

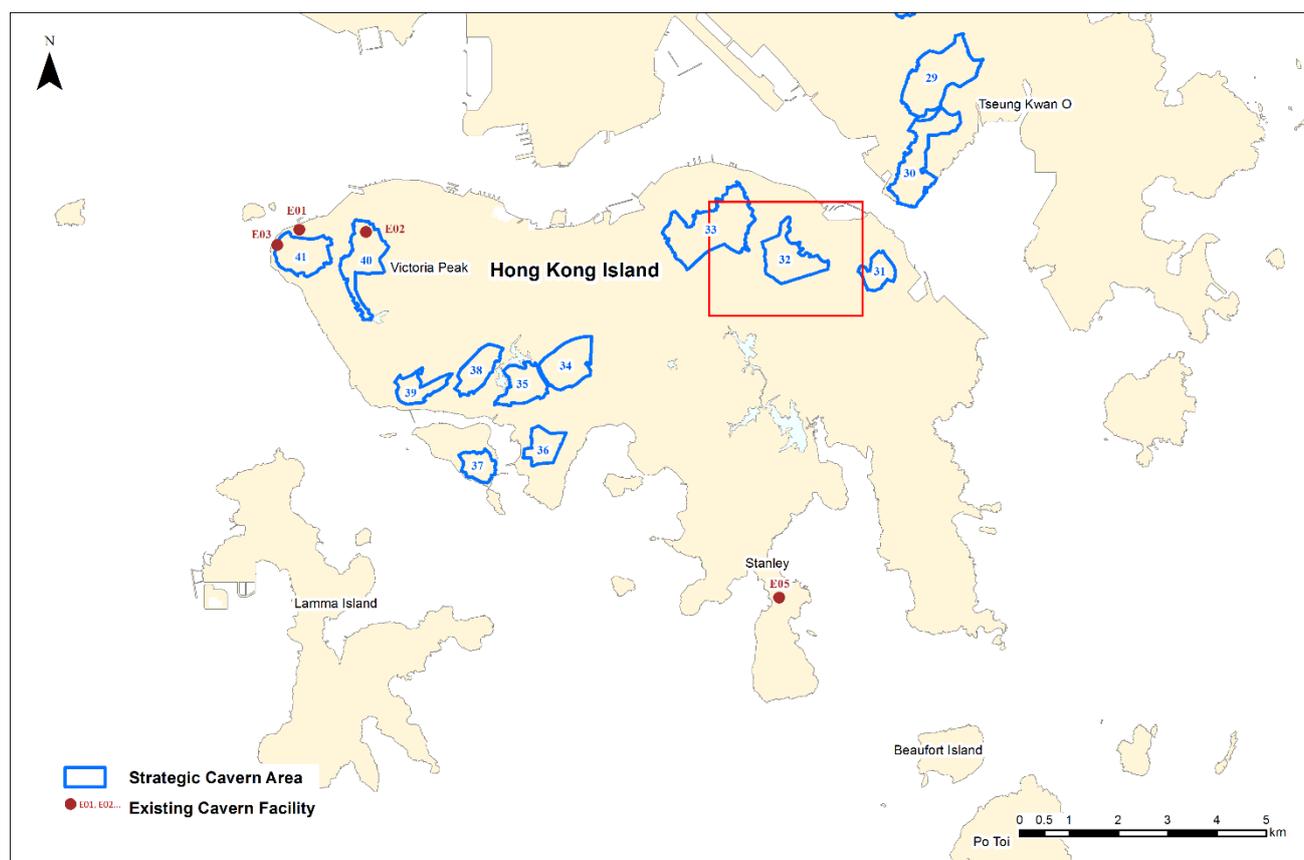
## CAVERN MASTER PLAN – INFORMATION NOTE

### STRATEGIC CAVERN AREA NO. 32 – SHAU KEI WAN

*This Information Note describes the characteristics, key development opportunities and constraints of Strategic Cavern Area No. 32 - Shau Kei Wan (the SCVA). It indicates the potential land uses suitable for cavern development within the area but would not pre-empt other possible land uses put forward by the project proponents with justifications. 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):	Approved Quarry Bay OZP No. S/H21/28 Approved Shau Kei Wan OZP No. S/H9/18
Area:	83.6 ha
Maximum elevation in the SCVA:	+299 mPD
Minimum elevation in the SCVA:	+20 mPD

## 3. District Context

### Location

The SCVA is located in the eastern part of Hong Kong Island. It occupies the foothill area facing Sai Wan Ho and Shau Kei Wan to the north and east. Tai Tam Country Park (Quarry Bay Extension) is located to the south and west of the SCVA and Quarry Bay is to the northwest.

The SCVA is generally hilly with a maximum elevation of about +299 mPD. A majority of the SCVA encroaches onto Tai Tam Country Park (Quarry Bay Extension). In the northern portion of the SCVA, there is the Shau Kei Wan Fresh Water Service Reservoir, Shau Kei Wan No. 2 Fresh Water Service Reservoir and Shau Kei Wan High Level Fresh & Salt Water Service Reservoirs.

There are several existing communities around the SCVA. To the north and east of the SCVA, Sai Wan Ho and Shau Kei Wan are two major residential areas on Hong Kong Island, with high-rise and high-density housing developments including Yiu Tung Estate (at the eastern boundary of the SCVA), Aldrich Garden (about 600 m to the northeast of the SCVA), Tung Hei Court and Hing Tung Estate (both at the northeastern boundary of the SCVA). Quarry Bay located to the northwest of the SCVA is a major residential and commercial area with high-rise and high-density developments including Taikoo Shing (about 200 m to the north of the SCVA) and Taikoo Place (about 750 m to the northwest of the SCVA). These areas are supported by various Government, Institution and Community (GIC) facilities, such as Sai Wan Ho Civic Centre (about 400 m to the northeast of the SCVA) and Shau Kei Wan Low Level Salt Water Service Reservoir (at the eastern boundary of the SCVA).

### Access

The SCVA is accessed from its eastern and northern edges via Yiu Hing Road and Hong Yue Street, both of which link to the district distributors (i.e. Shau Kei Wan Road and King's Road) and further connect to regional distributors. Regional connections could be routed through the nearby Island Eastern Corridor and Eastern Harbour Crossing.

The MTR Island Line and Tseung Kwan O Line serve the neighbouring areas of the SCVA. The nearest stations include Island Line's Shau Kei Wan Station (about 500 m to the east of the SCVA), Sai Wan Ho Station (about 350 m to the northeast of the SCVA), Tai Koo Station (about 100 m to the north of the SCVA) and Quarry Bay Station (about 1,000 m to the northwest of the SCVA; interchange station of Island Line and Tseung Kwan O Line). Tramway service is also provided in the area along Shau Kei Wan Road and King's Road.

### Land Use Zoning

Under the Approved Quarry Bay OZP No. S/H21/28 and the Approved Shau Kei Wan OZP No. S/H9/18, the northeastern part of the SCVA is zoned "Green Belt" with isolated "Government, Institution or Community" ("G/IC") zones in the north, whereas the southeastern and western parts are zoned "Country Park", which are within the Tai Tam Country Park (Quarry Bay Extension). The remaining area of the SCVA is not covered by any Statutory Plan. The surrounding areas to the north of the SCVA are mainly zoned "Green Belt", "G/IC", "Residential (Group A)" and "Residential (Group B)", whereas the areas to the south and west of the SCVA are either zoned 'Country Park' or not covered by any Statutory Plan.

For details of the latest land use zonings on OZPs, please refer to the Town Planning Board website (<http://www.tpb.gov.hk>).

There is currently 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 Hong Yue Street, Yiu Hing Road, private lots and residential developments, including Kornhill, Hing Tung Estate and Tung Hei Court. The eastern boundary of the SCVA is defined by private lots and residential developments, including Yiu Tung Estate and Tung Chun Court. The western boundary of the SCVA is defined by residential development of Kornhill and the valley topography. The southern boundary of the SCVA is defined by the Hong Kong Electric Nam Fung – Parker Cable Tunnel, and also by an extent of 800 m from the potential portal locations. Individual private lots 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 SCVA.

### **4.2. Geology**

The solid geology of the SCVA is primarily fine-grained granite within the western and southern portions, which belongs to Mount Butler Granite; and medium-grained granite within the northern and eastern portions, which belongs to Kowloon Granite. The SCVA is with the rock types that are suitable for cavern development. A number of geological features, such as faults, photolineaments and isolated dykes, are identified within and in areas surrounding the SCVA. The excavated fine-grained granite and medium-grained granite within the SCVA are suitable for reuse as construction aggregate.

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 Shau Kei Wan, Sai Wan Ho and Quarry Bay. Given the SCVA is well connected to the rest of the territory by highways and railways, there is potential for the SCVA to support the development, as well as redevelopment if there is opportunity, of the nearby urban areas.

The eastern, northern and western sides of the SCVA are the major residential and commercial development areas in Shau Kei Wan, Sai Wan Ho and Quarry Bay. These areas consist of various high-rise and high-density residential developments (e.g. Yiu Tung Estate, Aldrich Garden, Taikoo Shing) and commercial developments (e.g. Taikoo Place) supported by a number of GIC facilities (e.g. school, civic centre, service reservoir, etc.). In view of the existing compact and high density built environment and the large population catchment in the area, there is opportunity for the SCVA to provide solution space to improve the living environment, for example, by providing GIC uses (e.g. sports and recreational facilities) in caverns and relocating utility installations (e.g. electricity substation) and infrastructure facilities (e.g. service reservoir) to caverns with a view to releasing surface land for other uses. This could enable more effective utilisation of land resources in the district and promote public benefits while preserving the natural landscape adjacent to the Tai Tam Country Park (Quarry Bay Extension) as a green backdrop to the surrounding communities.

Quarry Bay is a major commercial area in the eastern part of Hong Kong Island, with key commercial developments such as Taikoo Place and a number of shopping centres. The industrial areas around Shipyard Lane, Westlands Road and Tong Chong Street are intended to be phased out through redevelopment for commercial use. Given that the areas are well served by roads and railways, the SCVA has the potential to support expansion of commercial activities by providing new space for suitable land uses, such as retail, food/wine storage and warehousing (such as mini-storage). The development of these land uses could contribute to meeting the increasing demand from both local communities and the territory.

Several data centres have been developed in the Eastern District, such as those in the industrial areas in Chai Wan and Taikoo Place in Quarry Bay. Given that there are commercial related uses in the vicinity, there is potential for the SCVA to provide additional space to support future expansion of the industry by housing more data centres and related facilities in caverns, which is in line with the Government's policy objective to promote Hong Kong as a data centre hub.

#### **4.4. Environmental**

Environmental sensitive receivers to cavern development in the SCVA are the nearby residential developments (e.g. Yiu Tung Estate, Tung Chun Court, Tung Hei Court and Kornhill) and schools (e.g. The Endeavourers Leung Lee Sau Yu Memorial Primary School and Hong Kong Chinese Women's Club College). A majority of the SCVA encroaches onto Tai Tam Country Park (Quarry Bay Extension) and Water Gathering Grounds. Tai Tam Reservoir Catchment Area Site of Special Scientific Interest is at the southwestern boundary of the SCVA. There are natural and modified water courses within the SCVA. Graded historic buildings including the Woodside, Mansion and Garage and Salesian Mission House, Main Building and Villa (all are Grade 2 historic buildings) are located in the vicinity of the SCVA.

All potential environmental constraints, which may impose restrictions on cavern development, should be identified and taken into account in cavern development proposals 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 planning each cavern development 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 eastern and northern edges via Yiu Hing Road and Hong Yue Street. Regional connections could be routed through the nearby Island Eastern Corridor and Eastern Harbour Crossing.

Although the SCVA is close to the primary road network, access to the potential portal locations can only be routed through relatively narrow, congested and densely populated district roads. This might impose certain limit on the number of trips that could be generated from the potential cavern development in the SCVA. The project proponents shall take into account the traffic condition and detailed assessment when pursuing cavern development projects. Nonetheless, these roads can be accessed from the Island Eastern Corridor and Shau Kei Wan Road, which both serve as the main arterial routes along the northeastern coast of Hong Kong Island.

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

A Water Supplies Department's tunnel, namely the Kornhill Tunnel, is located at the northwestern boundary of the SCVA. The nearest section of the MTR Island Line railway tunnel and Tai Koo Station are located approximately 100 m to the north of the SCVA. The Hong Kong Electric Nam Fung - Parker cable tunnel is located approximately 50 m to the south of the SCVA. Several abandoned tunnels are located at the northern boundary and some are about 300 m to the east of the SCVA. As these tunnels are either far away from the SCVA or at elevations different from that of cavern development in the SCVA, they would not pose any insurmountable constraint to cavern development.

### **5. Potential Land Uses**

The potential land uses for the SCVA are as follows:

<b>Land use</b>	<b>Description</b>
Data Centre	<p>The SCVA is in the Eastern District which has been developed with several data centres, such as those in the industrial areas in Chai Wan and Taikoo Place in Quarry Bay. There are also commercial related developments in the areas. There is potential for the SCVA to provide additional space to support the industry by housing data centres and related facilities in caverns. This would be in line with the Government’s policy to promote Hong Kong as a data centre hub.</p>
<p>Leisure Centre/Sports Centre</p> <p>Indoor Swimming Pool/Complex</p>	<p>The SCVA is adjacent to a large population catchment as it is close to various existing major residential communities such as Yiu Tung Estate, Tung Hei Court, Kornhill, as well as Ming Wa Dai Ha, which is under redevelopment. It is also easily accessible by the general public via public transport such as the nearby railway stations (e.g. Tai Koo Station about 100 m and Sai Wan Ho Station about 350 m to the SCVA). There is potential for the SCVA to support these neighbouring communities and to improve the living environment by providing additional supporting community facilities, such as leisure centre/sports centre and/or indoor swimming pool/complex, to meet the rising demand.</p>
Retail	<p>The SCVA is adjacent to various existing major commercial and residential areas in Sai Wan Ho, Shau Kei Wan and Quarry Bay, and the railway stations in these areas. It has good connectivity and is easily accessible by the general public. The SCVA has potential to support the possible expansion of the commercial activities, such as retail establishments, by providing additional space for commercial/retail uses. Given the area is in close proximity to a large population catchment and is easily accessible by existing public transport, provision of retailing services in the SCVA would help meet the increasing demand from the residential communities nearby.</p>

Land use	Description
<p>Service Reservoir Public Utility Installation</p>	<p>Given that the SCVA is adjacent to various residential communities in Quarry Bay, Sai Wan Ho and Shau Kei Wan, there is opportunity for the SCVA to provide alternative space for relocating the existing infrastructure facilities (e.g. service reservoir) and utility installations (e.g. electricity substation) in the vicinity, so as to release the surface land for other uses to support the neighbouring communities.</p>
<p>Warehousing Food/Wine Storage</p>	<p>For the same reason as described for “Retail”, there is potential for the SCVA to provide space for warehousing (such as mini-storage) and food/wine storage related land uses to support the commercial and residential developments in these areas. This can meet the demand from both local communities and the territory.</p>

Note: Zoning amendment/planning application may be required to facilitate the pursuit of the above potential land uses.

## 6. Extent of Potential Portal Locations

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

The SCVA is accessed from Yiu Hing Road, a restricted access to Tung Chun Court off Yiu Hing Road, and a cut slope adjacent to Shau Kei Wan Low Level Salt Water Service Reservoir to the east; and Hong Yue Street to the north of the SCVA.

The majority of potential portal locations of the SCVA are located on slopes adjacent to the carriageways, and access could be provided via a suitable run-in/out or priority controlled junctions, depending on the proposed land-use. Multiple portal locations could be formed along Yiu Hing Road.

Accessing the potential portal locations at the slope adjacent to Shau Kei Wan Low Level Salt Water Service Reservoir and at the access road to Tung Chun Court is restricted. Further liaison with relevant owners/stakeholders would be required. These potential locations may only be suitable for low traffic generating activities unless road widening or upgrading is carried out.

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

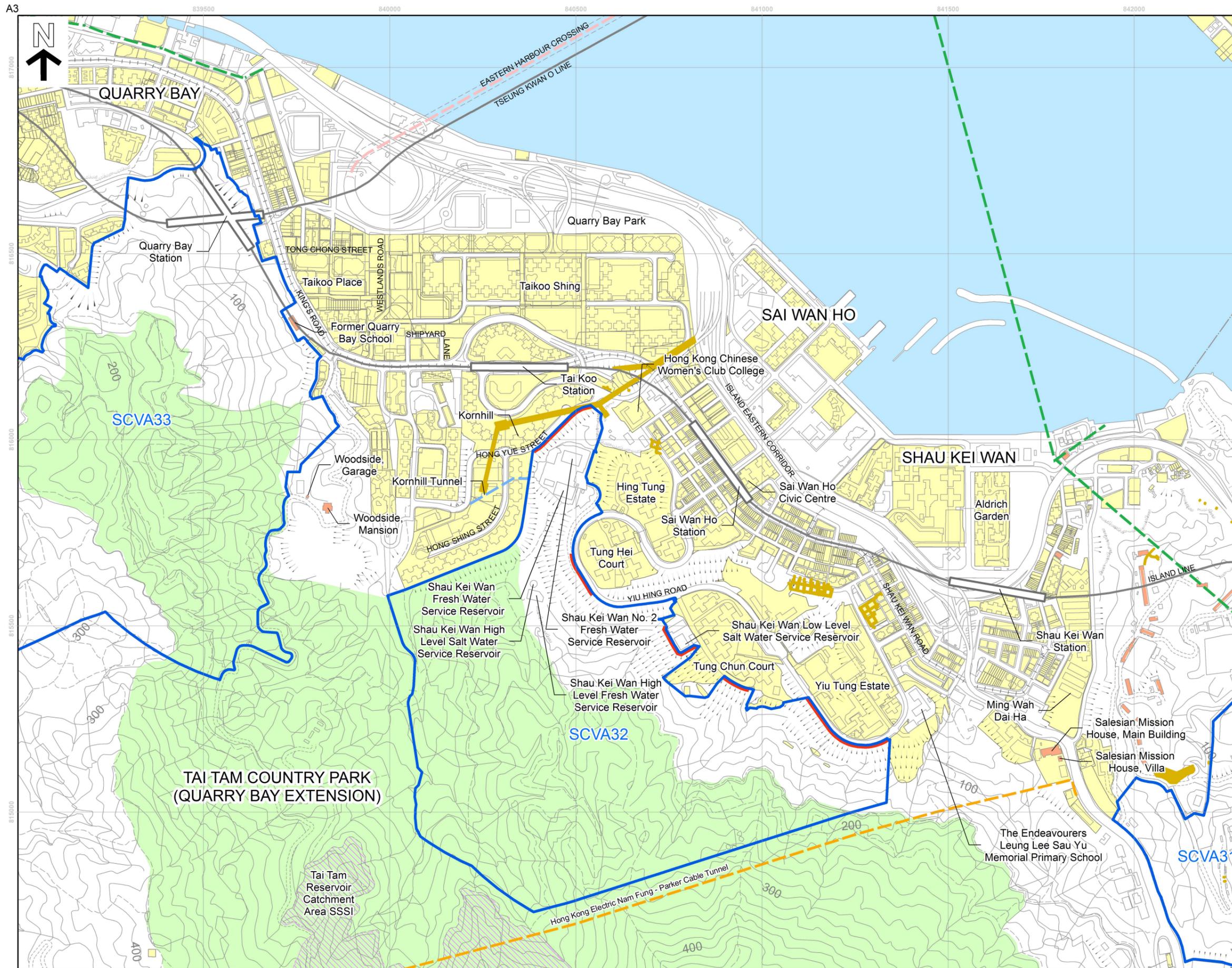
Project proponents should carry out further studies on identifying specific locations of portals for the proposed cavern development.

## **7. Concluding Remarks**

The SCVA presents an opportunity for rock cavern developments to serve the neighbouring residential communities (e.g. by housing leisure centre/sports centre, indoor swimming pool/complex, service reservoir or public utility installation), provide space for potential commercial uses (e.g. by housing retail, food/wine storage or warehousing), and facilitate the growth of the data centre industry (i.e. by housing data centres and related facilities). Project proponents for cavern development should take due consideration of the existing and proposed residential developments, environmental sensitive receivers, and the accessibility for cavern development, to minimise the interfacing issues and bring about greater synergy and opportunities.

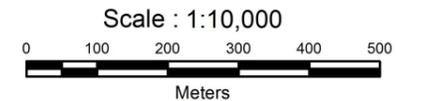
## **8. Notes**

The Cavern Master Plan and all supporting documents do not exempt project proponents for cavern development from following the relevant statutory and planning procedures. Information including the potential land uses and 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.



- Legend**
- Strategic Cavern Area
  - Extent of Potential Portal Locations
  - Existing Railway Line
  - Existing Tram
  - Cable Tunnel / Gas Tunnel
  - Vehicle Tunnel
  - Drainage Services Department Tunnel
  - Water Supplies Department Tunnel
  - Abandoned Tunnel
  - Sea
  - Graded Historic Building
  - Private Lot
  - Country Park
  - Site of Special Scientific Interest

Note: All private lots located inside the boundary of the Strategic Cavern Area have been excised. 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 Strategic Cavern Area.



REFERENCE DRAWING OF STRATEGIC CAVERN AREA NO. 32 - SHAU KEI WAN