

## 2. PROJECT DESCRIPTION

### 2.1. LOCATION AND SCOPE OF THE PROJECT

2.1.1. The Project Site is located at the southern side of HKO Headquarters at 134A Nathan Road, Tsim Sha Tsui, which is a Declared Monument under the *Antiquities and Monuments Ordinance (Cap.53)*. The Project aims to construct a new Annex Block in the form of a four-storey building located at the southern side of HKO Headquarters. The Project also covers refurbishment works to convert the existing Red House into a History Room. It is surrounded by HKO Quarters No. 1 to 3 to the north, Observatory Road to the southeast, commercial and residential buildings at Knutsford Terrace to the south and Tsim Sha Tsui District Kaifong Welfare Association to the west. According to the approved Tsim Sha Tsui OZP No. S/K1/28, the Project Site is currently zoned “G/IC”. The proposed building height is capped at +45 mPD.

2.1.2. As shown in [Figure 1.1](#), the Project Site is located in Tsim Sha Tsui District. The adjacent developments are identified and summarised as follows:

To the South:	New Knutsford House, Lok Fun Mansion, Carlton Building
To the East:	King’s Mansion, Bauhinia Hotel
To the North:	HKO Quarters No. 1 to 3, 1883 Building, Annex Building of 1883 Building
To the West:	St. Andrew’s Church, Tsim Sha Tsui District Kaifong Welfare Association, Mira Place

### 2.2. BACKGROUND AND HISTORY OF THE PROJECT

2.2.1. The historical land use activities in chronological order are summarised as follows.

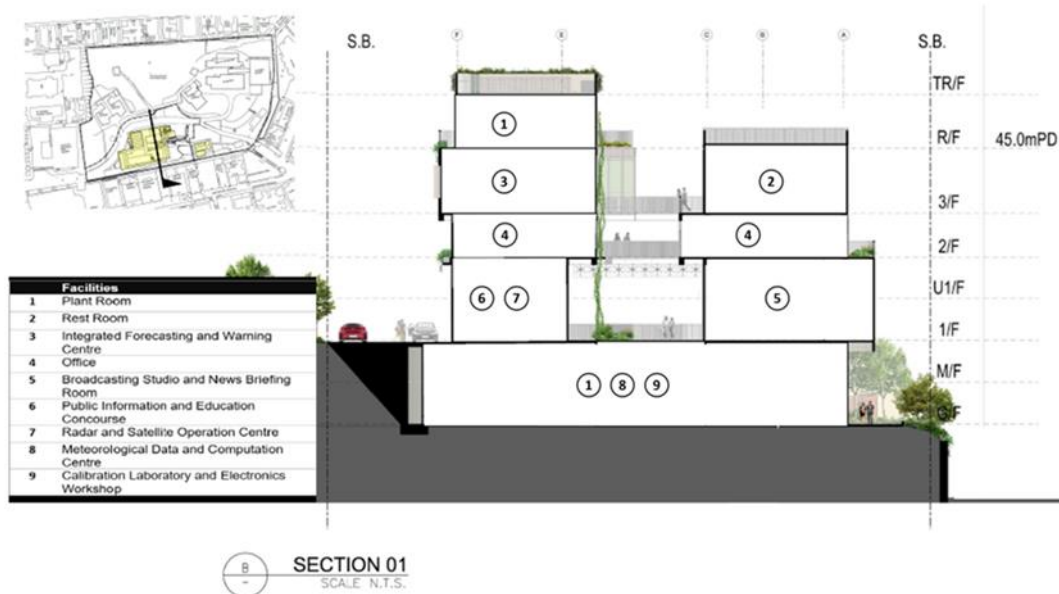
Before 1883	Covered by natural vegetation
1883	Occupied by HKO
1926	Built of Red House
1960 – Present	The rest of the Project Site is converted to an open carpark and an access road.

2.2.2. Buildings at HKO Headquarters are the first construction built on 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 HKO Headquarters are the only examples of architecture and structures for the Observatory’s operation in Hong Kong. Thus they are exceptional.

- 2.2.3. The northeast corner of HKO Headquarters, 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.
- 2.2.4. 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 a 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.

### 2.3. DESIGN OF THE PROJECT

- 2.3.1. The Project will mainly construct a new Annex Block in the form of a four-storey building (plus a mezzanine floor above G/F and U1/F above 1/F), with a proposed height of +45 mPD. The elevation drawing and rendering diagrams of the preliminary designs of the Project are set out in *Plate 2-1* to *Error! Reference source not found.*. The Project involves the following works:
- (a) Construction of a new Annex Block at HKO Headquarters, which mainly includes the following facilities:
    - Integrated Forecasting and Warning Centre (IFWC)
    - Multi-media Unit and Studio (MUST) including Broadcasting Studio and News Briefing Room
    - Public Information and Education Concourse (PIEC)
    - Radar and Satellite Operation Centre (RASOC)
    - Calibration Laboratory and Electronics Workshop (CLAW)
    - Meteorological Data and Computation Centre (MDCC)
    - Offices
    - Other associated and supporting facilities such as tentatively about 7 open car parking spaces for the Annex Block, outdoor space, file & general storage, general office furniture & equipment, Pantry, Conference Room, Interview Room, Shared-use Printer;
  - (b) Refurbishment works to convert the existing Red House into a History Room for showing the history of HKO;
  - (c) Road widening works for Emergency Vehicular Access (EVA) at the existing access road; and
  - (d) Minor public utility works and minor maintenance works to roads, slopes and utilities connecting to the existing HKO Headquarters.



**Plate 2-1 Elevation Drawing of the New Annex Block**



**Plate 2-2 Preliminary Design of the New Annex Block (1)**



**Plate 2-3 Preliminary Design of the New Annex Block (2)**



**Plate 2-4 Preliminary Design of the New Annex Block (3)**

## 2.4. OPERATION OF THE PROJECT

### *Operation Hours in the Project*

- 2.4.1. The majority of the new Annex Block for the office which would mainly operate during normal office hours (0830 to 1745 from Monday to Friday). To support the uninterrupted operation of HKO for monitoring and forecasting weather, as well as issuing warnings on weather-related hazards, the IFWC and MDCC would be operated for 24 hours every day. The Red House would be converted into the History Room, and its operation hours would depend on HKO's operation needs. The summary is shown in **Table 2.1** below:

**Table 2.1 Operation Hours of the Project**

<b>Facilities</b>	<b>Operation Hours</b>
IFWC and MDCC	Mon – Sun, 24 hrs
Others	Mainly normal office hours Mon – Fri, 0800 – 1800 hrs Outside office hours depending on HKO's operation needs (such as during inclement weather conditions)
PIEC and Red House	Weekdays (non-public holidays): around 1000 – 1630 hrs Weekends and public holidays: irregular operation during daytime subject to visitors appointments and HKO's manpower

- 2.4.2. The number of staff under normal circumstances working in the new Annex Block is estimated to be about 119 during daytime (tentatively 0800 to 1800 hrs) and about 8 in IFWC and MDCC round-the-clock, which is shown in **Table 2.2** below.

**Table 2.2 Total Number of Staff Working in the Project**

<b>Facilities</b>	<b>Total Number of Staff Working at Annex Block and Red House</b>	
	<b>Normal Office Hours (0830 - 1745 hrs)</b>	<b>Outside Normal Office Hours</b>
IFWC*	6-7	6-7
Operator Room of MDCC	1	1
Others	119	0
PIEC and Red House	Staff manning subject to visitors' number and appointments	Staff manning subject to visitors' number and appointments

\*with manpower reinforcement under inclement weather such as when tropical cyclone/rainstorm warning signal has been issued.

***Proposed Activities in the Project – Construction Phase***

2.4.3. The following construction processes and activities will be carried out in the Project:

Site Preparation and road works

- Site clearance;
- Site formation work;
- Slope upgrading and improvement work if any substandard non-registered slope feature is identified;
- Road widening work for EVA at the existing access road in HKO Headquarters in compliance with relevant rules and regulations;

***Excavation and Foundation***

- Excavation;
- Tree Management Work;
- Foundation work;

***Construction of Annex Block and Refurbishment of Red House***

- Superstructure works and external work;
- Refurbishment works (including reinstatement works) of the Red House;
- Underground utilities (UU) works connecting to existing HKO Headquarters; and
- Construction of open car parking spaces for the Annex Block.

2.4.4. Given that there are no existing buildings/structures at the Project Site, no demolition works will be carried out.

***Proposed Activities in the Project – Operation Phase***

2.4.5. 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:

- IFWC – for providing weather forecasting and warning services, radiation monitoring and assessment, and earthquake monitoring and tsunami warning services round-the-clock in an integrated manner;
- MDCC – for housing and operating HKO's computer systems which support HKO's round-the-clock mission-critical weather services;
- CLAW – for calibration, maintenance and storage of equipment, such as those for meteorological observation monitoring;
- Broadcasting Studio of MUST – for production of HKO's television and online weather programmes and educational programmes;

- News Briefing Room of MUST – for holding weather briefings and press conferences and organising public talks;
- PIEC – for organising exhibitions for public education purposes;
- RASOC – for reception, processing and display of data collected from radars and satellites;
- Rest Rooms - for shift duty officers to facilitate them to stay at HKO Headquarters under inclement weather situations to sustain round-the-clock essential weather services; and
- Offices – for normal office work of HKO’s staff.

## 2.5. CONSTRUCTION METHODOLOGY

- 2.5.1. Based on the preferred option of the Project under *Section 3*, at the commencement of construction, site formation works will be carried out and these will comprise the fencing of the site boundary, cutting and removal of unwanted rocks, shrubs, trees, levelling of the soil surface, excavation of soil to the required level with shoring if necessary. These tasks will involve the use of hand-held breakers and tracked excavators, etc...
- 2.5.2. Socketed H-Piles have been proposed as a foundation system in order to minimise the noise and vibration impacts on the surroundings. For the superstructure scheme, a conventional cast in-situ reinforced beam-slab system is recommended. The innovative construction method of reinforced concrete Modular Integrated Construction (MiC) will also be adopted for the superstructure construction at staff offices, restrooms, lavatories and pantry at 2/F and 3/F where applicable. It will be subdivided into pre-finished modules with building services provisions by means of off-site prefabrication.

## 2.6. PROJECT IMPLEMENTATION PROGRAMME

- 2.6.1. Subject to the availability of funding, findings of the EIA study and other constraints, the tentative programme for the Project is listed *Table 2.3* and [Appendix 2.1](#).

**Table 2.3 Tentative Programme**

Task		Tentative Timeline
Investigation and EIA Study		2019 Q3 – 2023 Q4
Construction works of the Project	Site preparation and road works	2025 Q3
	Excavation and Foundation	2025 Q3 – 2026 Q2
	Construction of Annex Block and Refurbishment of Red House	2026 Q2 – 2029 Q1

## 2.7. CONCURRENT PROJECTS

- 2.7.1. There are several concurrent projects in the vicinity of the Project Site, as also depicted in [Figure 2.1](#) and summarised in [Table 2.4](#). At this stage, consideration of concurrent projects for cumulative environmental impacts will only take into account those with the available implementation programmes. Cumulative impacts from existing, committed and planned major concurrent projects, if any, have been assessed in the individual sections of this EIA study.

**Table 2.4 List of Potential Concurrent Projects**

Concurrent Projects	Potential Cumulative Impacts	
	Construction Phase	Operation Phase
Agreement No. CE 41/2018 (DS) Drainage Improvement Works in Tsim Sha Tsui – Investigation, Design and Construction (Construction works commenced on 29 Mar 2019 and scheduled to be completed in 2029 tentatively)	✓	✗
Project 3075RE “Expansion of Hong Kong Science Museum and Hong Kong Museum of History” (Construction: 2026 to 2027)	✓	✗

## 2.8. IDENTIFICATION OF KEY ENVIRONMENTAL ISSUES

- 2.8.1. The identified key environmental issues during the construction and operation phases include the following:

### During Construction Phase

- Potential dust impacts arising from the construction works activities of the Project;
- Potential noise impacts arising from the construction works activities of the Project;
- Potential water quality and sewerage impacts arising from the construction works activities and workforce;
- Potential waste management implication arising from the construction works activities;
- Potential impact to the site of cultural heritage in particular the entire premises of HKO Headquarters which is a declared monument and its integrity, arising from the construction of the Project;
- Potential landscape and visual impacts arising from the construction works activities; and
- Potential cumulative environmental impacts through interaction or in combination with other existing, committed and planned concurrent projects.



### During Operation Phase

- Potential air quality impacts under normal operating condition of the Project;
- Potential fixed noise impacts arising from operation plant in the vicinity of the Project;
- Potential sewerage impacts arising from the workforce in the Project;
- Potential impact to the site of cultural heritage in particular the entire premises of HKO Headquarters which is a declared monument and its integrity, arising from the operation of the Project;
- Potential landscape and visual impacts arising from the operation of the Project; and
- Potential cumulative environmental impacts of the Project, through interaction or in combination with other existing, committed and planned projects in the vicinity of the Project, and that those impacts may have a bearing on the environmental acceptability of the Project.

2.8.2. Impacts on ecology, hazard to life and land contamination are not expected due to the construction and operation of the Project, and have not been included in the EIA study.

### Ecological

2.8.3. HKO Headquarters 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 overall impact on the surrounding urban environment and the species identified therein is considered insignificant.

### Hazard to Life

2.8.4. 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 operation 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. liquified petroleum gas station). Hazard to life issue is not anticipated during the construction and operation phases.

### Land Contamination

2.8.5. The Project Site was previously a vegetated area and has been converted into an open carpark and an access road since the 1960s until now. The past and present land use of the Red House did not involve potential land contamination activities and there were no storage of dangerous goods, chemicals and chemical waste. Land contamination is not expected.

2.8.6. According to the visual site inspection in 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. Given that there is no usage of chemicals or dangerous goods on site prior to the development and no intended uses during the construction phase and operation phase, land contamination within the Project Site is considered unlikely.

## **2.9. PUBLIC CONSULTATION**

- 2.9.1. 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. The Project Profile for EIA study was exhibited to the public for comments on 21 September 2021 for 14 days.
- 2.9.2. Comments received from the Members of YTMDC and the general public mainly focused on the potential impacts of the Project on the nearby residents and natural environment. The main concerns raised on the Project and how the relevant concerns have been addressed are summarized in [Appendix 2.2](#).