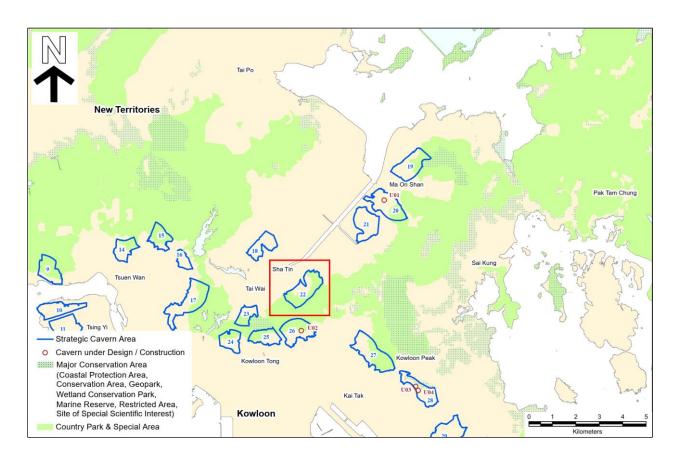
# **CAVERN MASTER PLAN – INFORMATION NOTE**

# STRATEGIC CAVERN AREA NO. 22 – TAI WAI EAST

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 22 - Tai Wai East (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 Plan (OZP)<sup>1</sup>: Sha Tin OZP

Area: 127.6 ha

Maximum elevation in the SCVA: +341 mPD

Minimum elevation in the SCVA: +20 mPD

#### 3. District Context

#### Location

The SCVA is located to the south of the Sha Tin New Town, which is to the north of Kowloon, separated by a range of hills including Lion Rock and Beacon Hill. It covers the hillside area to the east of Tai Wai in Sha Tin. Sha Tin New Town is to the north of the SCVA, Tai Wai is to the west, Lion Rock Country Park is to the south and Ma On Shan Country Park is to the east (not covered in the Reference Drawing).

The SCVA is generally hilly with a maximum elevation of about +341 mPD. The majority of the SCVA encroaches onto Lion Rock Country Park. Part of the Sha Tin Tau New Village is within the central portion of the SCVA. To the north and west of the SCVA, there are the Sha Tin New Town and Tai Wai areas which mainly consist of medium- to high-rise residential developments (e.g. Sun Tin Wai Estate about 50 m to the northwest of the SCVA, Shui Chuen O Estate about 200 m to the northeast of the SCVA and Festival City about 900 m to the northwest of the SCVA) and a number of local villages (e.g. Tsok Pok Hang San Tsuen near the northern boundary of the SCVA and Kak Tin Village about 100 m to the west of the SCVA).

In the proximity of the SCVA, there are some key Government, Institution or Community (GIC) facilities supporting the development of Sha Tin New Town, including Shui Chuen O Fresh Water Service Reservoir (about 200 m to the east of the SCVA) and Union Hospital (about 600 m to the southwest of the SCVA).

#### Access

The SCVA is accessible from its northern, western and southwestern edges via Tsok Pok Hang Road, Sha Tin Tau Road and Lion Rock Tunnel Road. Regional connections could be routed through the nearby Lion Rock Tunnel Road and Tsing Sha Highway.

<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 MTR East Rail Line and Tuen Ma Line run through the locality of the SCVA. Several stations are close to the SCVA, including Sha Tin Wai Station and Che Kung Temple Station of Tuen Ma Line (both about 400 m to the north of the SCVA), Hin Keng Station of Tuen Ma Line (about 1 km to the west of the SCVA) and Tai Wai Station which is the interchange station of the two railway lines (about 1 km to the northwest of the SCVA).

# 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 northeastern boundary of the SCVA is defined by Tsok Pok Hang San Tsuen, Shui Chuen Au Street and The Hong Kong Girl Guides Association Pok Hong Camp Site. The northwestern boundary of the SCVA is defined by Lion Rock Tunnel Road, Sha Tin Road, a permitted burial ground and private lots in Sha Tin Tau New Village. The southeastern boundary of the SCVA is defined by the valley topography. Individual private lot and permitted burial ground located within the SCVA have been excised from the SCVA. Project proponents shall check the latest land status with 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, which belongs to Shui Chuen O Granite; and fine-grained granite and quartz monzonite, which belong to Tei Tong Tsui Quartz Monzonite; and coarse-grained granite at the northern portion of the SCVA; which belongs to Shui Chuen O Granite. The SCVA is with the rock types that are suitable for the uses of rock caverns. A number of geological features, such as faults, photolineaments and isolated dykes, are identified within and in the areas surrounding the SCVA. The fine-grained granite and medium-grained granite within the SCVA are suitable for reuse as construction aggregate. Other excavated rock can be used as road base material and for asphalt production, etc.

Further geological information of the SCVA can be found on the 1:20,000-scale Geological Map Sheet 7 (Sha Tin) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

# 4.3. Planning

The SCVA is close to the existing urban developments in Sha Tin New Town and Tai Wai, and is well connected to the rest of the territory by several highways and railways. The northern and western sides of the SCVA are the major residential development areas in Sha Tin New Town and Tai Wai. These areas consist of various medium- to high-rise residential developments (e.g. Sun Tin Wai Estate and Festival City) and local villages (e.g. Tsok Pok Hang San Tsuen and Kak Tin Village) supported by a number of GIC facilities (e.g. sports ground, hospital, school, sewage treatment plant, service reservoir, etc). Given that the SCVA is in close proximity to these existing residential developments, there is potential for the SCVA to support these communities by providing additional community facilities (e.g. indoor games/sports hall).

#### 4.4. Environmental

Environmental sensitive receivers to the potential caverns in the SCVA are the nearby existing residential developments (e.g. Sun Tin Wai Estate, Sha Tin Tau New Village, Tsok Pok Hang San Tsuen, Shui Chuen O Estate and Kak Tin Village) and schools (e.g. Sha Tin Government Primary School). The SCVA comprises wooded areas and shrubby hillsides, and encroaches onto Lion Rock Country Park and Water Gathering Grounds. Ma On Shan Country Park is also located to the east of the SCVA. A traditional permitted burial ground lies within the SCVA and some others are located in the proximity of the SCVA. A number of graded historic buildings are located near the SCVA, including Tsang Tai Uk (Grade 1 historic building), Ng Yuen (Grade 3 historic building), Lau Ancestral Hall (Sha Tin Tau) (Grade 3 historic building), Che Kung Temple (Sha Tin) (Grade 2 historic building), and High Rock Christian Camp (Grade 2 historic building). Species of conservation importance including Hong Kong Newt and Lesser Spiny Frog, are recorded within Lion Rock Country Park in the SCVA. Also, there are wooded areas as well as natural or modified surface water courses within the SCVA.

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 northern, western and southwestern edges via Tsok Pok Hang Road, Sha Tin Tau Road and Lion Rock Tunnel Road.

Although the potential portal locations are located very close to the primary roads, direct access connections are not available in all cases. Access to the extent of potential portal locations is at a maximum of about 1.5 km from expressway access points on Sha Tin Road and Lion Rock Tunnel Road, which both enable easy connections to the expressway network. The expressway network in the Sha Tin area allows for easy connections to different parts of Hong Kong via Shing Mun Tunnel Road, Tsing Sha Highway, Lion Rock Tunnel Road and Tate's Cairn Highway and Tai Po Road – Sha Tin Heights. Nearby projects including the proposed Improvement of Lion Rock Tunnel and Revised Trunk Road T4 in Sha Tin might interface with the potential portals at west. Project Propoents should take due consideration on the status of these projects.

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

A Water Supplies Department tunnel, the High Island Main Tunnel, passes through the SCVA from in southwest-northeast direction. Due to the elevation difference, this tunnel would not pose any insurmountable constraint to potential uses of rock caverns within the SCVA.

Hung Mui Kuk Nature Trail and Wilson Trail Section 5 are located in the SCVA. Project proponents shall take into account when considering cavern options.

#### 5. Extent of Potential Portal Locations

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

The SCVA is accessible from Tsok Pok Hang Road (east of Tsok Pok Hang San Tsuen) to the northeast; Sha Tin Tau Road to the west; and the Lion Rock Tunnel Road to the southwest of the SCVA. The extent of potential portal locations on Tsok Pok Hang Road and Sha Tin Tau Road is at the slopes alongside the carriageways, so access could be provided via a run-in/outs or priority controlled junctions, depending on the actual site layout and the proposed land-use. However, these extents of potential portal locations are adjacent to residential areas, so there might be limitation on the proposed use owing to the constraints on the traffic capacity. The potential portal location along Lion Rock Tunnel Road is on the downhill side, thus it may require a dedicated access road to be built so as to connect to nearby existing roads at an elevation lower than the Lion Rock Tunnel Road, for example, the Hung Mui Kuk Road. Besides, nearby projects including proposed Improvement of Lion Rock Tunnel and Revised Trunk Road T4 in Sha Tin might interface with the potential portals at west. Project Propoents should take due consideration on the status of these projects.

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

Upgrading or widening of existing roads and the associated slope works within or adjacent to Lion Rock Country Park should be avoided as far as practicable. Alternative access road outside the country park should be explored to avoid the potential impact to Lion Rock Country Park.

Project proponents should carry out further studies on identifying specific locations 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.

