

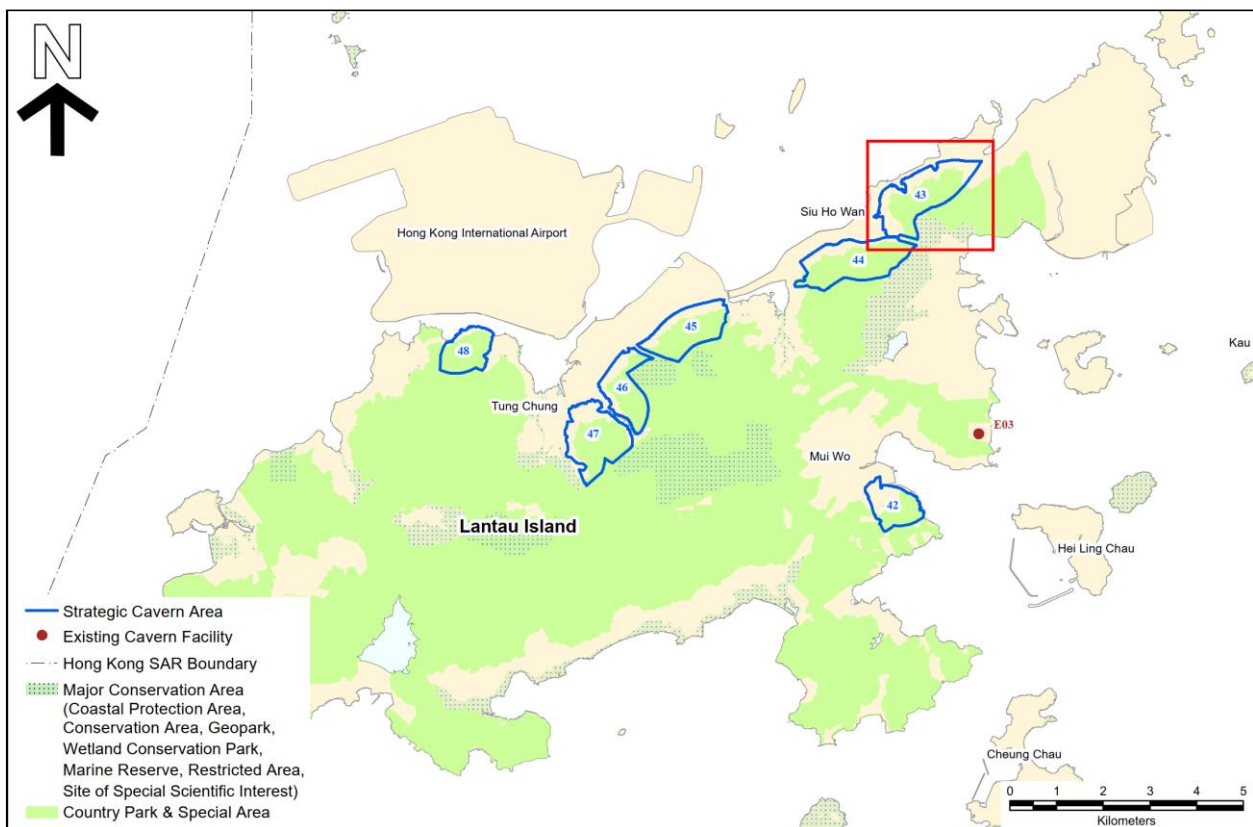
CAVERN MASTER PLAN – INFORMATION NOTE

STRATEGIC CAVERN AREA NO. 43 – SHAM SHUI KOK

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 43 - Sham Shui Kok (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 :	Siu Ho Wan OZP
Area:	178.3 ha
Maximum elevation in the SCVA:	+296 mPD
Minimum elevation in the SCVA:	+2 mPD

3. District Context

Location

The SCVA is located in the northern part of Lantau Island. It covers the hillside areas of Siu Ho Wan and Tai Che Tung. Sham Shui Kok is located to the north of the SCVA, Sunny Bay is to the northeast, Tai Che Tung and Lantau North (Extension) Country Park are to the south, Siu Ho Wan is to the west, and Tung Chung New Town, Hong Kong International Airport (HKIA) and Hong Kong Boundary Crossing Facilities (HKBCF) of Hong Kong-Zhuhai-Macao Bridge (HZMB) are to the further west.

The SCVA is generally hilly with a maximum elevation of about +296 mPD. About half of the SCVA of its central and southern portions encroaches onto Lantau North (Extension) Country Park. The vicinity of the SCVA has a number of key Government, Institution or Community (GIC) facilities and facilities of specified uses. These include Sham Shui Kok Substation (at the northern boundary of the SCVA), North Lantau Transfer Station (about 250 m to the northwest of the SCVA), Sunny Bay Fresh Water Service Reservoir and Sunny Bay Salt Water Service Reservoir (both at the eastern boundary of the SCVA), Siu Ho Wan Sewage Treatment Works (about 400 m to the southwest of the SCVA), Siu Ho Wan Water Treatment Works (at the southwestern boundary of the SCVA), Siu Ho Wan Vehicle Pound, Vehicle Examination Centre and Weigh Station (at the western boundary of the SCVA), O•Park Phase 1 at the western boundary of the SCVA), proposed columbarium (about 150 m to the west of the SCVA), proposed Siu Ho Wan Fresh Water Service Reservoir (at the southwest part of the SCVA) and some vehicle (including bus) depots and maintenance depots (including City Bus Limited Siu Ho Wan Bus Depot and Long Win Bus Company Limited (LWB) Siu Ho Wan Bus Depot (both are at the western boundary of the SCVA), Siu Ho Wan Government Maintenance Depot (about 1 km to the southwest of the SCVA) and MTR Siu Ho Wan Depot (about 1.6 km to the southwest 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/>).

MTRCL has studied the feasibility of residential development atop the MTR Siu Ho Wan Depot and Siu Ho Wan Depot Development is proposed². In addition, the construction of additional sewage rising main and rehabilitation of existing rising mains between Tung Chung and Siu Ho Wan Sewage Treatment Works is in progress³.

Access

The SCVA is accessible from its northern, western and southern edges via Cheung Tung Road, an access road to Sham Shui Kok Substation, Sham Shui Kok Drive and Discovery Bay Tunnel Link which is a restricted access road. Regional and cross-boundary connections could be routed through the adjacent North Lantau Highway, Tuen Mun-Chek Lap Kok Link and HZMB.

The MTR Airport Express and Tung Chung Line run alongside the North Lantau Highway to the north of the SCVA. There is currently no railway station close to the SCVA. A new railway station has been planned with the Siu Ho Wan Depot Topside Development and is expected to be completed in 2030.

Existing / Planned Facility in SCVA

There is currently no existing cavern facility within the SCVA. This SCVA is the study site under Agreement No. CE 78/2023 (GE) “Underground Quarrying at Sham Shui Kok, North Lantau – Investigation, Design and Construction”. Detailed investigation and design study was commenced in June 2024.

4. Summary of Characteristics of Strategic Cavern Area

4.1. Boundary

The northern boundary of the SCVA is defined by Cheung Tung Road, Sham Shui Kok Substation and private lots. The eastern boundary of the SCVA is defined by a geological inferred fault, Sunny Bay Fresh Water Service Reservoir and Sunny Bay Salt Water Service Reservoir. The western boundary of the SCVA is defined by Siu Ho Wan Water Treatment Works, City Bus Limited Siu Ho Wan Bus Depot and LWB Siu Ho Wan Bus Depot. The

² Source: Pact reached on depot site devt
(https://www.news.gov.hk/eng/2022/09/20220923/20220923_170529_083.html)

³ Source: Planning, Design and Construction of New Sewerage Facilities – Construction of Additional Sewage Rising Main and Rehabilitation of the Existing Sewage Rising Main between Tung Chung and Siu Ho Wan
(https://www.dsd.gov.hk/EN/Publicity_and_Publications/Publicity/DSD_Sustainability_Reports/20/planning_design_and_construction_of_new_sewerage_facilities.html)

southern boundary of the SCVA is defined by Discovery Bay Tunnel Link and Discovery Bay Tunnel. The southeastern boundary of the SCVA is defined by the Conservation Area.

4.2. Geology

The solid geology of the SCVA is primarily feldsparphyric rhyodacite, rhyolite and granite, which belong to East Lantau Rhyodacite and Rhyolite; and coarse ash crystal tuff which belongs to Yim Tin Tsai 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 isolated dykes, are identified within and in the areas surrounding the SCVA. The excavated feldsparphyric rhyodacite within the SCVA may be suitable for reuse as construction aggregate, subject to further confirmation by relevant testing on the potential alkali-silica reaction. Nevertheless, the excavated rocks 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 10 (Silver Mine Bay) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

4.3. Planning

The SCVA is situated at a strategic location near the HKIA, HKBCF and Tung Chung New Town and served with major trunk roads including North Lantau Highway, Tuen Mun-Chek Lap Kok Link and HZMB enabling regional and cross-boundary connections.

4.4. Environmental

Key environmental constraints on the potential caverns in the SCVA are the Lantau North (Extension) Country Park within and to the south of the SCVA, comprising the natural greenery and lowland forest. Conservation Area is located to the south of the SCVA. There are natural or modified surface water courses within the SCVA. Yam O Site of Archaeological Interest and mangrove site are in close proximity to the northeast of the SCVA. A seawater intake point is in the area to the north of the SCVA.

Bus depots, Siu Ho Wan Sewage Treatment Works, Siu Ho Wan Vehicle Pound, Vehicle Examination Center and Weigh Station and O•Park Phase 1 are located close to the SCVA, which may necessitate further investigation on potential land contamination.

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 from its northern, western and southern edges via Cheung Tung Road, an access road to Sham Shui Kok Substation, Sham Shui Kok Drive and Discovery Bay Tunnel Link which is a restricted access road. Regional and cross-boundary connections can be routed through the adjacent North Lantau Highway via other nearby roads/highways. The connectivity of the SCVA is enhanced by the nearby major transport infrastructure, including the HKIA, HZMB and Tuen Mun-Chek Lap Kok Link, as well as the proposed new railway station at Siu Ho Wan.

Access to the North Lantau Highway from the SCVA can be routed through Sunny Bay Road and Penny's Bay Highway (both are about 1.4 km to the east of the SCVA; outside the coverage of the Reference Drawing), or Tung Chung Eastern Interchange (about 5.8 km to the west of the SCVA; outside the coverage of the Reference Drawing).

Discovery Bay Tunnel Link is a toll road with restricted access. Cheung Tung Road is a single carriageway for two-way traffic connecting MTR Sunny Bay Station at the east and Tung Chung at the west. The capacity of Cheung Tung Road should be suitable for various traffic generating activities. Nevertheless, the project proponents would be required to assess the traffic impact on a case by case basis.

4.6. Other Key Issues / Constraints on Cavern Development

Siu Ho Wan/Silver Mine Bay Aqueduct is located approximately 50 m to the southwest of the SCVA. Discovery Bay Tunnel is located about 50 m to the south of the SCVA. Owing to difference in elevation, these tunnels would not pose any insurmountable constraint on the potential uses of rock caverns within the SCVA. There is a proposed fresh water tunnel between Siu Ho Wan and Silver Mine Bay Water Treatment Works at the southwestern corner of the SCVA. Project proponents should take into account the existing and proposed underground infrastructure when pursuing cavern projects.

The SCVA falls within an area that is covered by Deed of Restrictive Covenant ("DRC") dated 10 December 1999 (memorial no. IS278911 and TW1325552) as amended by the Deed of Variation of DRC ("DVDRC") dated 25 August 2017 (memorial no. 17092601830018) in relation to the Hong Kong Disneyland, which sets height restrictions in the vicinity of the theme park to avoid visual intrusions. Lands Department should be consulted regarding any proposals that may encroach onto the area covered by the deed.

Project proponents should also take into account the latest progress of the proposed developments at Siu Ho Wan and other developments under the Blueprint.

5. Extent of Potential Portal Locations

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

The SCVA is generally accessible from Cheung Tung Road and an access road to Sham Shui Kok Substation to the north of the SCVA; Sham Shui Kok Drive and at the slope behind the Siu Ho Wan Water Treatment Works to the west; and Discovery Bay Tunnel Link to the south.

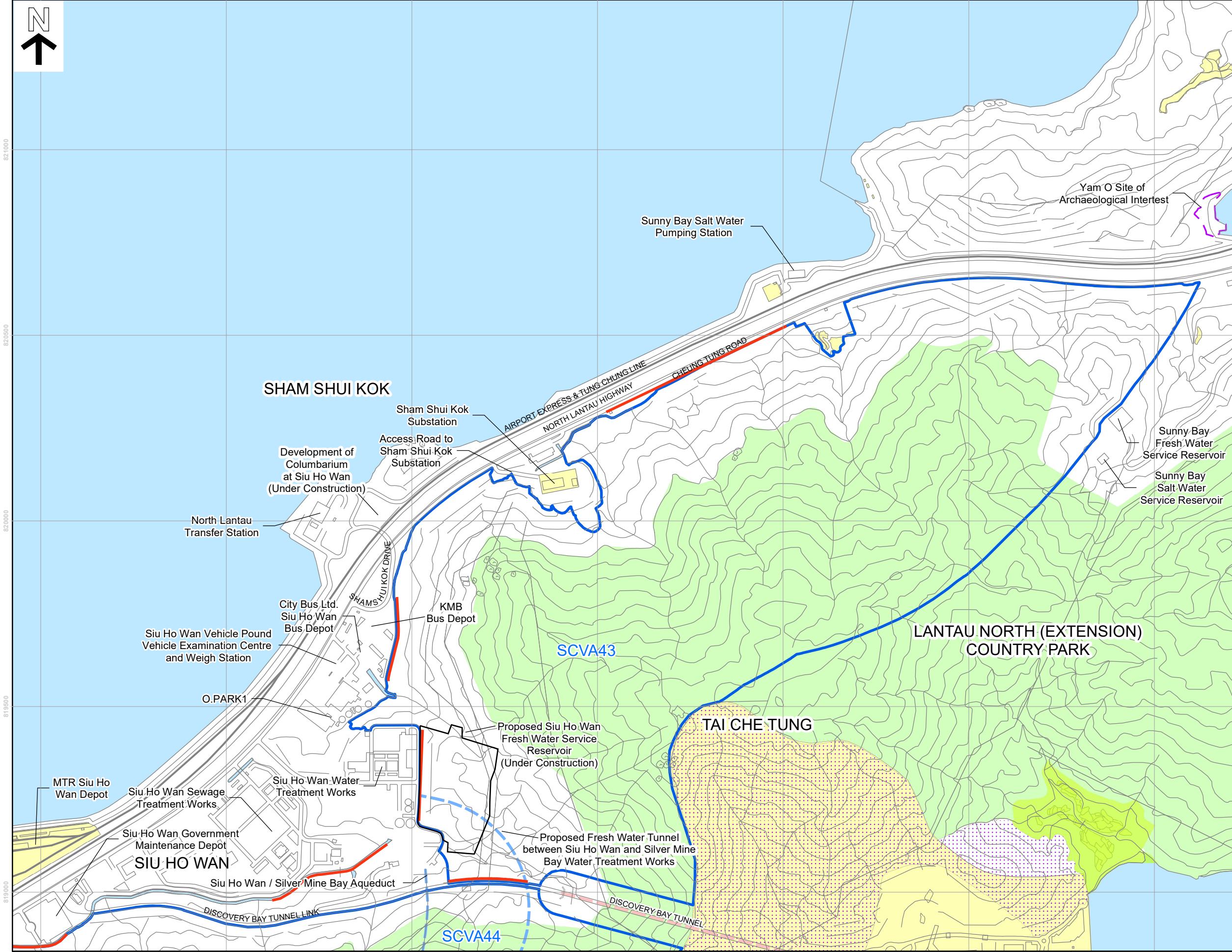
All potential portal locations are located on roadside slopes, and could be accessed by the provision of run-in/out or priority controlled junctions depending on the proposed land-use. They are mostly unrestricted by the existing road configurations, and so would be able to support a range of traffic-generating activities. For the potential portal location on Discovery Bay Tunnel Link, which is a restricted access road, the project proponents would have to sort out the land status and right of access issues when planning the cavern project.

There are natural slopes above the potential portal locations. 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 projects considering cavern options.

6. Remarks to Information Note

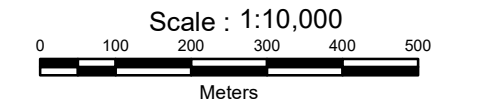
The Cavern Master Plan and all supporting documents do not exempt project proponents for cavern projects from following the relevant statutory procedures. Information including the extent of potential portal locations indicated in this Information Note should serve as reference materials only. In formulation 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
- Vehicle Tunnel
- Water Supplies Department Tunnel
- River / Nullah / Sea
- Site of Archaeological Interest
- Conservation Area
- Country Park
- Private Lot
- Coastal Protection Area (CPA)

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. 43 - SHAM SHUI KOK