

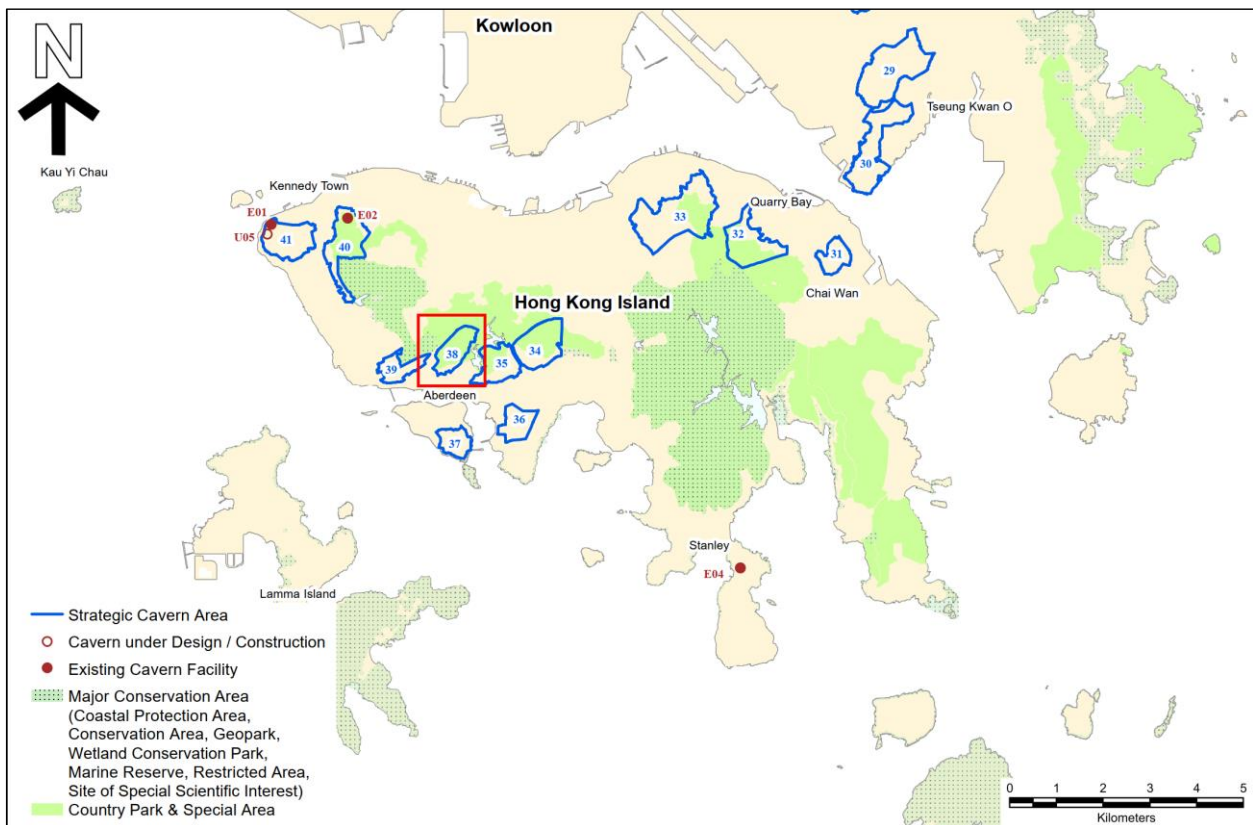
## **CAVERN MASTER PLAN – INFORMATION NOTE**

### **STRATEGIC CAVERN AREA NO. 38 – TIN WAN SHAN**

*This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 38 - Tin Wan 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> :	The Peak Area OZP Aberdeen and Ap Lei Chau OZP
Area:	51.5 ha
Maximum elevation in the SCVA:	+252 mPD
Minimum elevation in the SCVA:	+34 mPD

## 3. District Context

### Location

The SCVA is located in the southwestern part of Hong Kong Island. It occupies the area of Tin Wan Shan in Aberdeen. Aberdeen Country Park is to the north of the SCVA, Shek Pai Wan, Aberdeen is to the south, and Tin Wan is to the southwest.

The SCVA is generally hilly with a maximum elevation of about +252 mPD. A majority of the SCVA encroaches onto Aberdeen Country Park. To the southeast, south and southwest of the SCVA, the areas of Shek Pai Wan, Aberdeen and Tin Wan are predominantly residential communities with medium- to high-rise developments. These include Yue Kwong Chuen (at the southeastern boundary of the SCVA), Shek Pai Wan Estate (about 250 m to the southeast of the SCVA), Aberdeen Centre (about 250 m to the south of the SCVA) and Tin Wan Estate (about 200 m to the southwest of the SCVA). In Aberdeen and Tin Wan, industrial related uses are intended to be phased out gradually through redevelopment for residential uses.

In the proximity of the SCVA, there are a number of key Government, Institution or Community (GIC) facilities supporting the development of surrounding areas, including Aberdeen Fresh Water Service Reservoir (about 50 m to the southeast of the SCVA), Aberdeen Water Treatment Works (about 50 m to the southeast of the SCVA) and Yue Kwong Road Sports Centres (about 120 m to the south of the SCVA). Aberdeen Chinese Permanent Cemetery is at the southwestern boundary of the SCVA. To the further southeast of the SCVA, the industrial area of Wong Chuk Hang has been rezoned to “Other Specified Uses” annotated “Business” and gradually transformed into a new business area for commercial and office related uses, with medium- to high-rise developments clustering along Wong Chuk Hang Road and Heung Yip Road.

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<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 (<https://www.ozp.tpb.gov.hk/>).

### Access

The SCVA is accessible from its southeastern edge via Aberdeen Reservoir Road. Regional connections to the northern and western parts of Hong Kong Island could be routed through Aberdeen Praya Road, Wong Chuk Hang Road and Aberdeen Tunnel.

The MTR South Island Line serves the neighbouring areas of the SCVA. The nearest station is Wong Chuk Hang Station, which is about 1,200 m to the southeast of the SCVA. The proposed MTR South Island Line (West) is proposed to serve the western and southern parts of Hong Kong Island. The South Island Line (West) together with the South Island Line and the Island Line will form a railway loop covering the central and western parts of Hong Kong Island. The South Island Line (West) will comprise a proposed station at Aberdeen (exact location to be confirmed) serving the locality 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 southern boundary of the SCVA is defined by Peel Rise, St. Peter's Secondary School and the Aberdeen Chinese Permanent Cemetery. The eastern boundary of the SCVA is defined by Aberdeen Reservoir Road. The western boundary of the SCVA is defined by Peel Rise and a geological photolineament.

### **4.2. Geology**

The solid geology of the SCVA is primarily fine ash vitric tuff in the northeastern and southwestern portions, which belongs to Ap Lei Chau Formation; and coarse ash crystal tuff in the central 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, photolineaments and folds, are identified within and in areas surrounding the SCVA. The excavated rocks within the SCVA 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) and Map Sheet 15 (Hong Kong South & Lamma Island) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

### **4.3. Planning**

The SCVA is fronting various residential and industrial/commercial areas in Shek Pai Wan, Aberdeen and Tin Wan. The SCVA is also well connected to the rest of the territory by roads and railways.

The areas of Tin Wan, Aberdeen, Aberdeen Centre and Shek Pai Wan are major residential communities consisted of medium- to high-rise developments (e.g. Yue Kwong Chuen and Tin Wan Estate) supported by various GIC facilities (e.g. sports hall, school, water treatment plant, service reservoir, etc.). The industrial areas in Tin Wan and Aberdeen have been rezoned to “Residential (Group E)” (except for the waterfront industrial area) and are intended to be transformed into residential areas gradually. There is also a plan to redevelop the aged Yue Kwong Chuen for the improvement of the living environment and provision of more residential flats.

### **4.4. Environmental**

Environmental sensitive receivers to the potential caverns in the SCVA are the nearby existing residential developments (e.g. Yue Kwong Chuen, Yue Fai Court and Shek Pai Wan Estate) and schools (e.g. St. Peter’s Secondary School and Pui Tak Canossian College). The majority of the SCVA encroaches onto Aberdeen Country Park. There are also natural greenery, Water Gathering Ground, natural or modified surface water courses within the SCVA. Pok Fu Lam Country Park and Pok Fu Lam Reservoir Catchment Area Site of Special Scientific Interest are to the west of the SCVA. A number of built heritages are identified in the vicinity of the SCVA. Valve House, Bridge and the Dam of the Aberdeen Upper Reservoir (all are declared monuments), the Dam of the Aberdeen Lower Reservoir (declared monuments), the Valve House and Pump House of the Aberdeen Lower Reservoir (both are Grade 2 historic buildings), the Aberdeen Management Centre, Chemical House and Air Vents of the Aberdeen Lower Reservoir (both are Grade 3 historic buildings) are in the vicinity of the eastern portion of the SCVA. The Old Aberdeen Police Station, Main Building and two Annexes (Grade 2 historic building) and Tin Hau Temple (Aberdeen) (Grade 3 historic building) are in the vicinity of the south portion of the SCVA. Species of conservation importance including Short-legged Toad, Hong Kong Cascade Frog, Lesser Spiny Frog, Copperhead Racer, Hong Kong Newt and Malayan Box Turtle are recorded within the SCVA and along the catchwater within Aberdeen 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 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 via Aberdeen Reservoir Road, which is an Urban Local Distributor that leads to Aberdeen Main Road. Regional connections could be routed through Aberdeen Praya Road, Wong Chuk Hang Road and Aberdeen Tunnel.

There have been local concerns on the traffic capacity of the local roads in the Southern District, particularly for Aberdeen Tunnel and Ap Lei Chau Bridge Road. Project proponents should take account of the concerns in considering cavern options and review and assess any potential traffic impact on both local and district bases.

The project proponent would be required to assess the traffic impacts to the road networks and junctions 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 considering cavern options in the SCVA. Further advice on the scope of the Traffic Impact Assessment shall be sought by the project proponents.

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

A cable tunnel, namely the Hong Kong Electric Wah Fu - Bowen Road Cable Tunnel, is about 500 m to the northwest of the SCVA. Several abandoned tunnels are identified approximately 200 m to the south and 500 m to the southeast of the SCVA. As these underground structures are away from the SCVA, they will not pose any insurmountable constraint on the potential uses of rock caverns within the SCVA.

Hong Kong Trail Section 3, Aberdeen Fitness Trail and Aberdeen Tree Walk are also located within the SCVA. Project proponents shall take into account when considering cavern options.

### **5. Extent of Potential Portal Locations**

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

The SCVA is accessible along Aberdeen Reservoir Road to the south of the SCVA. The section of road leading to the potential portal location is relatively steep. This would have to be taken into account by the project proponents when planning/developing proposed uses in caverns. Access to potential portal could be made via provision of suitable run-in/out or priority controlled junction, depending on the proposed use.

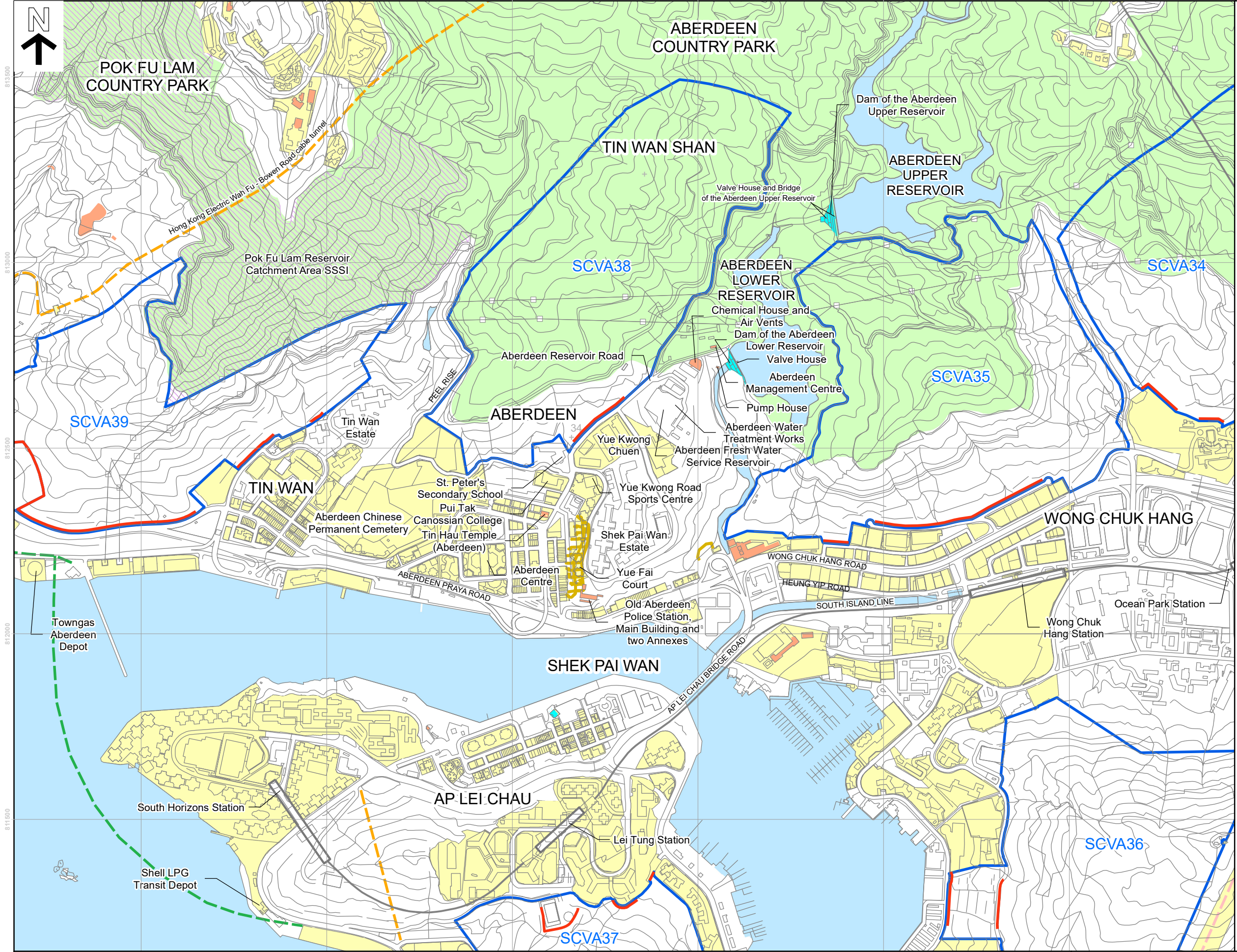
The potential portal location is on cut slopes with natural terrain above. There may be potential natural terrain hazards in the vicinity which will require further study by the project proponents.

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.





Legend

- Strategic Cavern Area
- Extent of Potential Portal Locations
- Existing Railway Line / Light Rail / Tram
- Cable Tunnel / Gas Tunnel
- Vehicle Tunnel
- Drainage Services Department Tunnel
- Reservoir / River / Nullah / Sea
- Graded Historic Building
- Declared Monument (Historic Building)
- Private Lot
- Country Park
- Abandoned Tunnel
- 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.

