

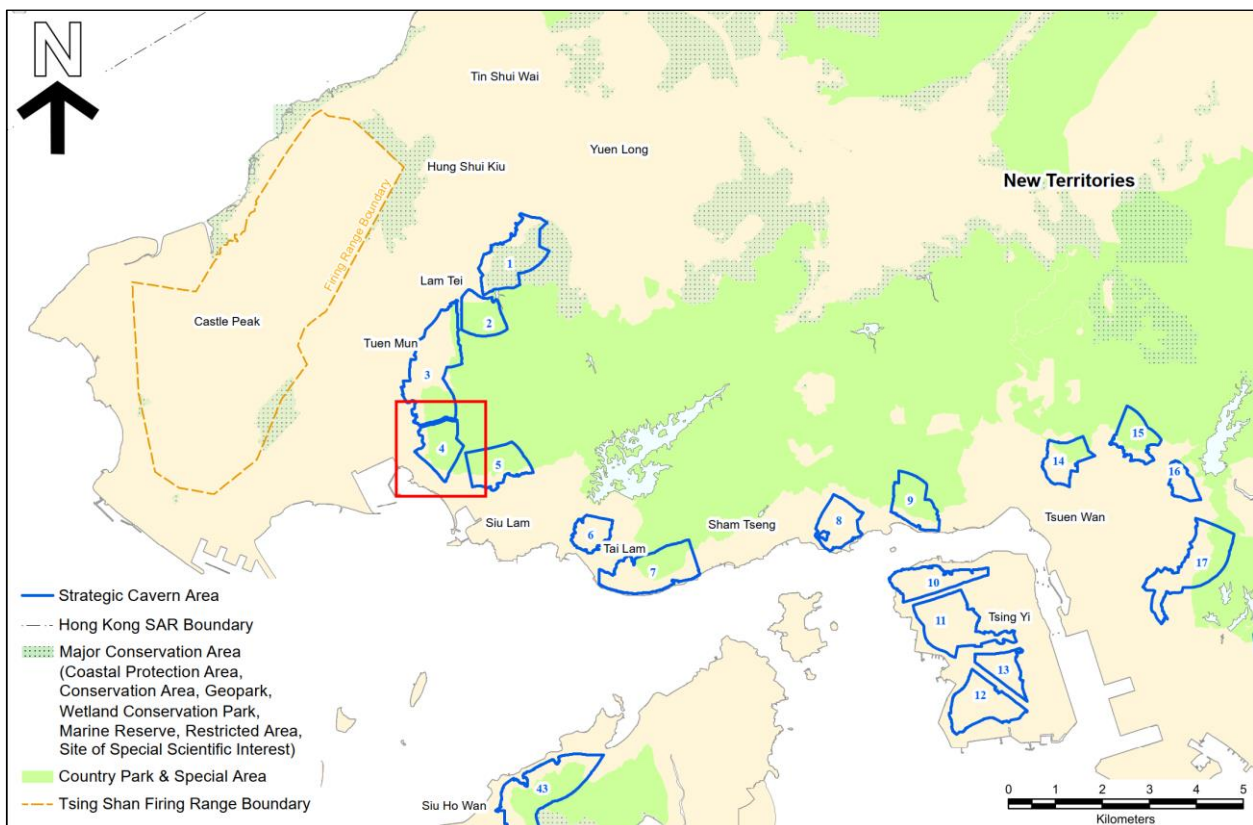
CAVERN MASTER PLAN – INFORMATION NOTE

STRATEGIC CAVERN AREA NO. 04 – KAU KENG SHAN

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 04 - Kau Keng 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 Plan (OZP) ¹ :	Tuen Mun OZP
Area:	79.7 ha
Maximum elevation in the SCVA:	+403 mPD
Minimum elevation in the SCVA:	+10 mPD

3. District Context

Location

The SCVA is located in the western part of the New Territories. Tin Shui Wai and Yuen Long are to the north of the SCVA, Tuen Mun New Town is to its west, Castle Peak Bay is to its south and Tai Lam Country Park is to its east.

The SCVA is generally hilly with a maximum elevation of about +403 mPD. The majority of the SCVA, including the central and eastern portions, encroaches onto Tai Lam Country Park. Hong Kong Girl Guides Tuen Mun Campsite (Former) is located on the western boundary of the SCVA.

To the west of the SCVA, Tuen Mun New Town is a local hub of high-density residential developments. These include Tuen Mun Town Plaza (about 750 m to the northwest of the SCVA), On Ting Estate (about 400 m to the northwest of the SCVA) and Handsome Court (adjoining the northwest boundary of the SCVA). In the proximity of the SCVA, there are a number of key Government, Institution or Community (GIC) facilities supporting the development of Tuen Mun New Town, including Tuen Mun Town Hall (about 700 m to the northwest of the SCVA), Yau Oi Sports Centre (about 1,050 m to the west of the SCVA boundary) and Tuen Mun East Fresh Water Service Reservoir (about 700 m to the north of the SCVA).

The area to the southwest of the SCVA is Sam Shing and Castle Peak Bay of Tuen Mun New Town which is also home of various residential developments, including Sam Shing Estate (about 300 m to the southwest of the SCVA) and Seaview Garden (about 120 m to the south of the SCVA).

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

Access

The SCVA is accessible from its northwestern edge via Fu Fat Lane and its southern edge via Tuen Mun Road and Tsing Ying Road. Regional connections could be routed through the nearby Tuen Mun Road and Castle Peak Road.

The MTR Light Rail Transit (LRT) serves the northwest New Territories and several stations are close to the SCVA. These include On Ting Station (about 750 m to the west of the SCVA), Yau Oi Station (about 800 m to the west of the SCVA), Siu Lun Station (about 800 m to the west of the SCVA) and Sam Shing Station (about 450 m to the west of the SCVA). Tuen Mun Station of the MTR Tuen Ma Line is located about 1,200 m to the northwest of the SCVA, providing connection to Kowloon.

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 northern boundary of the SCVA is defined by the valley topography. The southwestern boundary of the SCVA is defined by Tuen Mun Road. The southeastern boundary is defined by a geological feature (i.e. an inferred geological fault). The western boundary of the SCVA is defined by Wah Fat Street, Fu Fat Lane, the GIC cluster around Wah Fat Street and the residential cluster including Kam Fai Garden.

4.2. Geology

The solid geology of the SCVA is primarily fine- to medium-grained granite, which belongs to Tai Lam Granite; and medium-grained granite and coarse-grained granite within the western and southern portions of the SCVA, which belongs to Lantau 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, inferred faults, photolineaments and isolated dykes, are identified within and in the areas surrounding the SCVA. The excavated fine- to medium-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 materials, asphalt production, etc.

Further geological information of the SCVA can be found in the 1:20,000-scale Geological Map Sheet 6 (Yuen Long) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

4.3. Planning

The SCVA is close to the existing urban developments in Tuen Mun New Town and is easily accessible by several highways and railways.

Located to the west of the SCVA, Tuen Mun New Town is a local hub of residential developments (e.g. Tuen Mun Town Plaza) which is supported by various GIC facilities (e.g. hospital, service reservoir, school, sports hall, etc.). The SCVA may overlap with the proposed possible alignment of Tuen Mun Bypass. The project proponent should also take note of the possible alignment of Tuen Mun Bypass (TMB) under Agreement No. CE 65/2021 (HY) “Tuen Mun Bypass – Investigation” which commenced in March 2022.

4.4. Environmental

Environmental sensitive receivers to the potential caverns in the SCVA include the nearby existing schools (e.g. Harrow International School Hong Kong) and residential developments (e.g. Seaview Garden and Handsome Court). Shing Miu of Sam Shing Hui (a Grade 2 historic building), Ceramic Kiln in Hin Fat Lane (a Grade 3 historic building, also a Site of Archaeological Interest) and So Kwun Wat Perowne Barracks Site of Archaeological Interest are located in the vicinity of the SCVA. The majority of the SCVA falls within Tai Lam Country Park and Water Gathering Grounds. Water courses and wooded areas are located within Tai Lam Country Park and are close to the potential portal locations of the SCVA. Species of conservation importance including Lesser Spiny Frog and Hong Kong Cascade Frog, are recorded at the natural streams within the Tai Lam Country Park.

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 and ecological sensitive receivers when planning each project 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 northwestern and southern edges via Fu Fat Lane, Tuen Mun Road and Tsing Ying Road. Further connections to Castle Peak Road, Yuen Long Highway and Kong Sham Western Highway can be made, allowing road network connection to other parts of Hong Kong and Shenzhen while connection to Lantau can be made via the Tuen Mun – Chek Lap Kok Link.

The SCVA may overlap with the proposed possible alignment of Tuen Mun Bypass (TMB). The project proponent should also take note of the possible alignment of TMB under Agreement No. CE 65/2021 (HY) “Tuen Mun Bypass – Investigation” which commenced in March 2022.

4.6. Other Key Issues / Constraints on Cavern Development

There are no existing underground facilities found within or in the vicinity of the SCVA.

Some potential portal locations are close to existing school and residential developments. Meanwhile, Fu Tei Au Country Trail, Tuen Mun Fitness Trail and MacLehose Trail Section 10 are located in the SCVA. Project proponent shall take it into account when considering cavern options in order to minimise potential interface issues and adverse impacts arising from the construction and operation of cavern facilities.

5. Extent of Potential Portal Locations

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

The SCVA is accessible from potential portals located at Fu Fat Lane, Tsing Ying Road and Tuen Mun Road. The access to potential portal located near the end of Fu Fat Lane may only be suitable for accommodating low traffic-generating activities. Widening of which would be restrained by the existing developments. Given the traffic condition of Tsing Ying Road, the access to the potential portal may also only be suitable for accommodating low traffic-generating activities. Widening or upgrading of Tsing Ying Road, subject to necessary detailed assessment, would be required for it to support moderate to high traffic-generating activities. To connect to Tuen Mun Road, new slip roads with suitable merging and diverging arrangements will be required. Given that Tuen Mun Road is a high capacity road, a wide range of traffic generating activities may be considered in the SCVA, provided that the capacity of the road would not be compromised subject to further detailed traffic and engineering assessments. For westbound access to the SCVA via Tuen Mun Road, if necessary, access may be provided via new slip roads flying over or going under Tuen Mun Road, of which significant works would be required.

The potential portal locations are at the toe of cut slopes with natural terrain above. There may be potential natural terrain hazards in the vicinity of the potential portal locations, which may require further study by project proponents.

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.

