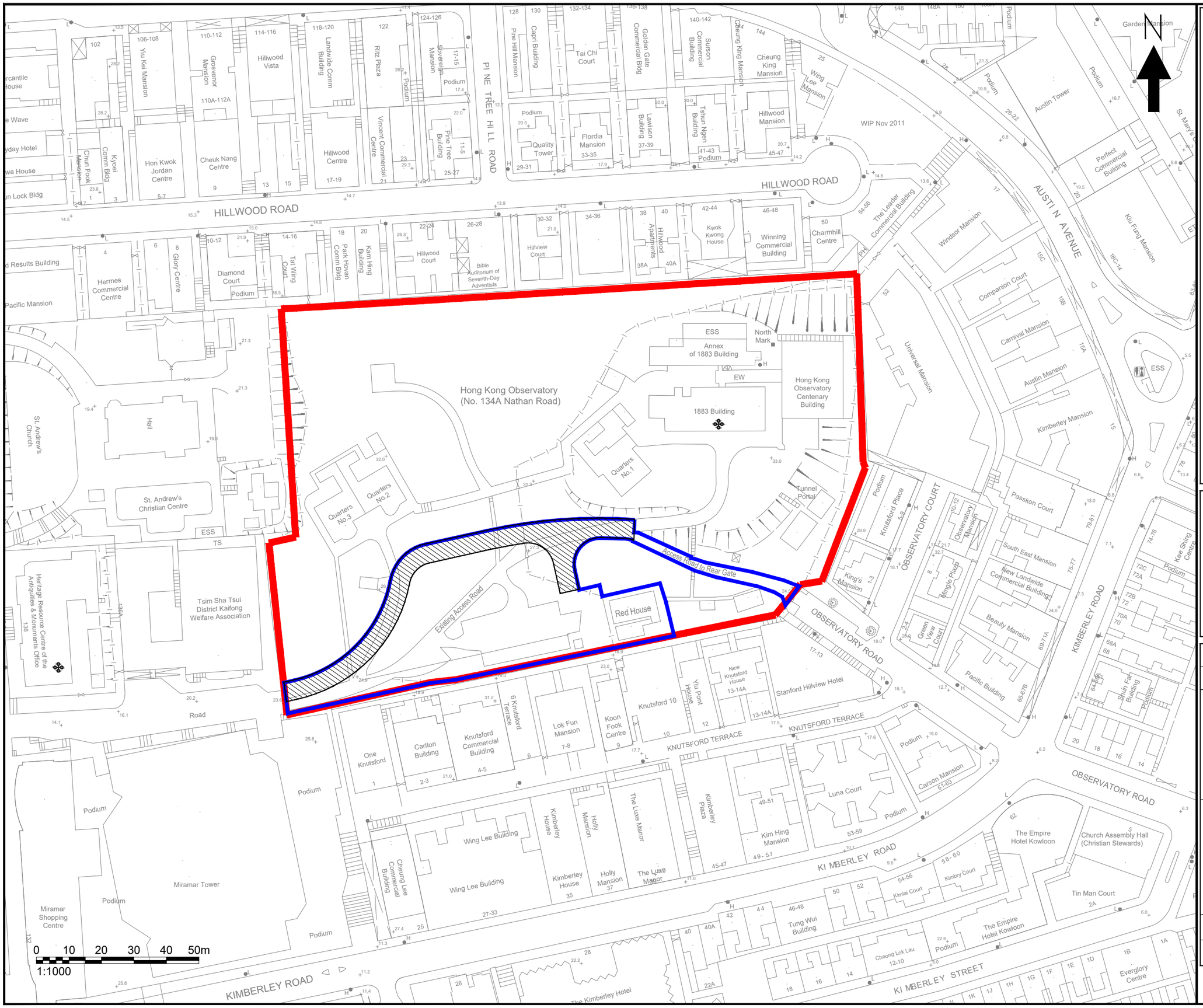
6.12.1. The Food, Environmental Hygiene and Public Works Committee of Yau Tsim Mong District Council (YTMDC) was consulted on the scope of the Project on 2 March 2021 and Members attended the meeting expressed their general support to the Project. Further consultation with YTMDC and other stakeholders will be conducted during the EIA Stage.

7. Use of Previously Approved EIA Reports

7.1.1. No previous EIA report has been approved or submitted for this Project. The following approved EIA report will be used as reference in the Study.

Title of EIA	Date of Approval	EIAO Register No.	Addressed Environmental Aspects in the EIA	Relevance Environmental Aspect to the Project	Relevance Control Measures to the Project
(1) Central Police Station Compound Conservation and Revitalisation	April 2011	AEIAR-162/2011	Air quality, noise, water quality, waste management, landscape and visual, cultural heritage	Air quality, noise, water quality, waste management, landscape and visual, cultural heritage	Construction control measures and management plan, Implementation of the Conservation Management Plan, Vibration Monitoring

Figures



NOTES :

PROJECT SITE
工程項目工地

BOUNDARY OF HONG KONG OBSERVATORY HEADQUARTERS (SAME AS THE BOUNDARY OF DECLARED MONUMENT)
尖沙咀天文台總部邊界範圍
(與法定古蹟範圍一樣)

PROPOSED EMERGENCY VEHICULAR ACCESS (EVA)
建議緊急車輛通道

Consultant

Allied Environmental Consultants Limited

Project No. :	1709
File Name :	–

Project :
CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :
SITE LOCATION PLAN
工程項目工地位置圖

Drawing No : FIGURE 2.1 圖2.1	Revision : 1
Scale : AS SHOWN 如圖示	Date : JUL 2021

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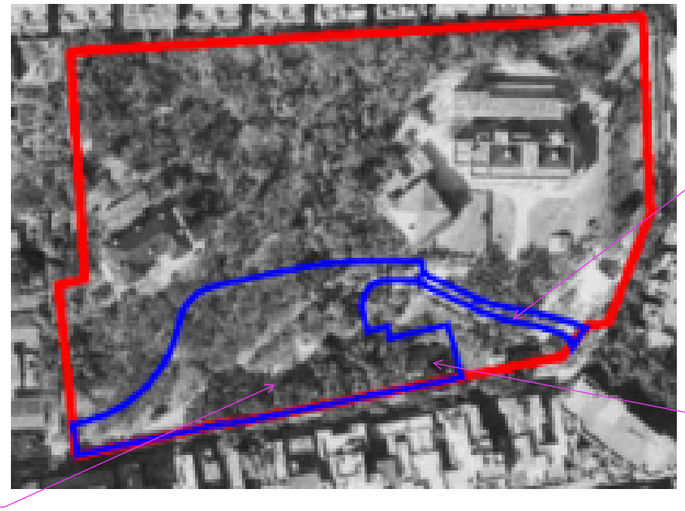
A4 297 x 210

Year 1945
1945年

Year 1968
1968年



Year 2020 (Present)
2020年 (現時)

NOTES :

PROJECT SITE
工程項目工地

BOUNDARY OF HONG KONG OBSERVATORY HEADQUARTERS (SAME AS THE BOUNDARY OF DECLARED MONUMENT)
尖沙咀天文台總部邊界範圍
(與法定古蹟範圍一樣)

Consultant

Allied Environmental Consultants Limited

Project No. : 1709

File Name : –

Project :
CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :
HISTORICAL AERIAL PHOTOS
歷史航攝照片

Drawing No : FIGURE 2.2 圖2.2
Revision : 0
Scale : AS SHOWN 如圖示
Date : JUN 2021

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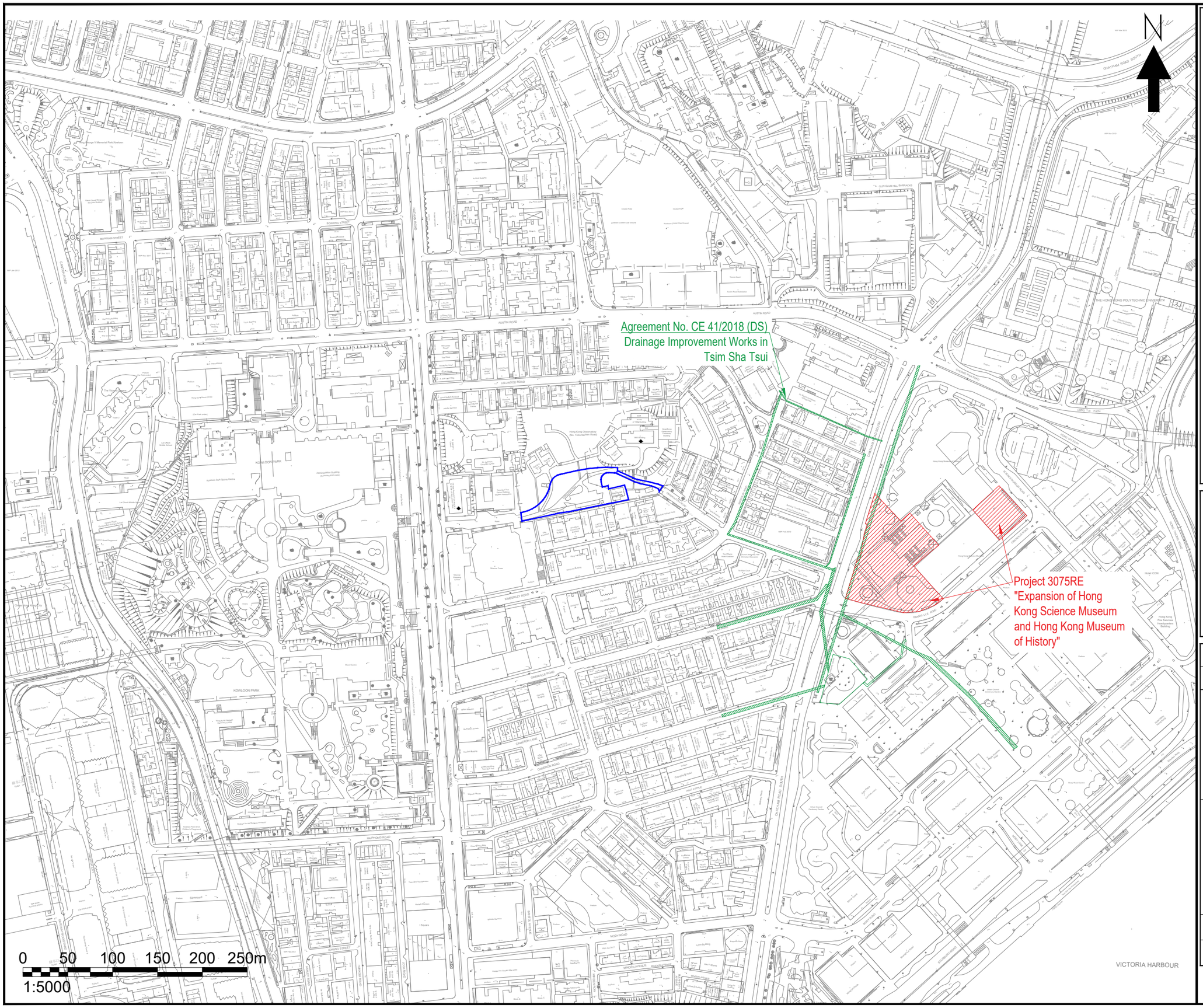

NOTES :

PROJECT SITE
工程項目工地

CONCURRENT PROJECT (i)
可能並進的鄰近項目 (i)

CONCURRENT PROJECT (ii)
可能並進的鄰近項目 (ii)

Consultant

Allied Environmental Consultants Limited

Project No. :	1709
File Name :	–

Project :

CONSTRUCTION OF ANNEX BLOCK
AT HONG KONG OBSERVATORY
HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :

LOCATION OF CONCURRENT PROJECT
並進的鄰近項目位置圖

Drawing No : FIGURE 3.1 圖3.1	Revision : 1
Scale : AS SHOWN 如圖示	Date : JUL 2021

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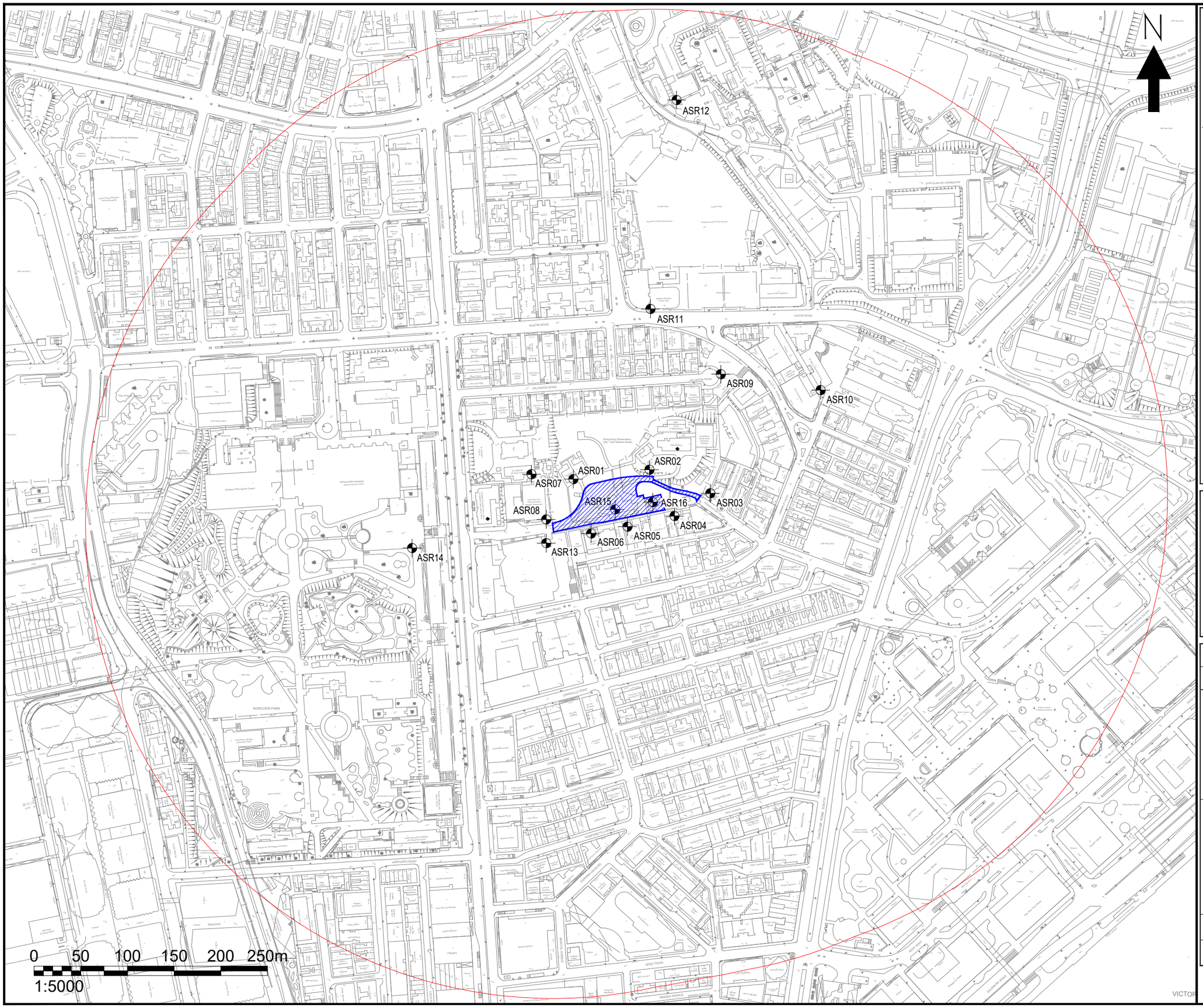

NOTES :

PROJECT SITE
工程項目工地

500m AIR ASSESSMENT AREA
500米研究範圍

REPRESENTATIVE AIR SENSITIVE RECEIVER
具代表性的空氣敏感受體

Consultant

Allied Environmental Consultants Limited

Project No. :	1709
File Name :	–

Project :

CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :

LOCATION OF REPRESENTATIVE AIR SENSITIVE RECEIVERS
具代表性的空氣敏感受體位置圖

Drawing No : FIGURE 4.1 圖4.1	Revision : 0
Scale : AS SHOWN 如圖示	Date : APR 2021

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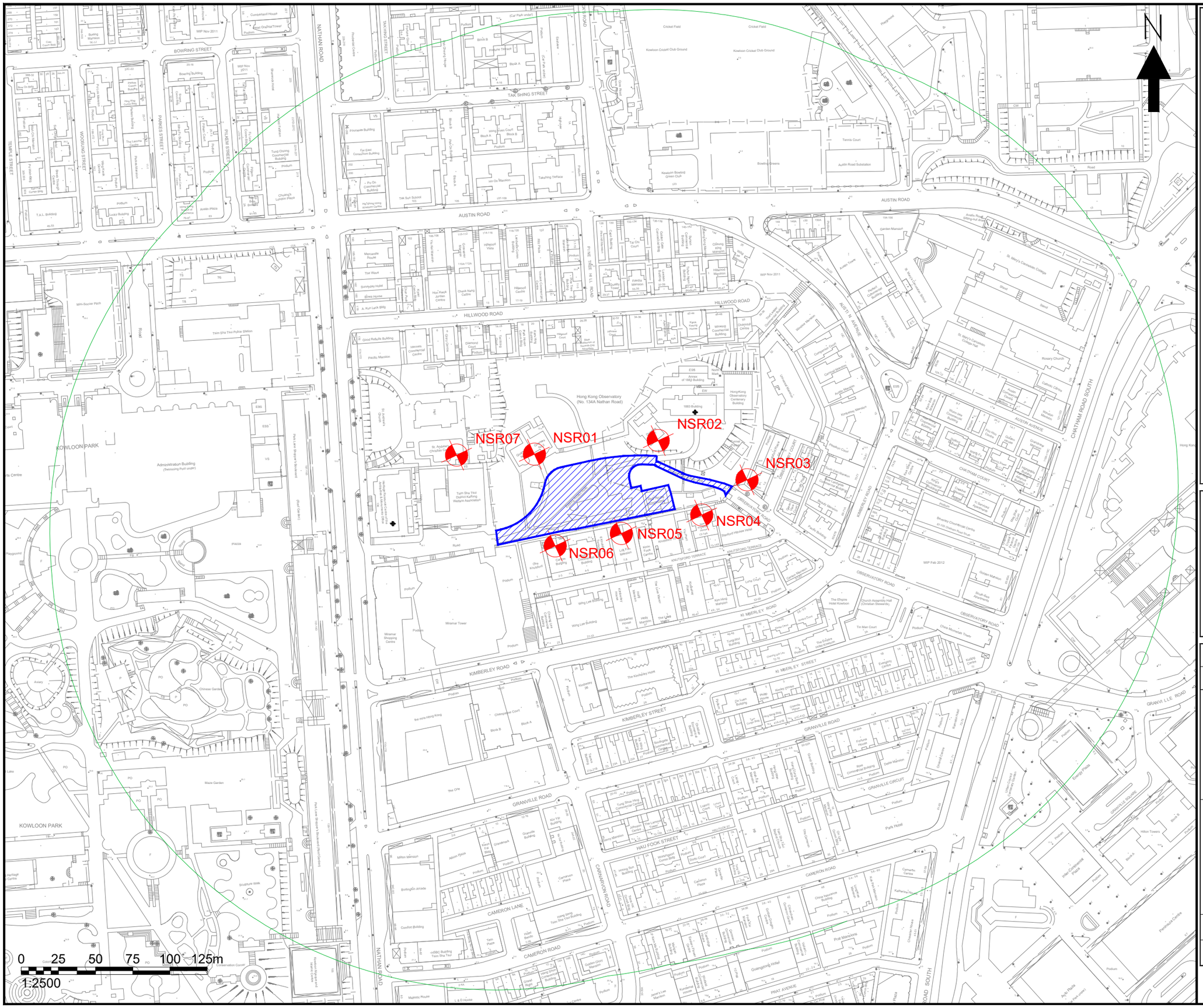

NOTES :

PROJECT SITE
工程項目工地

300m NOISE ASSESSMENT AREA
300米研究範圍

REPRESENTATIVE NOISE SENSITIVE RECEIVER
具代表性的噪音敏感受體

Consultant

Allied Environmental Consultants Limited

Project No. :	1709
File Name :	–

Project :

CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :

LOCATION OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS
具代表性的噪音敏感受體位置圖

Drawing No : FIGURE 4.2 圖4.2	Revision : 0
Scale : AS SHOWN 如圖示	Date : JUL 2021

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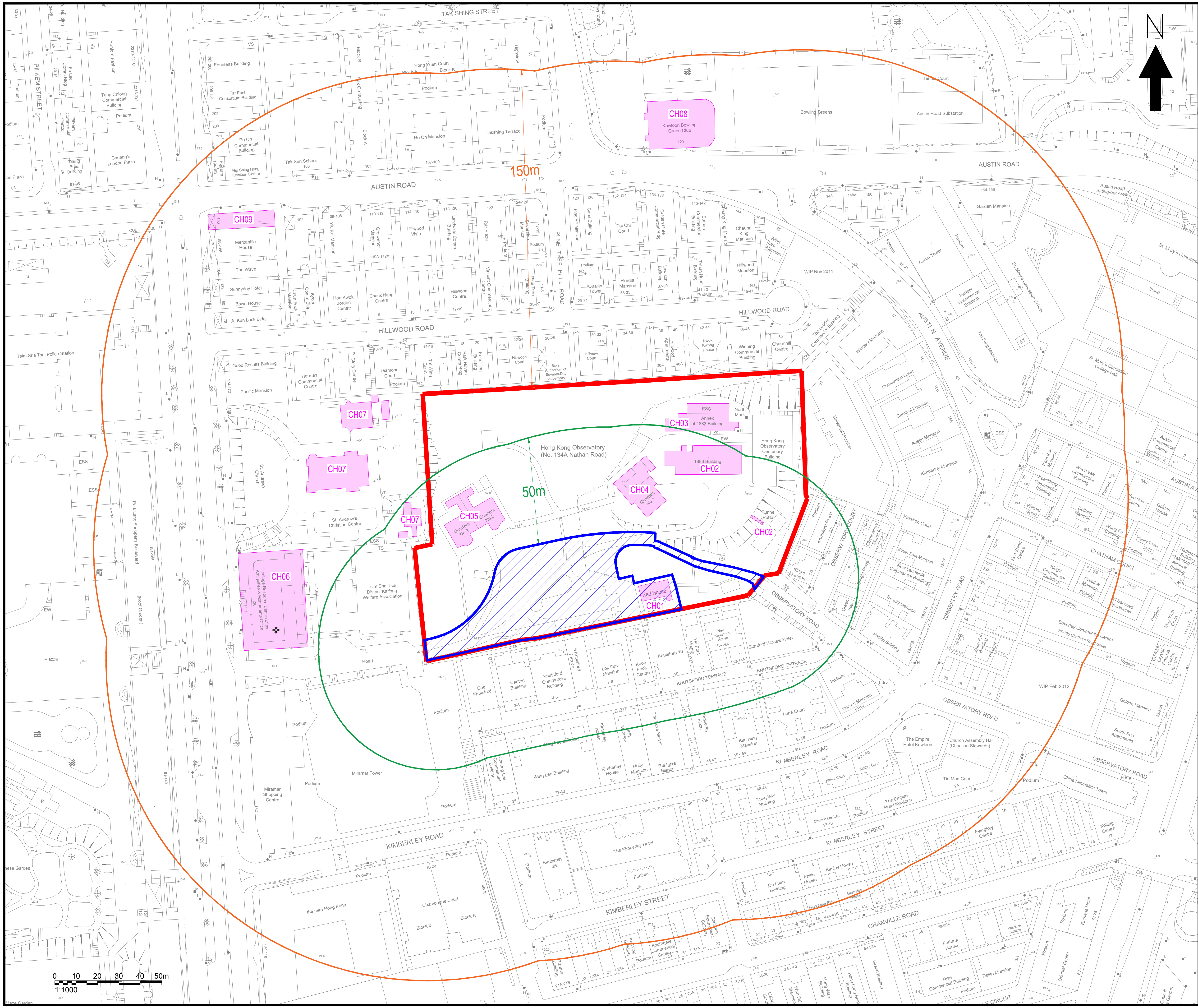

NOTES :

PROJECT SITE
工程項目工地

BOUNDARY OF HONG KONG OBSERVATORY HEADQUARTERS (HKOHQ) (SAME AS THE BOUNDARY OF DECLARED MONUMENT)
尖沙咀天文台總部邊界範圍 (與法定古蹟範圍一樣)

STUDY AREA WITHIN 150M FROM HKOHQ
尖沙咀天文台總部150米研究範圍

50M FROM PROJECT SITE BOUNDARY
本工程項目工地邊界50米範圍

CULTURAL HERITAGE
文化遺產

Consultant

Allied Environmental Consultants Limited

Project No. : 1709

File Name : –

Project :
CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :
LOCATION OF CULTURAL HERITAGE IN THE VICINITY OF THE PROJECT SITE
工程項目鄰近的文化遺產

Drawing No : FIGURE 4.3 圖4.3

Revision : 0

Scale : AS SHOWN 如圖示

Date : JUN 2021

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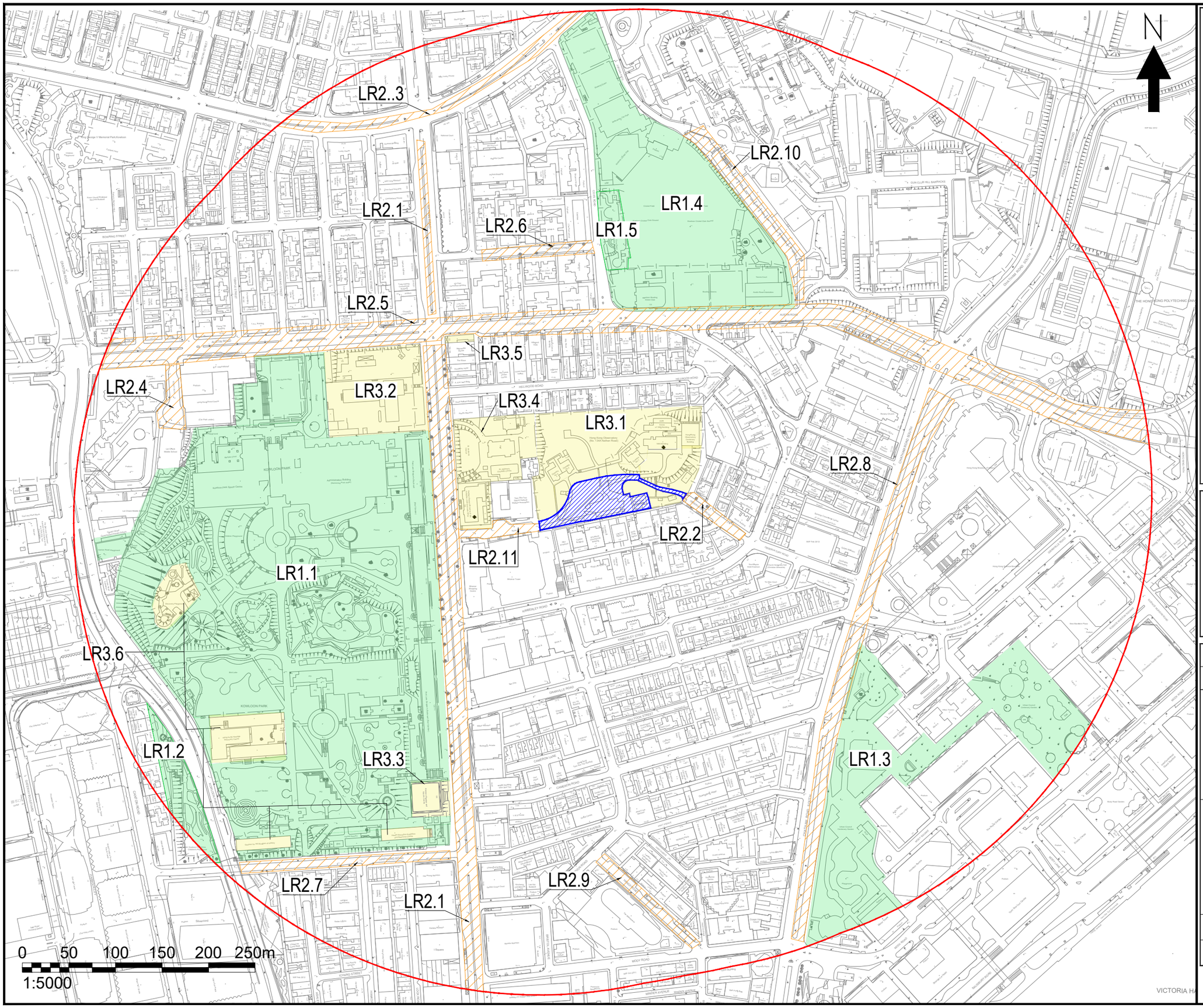

NOTES :

PROJECT SITE
工程項目工地

500m ASSESSMENT AREA
500米研究範圍

LR1: PARK / RECREATIONAL
LR1:公園及康樂用地

LR2: ROADSIDE PLANTING
LR2:路旁植物

LR3: INSTITUTIONAL BUILDINGS, CULTURAL AND HISTORICAL FEATURES
LR3:機構、文化歷史特色

Consultant

Allied Environmental Consultants Limited

Project No. :	1709
File Name :	–

Project :

CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :

LANDSCAPE RESOURCES

景觀資源

Drawing No : FIGURE 4.4 圖4.4	Revision : 0
Scale : AS SHOWN 如圖示	Date : JUN 2021

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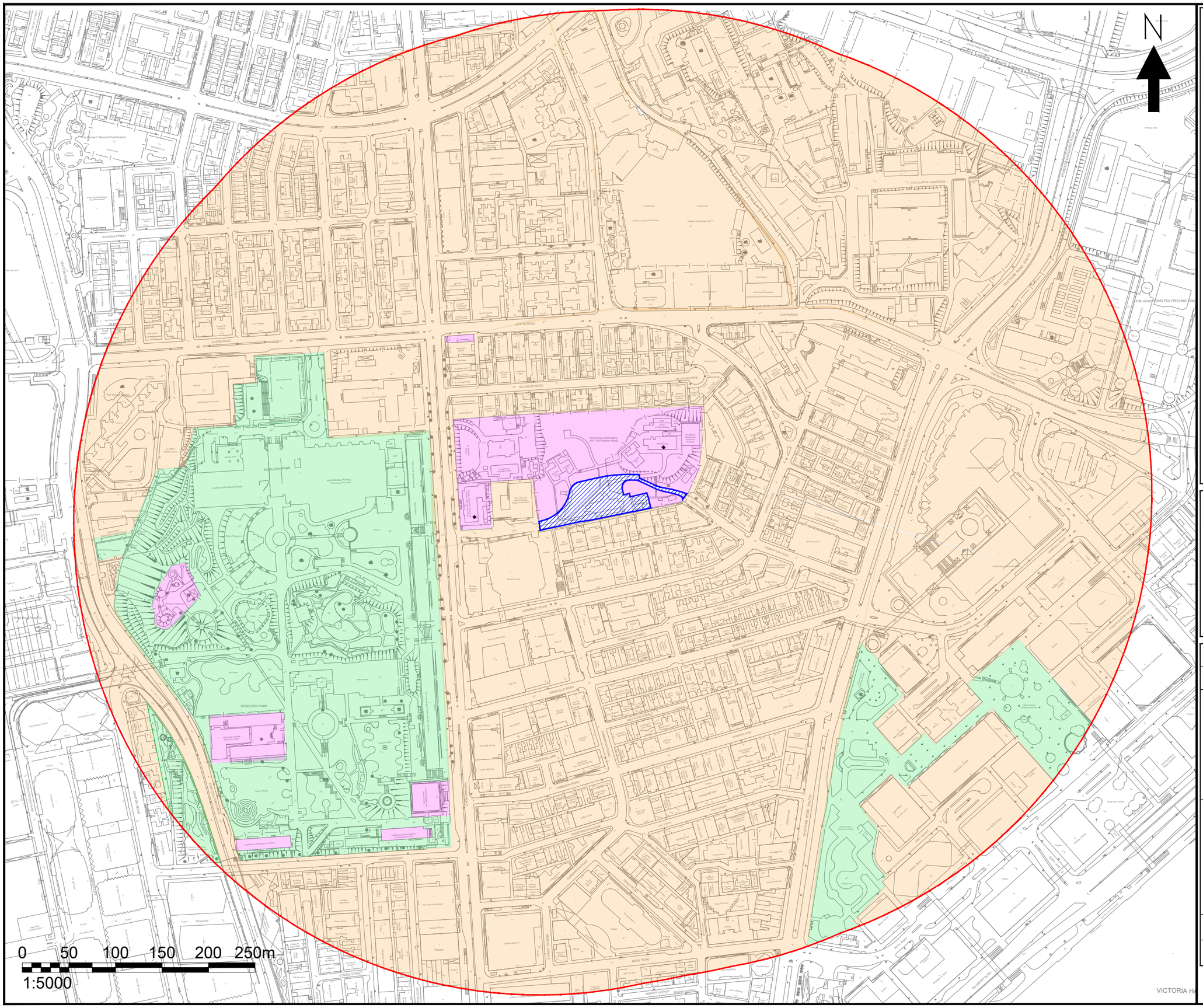

NOTES :

PROJECT SITE
工程項目工地

500m ASSESSMENT AREA
500米研究範圍

LCA1: PARK LANDSCAPE
LCA1:公園景觀

LCA2: MEDIUM/HIGH-RISE MIXED URBAN LANDSCAPE
LCA2:中高樓混合市區景觀

LCA3: HISTORICAL LANDSCAPE
LCA3:歷史景觀

Consultant

Allied Environmental Consultants Limited

Project No. :	1709
File Name :	–

Project :

CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :

LANDSCAPE CHARACTER AREAS

景觀特色區

Drawing No : FIGURE 4.5 圖4.5	Revision : 0
Scale : AS SHOWN 如圖示	Date : JUN 2021

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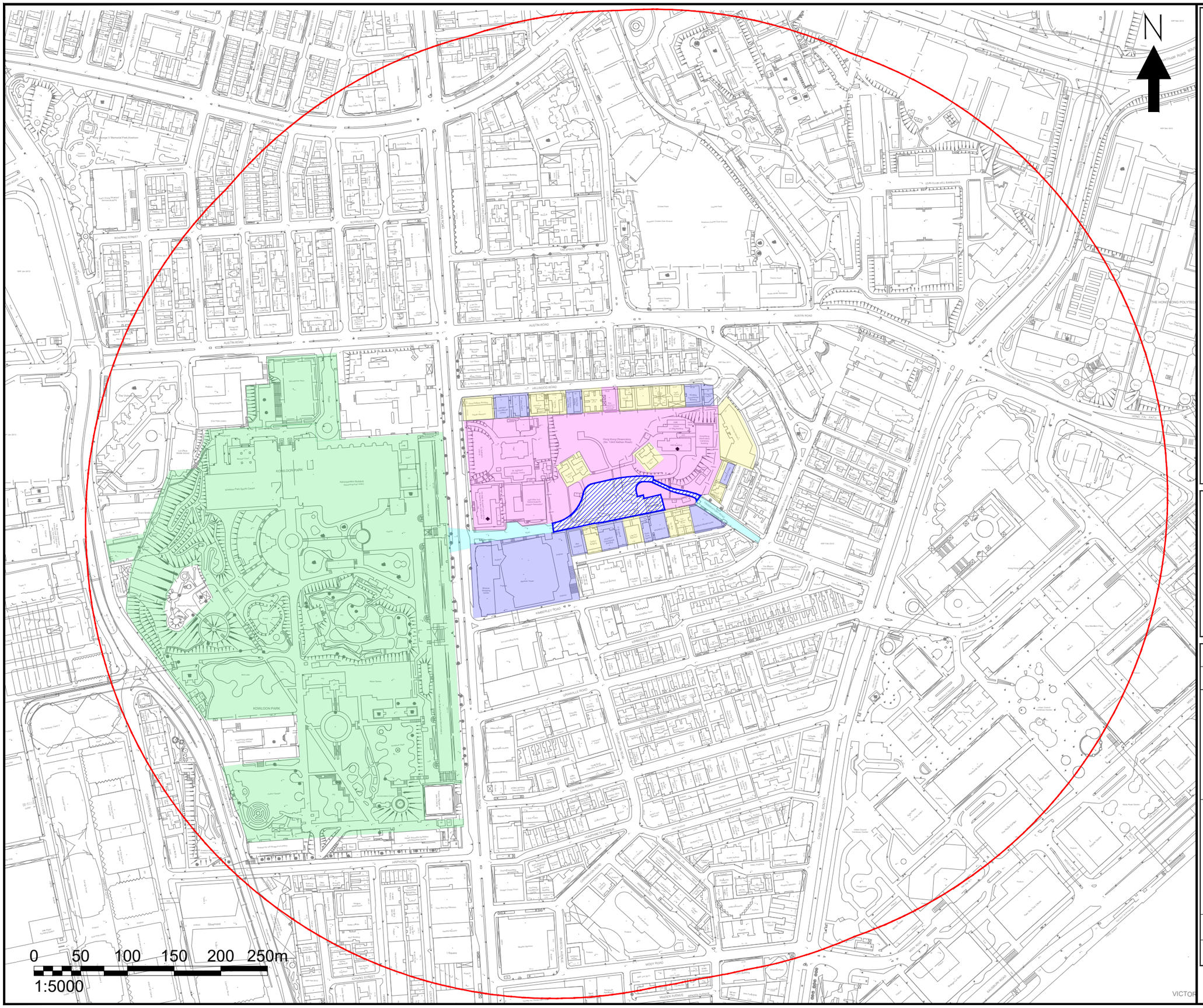

NOTES :

PROJECT SITE
工程項目工地

500m ASSESSMENT AREA
500米研究範圍

RESIDENTIAL VSRS
住宅視覺敏感受體

COMMERCIAL VSRS
商業視覺敏感受體

INSTITUTIONAL VSRS
機構視覺敏感受體

RECREATIONAL VSRS
康樂視覺敏感受體

TRANSIENT VSRS
短暫視覺敏感受體

Consultant

Allied Environmental Consultants Limited

Project No. :	1709
File Name :	–

Project :

CONSTRUCTION OF ANNEX BLOCK
AT HONG KONG OBSERVATORY
HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :

LOCATION OF REPRESENTATIVE
VISUAL SENSITIVE RECEIVERS
視覺敏感受體位置圖

Drawing No : FIGURE 4.6 圖4.6	Revision : 0
Scale : AS SHOWN 如圖示	Date : JUN 2021

A4 297 x 210

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Hong Kong Observatory
(No. 134A Nathan Road)

Photo 1
Photo 2
Photo 3
Red House
Existing Access Road
Access Road to Rear Gate

AUSTIN ROAD
HILLWOOD ROAD
PINE TREE HILL ROAD
OBSERVATORY ROAD
KIMBERLEY ROAD
KNUTSFORD TERRACE

0 10 20 30 40 50m
1:1000

NOTES :

PROJECT SITE
工程項目工地

BOUNDARY OF HONG KONG OBSERVATORY HEADQUARTERS (SAME AS THE BOUNDARY OF DECLARED MONUMENT)
尖沙咀天文台總部邊界範圍
(與法定古蹟範圍一樣)

PHOTO VIEW POINT
相片視點
Photo 1

Consultant

Allied Environmental Consultants Limited

Project No. :	1709
File Name :	–

Project :
CONSTRUCTION OF ANNEX BLOCK AT HONG KONG OBSERVATORY HEADQUARTERS, TSIM SHA TSUI
尖沙咀天文台總部副樓興建計劃

Drawing Title :
PHOTOLOG OF VISUAL SITE INSPECTION
實地考察相片

Drawing No : FIGURE 5.1 圖5.1	Revision : 0
Scale : AS SHOWN 如圖示	Date : APR 2021

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