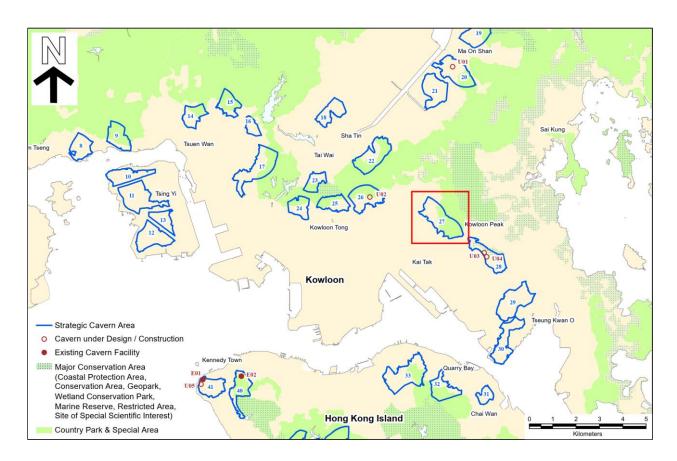
# <u>CAVERN MASTER PLAN – INFORMATION NOTE</u>

# <u>STRATEGIC CAVERN AREA NO. 27 – FEI NGO SHAN</u>

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 27 - Fei Ngo Shan (the SCVA). It also denotes the extent of potential portal locations. The spatial context of the SCVA is illustrated in the Reference Drawing appended to this Information Note.

Reference should be made to the Explanatory Statement of the Cavern Master Plan for its background and purposes, as well as the definition and delineation criteria of SCVAs.

## 1. Location Plan



## 2. Strategic Cavern Area Details

Outline Zoning Plans (OZPs)<sup>1</sup>: Ngau Chi Wan OZP

Tseng Lan Shue OZP

Area: 146.4 ha

Maximum elevation in the SCVA: +602 mPD

Minimum elevation in the SCVA: +62 mPD

#### 3. District Context

#### Location

The SCVA is located at Fei Ngo Shan (Kowloon Peak) which is located in East Kowloon. Ma On Shan Country Park is located to the northeast of the SCVA, Fei Ngo Shan and Jordan Valley are to the southeast, Ngau Chi Wan and Wong Tai Sin is to the southwest, Tsz Wan Shan and Lion Rock Country Park are to the northwest.

The SCVA is generally hilly with a maximum elevation of about +602 mPD. About half of the SCVA, on its eastern side, encroaches onto Ma On Shan Country Park. To the southeast of the SCVA, Jordan Valley and Fei Ngo Shan are home of some low- to high-rise residential developments, including Shun Chi Court (about 200 m to the southeast of the SCVA), Shun Lee Estate (about 400 m to the southeast of the SCVA) and Flamingo Garden (about 500 m to the east of the SCVA). Adjacent to Jordan Valley to its east, the Anderson Road Quarry (ARQ) has ceased quarrying operation in 2017. The "Planning Study on Future Land Use at ARQ – Feasibility Study" completed in 2014 recommended using the quarry site for housing development with supporting commercial, Government, Institution or Community (GIC) and open space uses.

To the southwest of the SCVA, Ngau Chi Wan and Wong Tai Sin are major residential communities with high-rise residential developments, including Choi Fai Estate (at the southwestern boundary of the SCVA), Aria (at the southwestern boundary of the SCVA) and Upper Wong Tai Sin Estate (about 1,600 m to the west of the SCVA). To the northwest of the SCVA, Tsz Wan Shan is another major residential areas in the district which consists of a number of sizeable high-rise public housing developments, including Chuk Yuen (North) Estate (about 1,400 m to the west of the SCVA).

<sup>&</sup>lt;sup>1</sup> For details of the latest land use zonings on the OZPs, please refer to the Town Planning Board Statutory Planning Portal 3 (<a href="https://www.ozp.tpb.gov.hk/">https://www.ozp.tpb.gov.hk/</a>).

The development of these major residential areas is supported by a number of key Government, Institution or Community (GIC) facilities, including various service reservoirs such as Choi Wan Road Fresh & Salt Water Service Reservoirs (about 550 m to the south of the SCVA), Ngau Chi Wan Fresh Water Service Reservoir (about 300 m to the southwest of the SCVA) and Diamond Hill No. 2 Fresh Water Service Reservoir (about 200 m to the west of the SCVA). Various columbarium related facilities are in close proximity to the SCVA, such as Diamond Hill Urn Cemetery, Diamond Hill Crematorium and Diamond Hill Columbarium (all at the northwestern boundary of the SCVA).

#### Access

The SCVA is accessible from its southeastern and western edges via Fei Ngo Shan Road and Fung Shing Street. Regional connections could be routed through the nearby New Clear Water Bay Road, Lung Cheung Road and Tate's Cairn Tunnel.

The MTR Kwun Tong Line and Tuen Ma Line serve the locality of Wong Tai Sin and Ngau Chi Wan. The nearest stations include Choi Hung Station (Kwun Tong Line; about 700 m to the southwest of the SCVA) and Diamond Hill Station (interchange of Kwun Tong Line and Tuen Ma Line; about 800 m to the southwest of the SCVA). Connecting minibus and bus services to the MTR stations are also established in the locality to serve the existing residential developments.

According to Chief Executive Policy Address in 2023 and the Hong Kong Major Transport Infrastructre Development Blueprint promulgated in 2023, the proposed Smart and Green Mass Transit System in East Kowloon is located to the south of the SCVA (subject to study)

# Existing / Planned Facility in SCVA

There is no existing or planned cavern facility within the SCVA.

## 4. Summary of Characteristics of Strategic Cavern Area

#### 4.1. Boundary

The northwestern boundary of the SCVA is defined by Diamond Hill Urn Cemetery and Diamond Hill Crematorium. The southeastern boundary of the SCVA is defined by private lots and Clear Water Bay Road. The southwestern boundary of the SCVA is defined by Jat's Incline, Fung Shing Street, residential developments, including Hill Top Gardens, Scenic View, Aria and Choi Fai Estate, and GIC developments, including Good Hope School, Caritas Pelletier Hall, Fung Shing Street Disciplined Services Quarters and Ngau Chi Wan Park. Individual private lots located within the SCVA have been excised from the SCVA. Project proponents shall check the latest land status with the Lands Department. Reference should be made to the Explanatory Statement of the Cavern Master Plan for the delineation criteria of SCVAs.

## 4.2. Geology

The solid geology of the SCVA is primarily medium-grained granite in the western portion, which belongs to Kowloon Granite; and coarse-ash crystal tuff with tuffaceous sandstone in the eastern portion, which belongs to Mount Davis Formation. The SCVA is with the rock types that are suitable for the uses of rock caverns. A number of geological features, such as faults and photolineaments, are identified within and in areas surrounding the SCVA. The excavated medium-grained granite within the SCVA is suitable for use as construction aggregate. Other excavated rock can be used as road base materials and for asphalt production, etc.

Further geological information of the SCVA can be found on the 1:20,000-scale Geological Map Sheet 11 (Hong Kong & Kowloon) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

## 4.3. Planning

The SCVA is close to the existing urban developments in Jordan Valley, Ngau Chi Wan, Wong Tai Sin and Tsz Wan Shan.

The southeastern, southwestern and northwestern sides of the SCVA are the major residential development areas in Jordan Valley, Ngau Chi Wan, Wong Tai Sin and Tsz Wan Shan. These areas consist of various low- to high-rise residential developments (e.g. Flamingo Garden, Shun Chi Court, Choi Fai Estate and Chuk Yuen (North) Estate) supported by a number of GIC facilities (e.g. schools, sports centre, service reservoirs, etc.).

#### 4.4. Environmental

Environmental sensitive receivers to the potential caverns in the SCVA are the nearby existing residential developments (e.g. Fu Shan Estate, King Shan Court, Scenic View, Windsor Castle, Bellevue Villa, Fei Ngo Shan Road No. 5, Choi Fai Estate, Fung Shing Street Disciplined Services Quarters, Aria and Hill Top Gardens), schools (e.g. Caritas Pelletier School and Good Hope School) and institution (e.g. Caritas Pelletier Hall). The SCVA comprises wooded areas and shrubby hillsides, and encroaches onto Ma On Shan Country Park. Ho Chung Valley Site of Special Scientific Interest is located to the northeast of the SCVA. A government historic site identified by Antiquities and Monuments Office (AMO), namely New Kowloon Boundary Stone (Jat's Incline, near Good Hope School), is situated at the south-eastern portion of SCVA. The southwestern portion of the SCVA encroaches onto the consultation zone of the closed Ngau Chi Wan Landfill. In respect of the potential landfill gas from the closed landfill sites, risk assessment would be required during the planning stage and before commencement of works. There are natural or modified surface water courses within the SCVA. Kowloon Peak Transposer Station is located at the eastern boundary of the SCVA, which may necessitate further investigation on potential of land contamination by the project proponents when considering cavern options in the vicinity.

All potential environmental constraints, which may impose restrictions on the potential caverns, should be identified and taken into account under the Environmental Impact Assessment Ordinance (EIAO) and other relevant ordinances, such as the Country Parks Ordinance. Project proponents are required to take into account the potential environmental constraints when considering cavern options and undertaking the environmental impact assessment under the EIAO to determine its environmental acceptability, potential environmental impacts and environmental mitigation measures required.

#### 4.5. Traffic

The SCVA can be accessed from its southeastern and western edges via Fei Ngo Shan Road and Fung Shing Street respectively, which are both two-lane access roads. Regional connections could be routed through the nearby New Clear Water Bay Road, Lung Cheung Road and Tate's Cairn Tunnel.

The extent of potential portal locations on the access road near Ngau Chi Wan Park off the southern section of Fung Shing Street and Fei Ngo Shan Road are well located within the primary road network with good direct connection to New Clear Water Bay Road and with nearby arterial connections in Ngau Chi Wan to Kwun Tong Road, Kwun Tong Bypass and Lung Cheung Road. The one-way arrangement of Jat's Incline will significantly restrict the viability of a portal in this location unless road widening is undertaken. The extent of potential portal locations on the northern section of Fung Shing Street can be easily accessed from arterial roads via Hammer Hill Road.

Traffic problem has been an on-going issue for the locals in Wong Tai Sin District (e.g. congestion at the junction of New Clear Water Bay Road and Lung Cheung Road), particularly for the residents in the vicinity of Fung Shing Street. There is currently a 23 tonnes vehicle weight restriction imposed at Fung Shing Street (northern section). Also, it is noteworthy that the huge crowd of public visiting the nearby cemeteries during Ching Ming and Chung Yeung Festivals have caused severe congestion in the nearby roads. The project proponent would be required to assess the traffic impacts to the road networks in the vicinity and carry out traffic improvement measures so as to ensure that the traffic infrastructure could cope with the additional traffic flow brought by the project when formulating cavern options in any development proposals in the SCVA.

## 4.6. Other Key Issues / Constraints on Cavern Development

A Drainage Services Department's tunnel, namely Tolo Harbour Effluent Export Scheme Tunnel, is approximately 500 m to the west of the SCVA. A vehicle tunnel, namely Tate's Cairn Tunnel, is approximately 200 m to the west of the SCVA. As they are far from the SCVA boundary, they would not pose any insurmountable constraint on the potential uses of rock caverns.

#### 5. Extent of Potential Portal Locations

The extent of the potential portal locations is shown on the Reference Drawing.

The SCVA is accessible from Fung Shing Street on the western boundary, from the access road near Ngau Chi Wan Park off Fung Shing Street on the southern boundary and from Fei Ngo Shan Road on the southeastern boundary.

The extent of potential portal locations on the northern Fung Shing Street and Fei Ngo Shan Road is located on slopes alongside the carriageways, and access could be provided via provision of suitable run-in/out or priority controlled junctions, depending on the proposed land-use. Road widening would probably be required at the potential portal location at Fei Ngo Shan Road. This location is also close to a hiking footpath and Ma On Shan Country Park. Project proponents should carry out further studies to identify if there is other suitable portal location and minimise the disturbance to the public when developing portal access Fei Ngo Shan Road. The construction of portal and the associated works (e.g. slope works and road widening works) at Fei Ngo Shan Road should be sited away from Ma On Shan Country Park as far away as possible to reduce any possible ecological, visual and recreational impacts to the country park and its users.

The current access for the extent of potential portal location on the access road off Fung Shing Street is a single-lane road leading to the car park of Ngau Chi Wan Park and would be suitable for low traffic-generating activities. The road and its connection would need suitable widening to allow for two-way traffic in order to support moderate to high traffic-generating activities that would require frequent vehicle access in and out of the cavern facilities. The project proponent shall conduct necessary assessment when developing this potential portal location.

There are natural slopes above the potential portal locations. There are potential natural terrain hazards in the vicinity which may require further study by the project proponents.

Project proponents should carry out further studies on identifying specific location of portals for projects considering cavern options.

## 6. Remarks to Information Note

The Cavern Master Plan and all supporting documents do not exempt project proponents for cavern projects from following the relevant statutory procedures. Information including the extent of potential portal locations indicated in this Information Note should serve as reference materials only. In formulation of development proposals, project proponents should conduct the necessary studies and assessments relevant to each project stage. Reference should be made to the "Implementation" section of the Explanatory Statement of the Cavern Master Plan for further details.

