

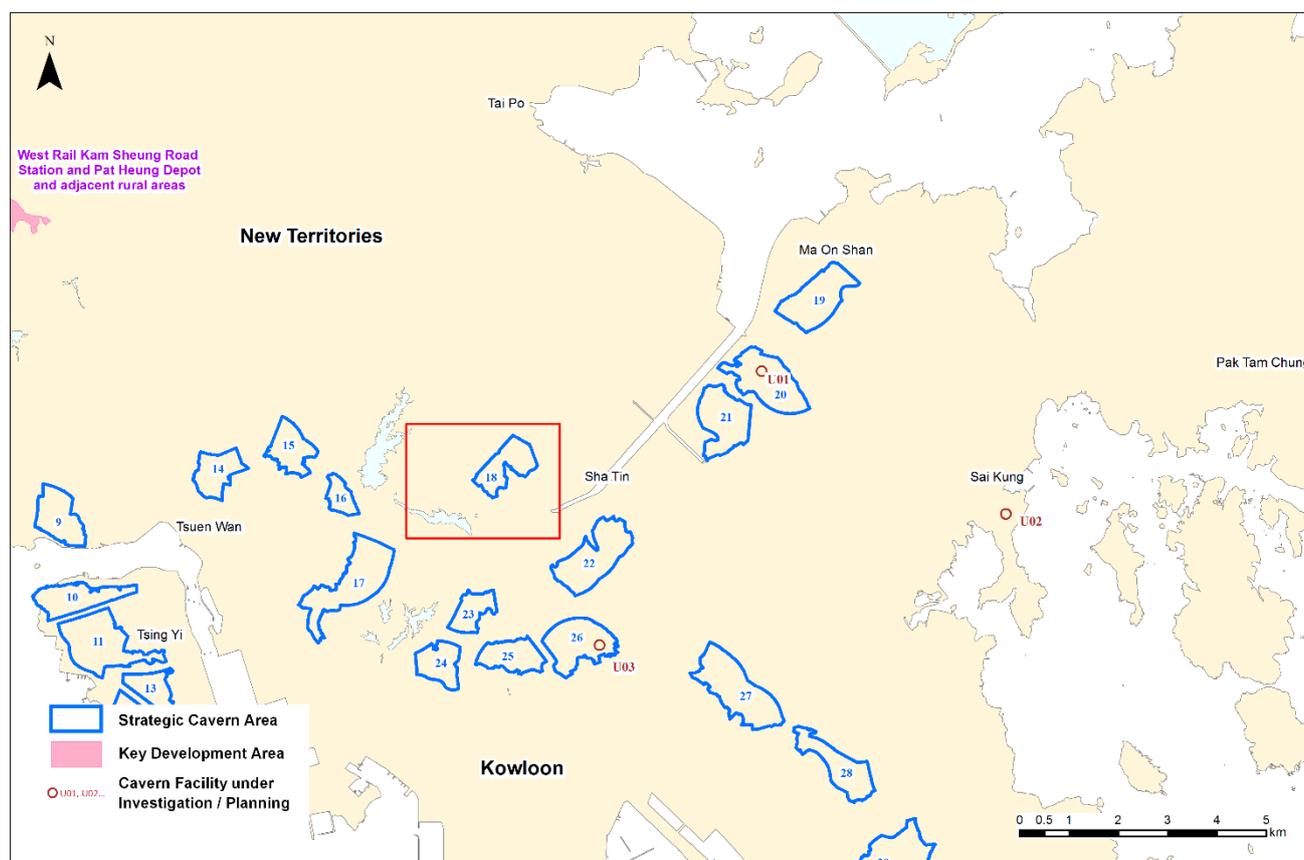
CAVERN MASTER PLAN – INFORMATION NOTE

STRATEGIC CAVERN AREA NO. 18 – LOWER SHING MUN

This Information Note describes the characteristics, key development opportunities and constraints of Strategic Cavern Area No. 18 - Lower Shing Mun (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 justification. 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):	Draft Sha Tin OZP No. S/ST/33
Area:	74.5 ha
Maximum elevation in the SCVA:	+280 mPD
Minimum elevation in the SCVA:	0 mPD

3. District Context

Location

The SCVA is located in the southwestern part 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 area of Pak Tin in Sha Tin. Sha Tin New Town is to the northeast of the SCVA, Tai Wai is to the southeast, Kam Shan Country Park is to the southwest and Shing Mun Country Park is to northwest.

The SCVA is generally hilly with a maximum elevation of about +280 mPD. There are several structures scattered within the SCVA, including some religious institutions located along Shing Mun Tunnel Road such as Shun Shin Chee Kit Yin Koon at the middle portion of the SCVA. A burial ground is at the southern portion of the SCVA. Shing Mun Tunnel Road runs across the SCVA and connects to Shing Mun Tunnel to the west of the SCVA.

To the northeast and southeast of the SCVA, Sha Tin New Town and Tai Wai are the areas mainly consisted of medium- to high-rise residential developments (e.g. Mei Chung Court and May Shing Court to the southeast of the SCVA, Granville Garden, Parkview Garden and Mei Pak Court to the south of the SCVA, Mei Lam Estate about 300 m to the southeast of the SCVA, committed private residential development above Tai Wai Station (under construction) about 850 m to the south of the SCVA, Festival City about 900 m to the south of the SCVA, and Sun Tin Wai Estate about 1.4 km to the southeast of the SCVA) and a number of local villages (e.g. Heung Fan Liu New Village to the southwest of the SCVA).

In the proximity of the SCVA, there are a number of key Government, Institution and Community (GIC) facilities supporting the development of Sha Tin New Town, Tai Wai, as well as the whole territory, including Sha Tin West Salt Water Service Reservoir and Sha Tin West Fresh Water Service Reservoir (both about 400 m to the south of the SCVA), and a cluster of columbarium related facilities, including Fu Shan Columbarium, Fu Shan Crematorium, Fu Shan Public Mortuary and Po Fook Memorial Hall (about 300 m to the southwest of the SCVA). Lower Shing Mun Reservoir is about 700 m to the southwest of the SCVA.

Access

This SCVA is accessed from its southern and southwestern edges via Mei Tin Road and Heung Fan Liu Street respectively. Regional connections could be routed through the nearby Shing Mun Tunnel, Tsing Sha Highway and Tai Po Road.

The MTR East Rail Line and Ma On Shan Line run through the locality of the SCVA. Tai Wai Station, which is the interchange station of the two railway lines, is located closest to the SCVA of about 900 m to its southeast.

Land Use Zoning

While the majority of the SCVA is zoned “Green Belt” (“GB”) under the Draft Sha Tin OZP No. S/ST/33, the western portion of the SCVA is zoned “Government, Institution or Community” (“G/IC”). The zoning of the surrounding areas includes “GB” mainly to the north, east and south, “G/IC”, “Residential (Group B)”, “Residential (Group A)” and “Comprehensive Development Area” to the south and west.

For details of the latest land use zonings on the OZP, 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 and northwestern boundaries of the SCVA are defined by the Water Supplies Department tunnels. The eastern boundary of the SCVA is defined by a geological photolineament and a residential development namely the Peak One. The western boundary of the SCVA is defined by an access road to the Sha Tin 400kV substation. The southern boundary of the SCVA is defined by Shing Mun River, Mei Tin Road, private lots and residential developments, including Mei Chung Court and Granville Garden. Individual private lots located within the SCVA have been excised from the SCVA. 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 SCVAs.

4.2. Geology

The solid geology of the SCVA is primarily coarse-grained granite, which belongs to Sha Tin Granite; fine-grained granites at the western and northeastern portions, which belong to Needle Hill Granite. The SCVA is with the rock types that are suitable for cavern development. A number of geological features, such as photolineaments and isolated dykes, are identified within and in the areas surrounding the SCVA. The excavated fine-grained granite within the SCVA is suitable for reuse as construction aggregate. Other excavated rock 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 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. Given the SCVA is also connected to the rest of the territory by several highways and railways, there is potential for the SCVA to support the development of these areas.

The eastern and southeastern 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. Mei Lam Estate, committed private residential development above Tai Wai Station (under construction), Festival City and Sun Tin Wai Estate) and local villages (e.g. Heung Fan Liu New Village) supported by a number of GIC facilities (e.g. sports ground, hospital, school, sewage treatment works, service reservoir, etc.). Should there be any need for providing additional land for residential and/or community uses, the SCVA may provide solution space by, for example, relocating some of the suitable infrastructure facilities (e.g. service reservoirs) to caverns. By doing so, surface land could be released for other beneficial uses (e.g. residential developments and/or community facilities), and it could also enable more effective utilisation of land resources in Sha Tin New Town and Tai Wai while preserving the natural landscape adjacent to the Shing Mun Country Park and Kam Shan Country Park as the natural backdrops to the urban developments in the locality.

Given the close proximity of the SCVA to various major residential areas and with good road network, the SCVA could provide suitable solution space for community facilities, such as leisure centre/sports centre or civic centre, to meet the rising need of the local communities in a scale proportionate to the then development context.

4.4. Environmental

Environmental sensitive receivers to cavern development in the SCVA are the nearby residential developments (e.g. Mei Chung Court, May Shing Court, Parkview Garden, Peak One, Granville Garden and Heung Fan Liu New Village) and schools (e.g. Lock Tao Secondary School and St. Margaret's Girls' College). The SCVA and the adjacent hillside areas comprise wooded area and shrubby hillside, but are distant from any recognised sites of conservation importance. The northern portion of the SCVA falls within Water Gathering Grounds. A traditional burial ground is located within the southern portion of the SCVA. Also, five built heritages associated with the Lower Shing Mun Reservoir, including the graded historic buildings of Dam of Lower Shing Mun Reservoir (Grade 3 historic building), Supply Basin (Grade 3 historic building), Bellmouth Overflow (Grade 2 historic building), Weir (Grade 2 historic building) and Gate Shaft (Grade 2 historic building) are located in the vicinity of the SCVA. There are natural or modified surface water courses within the SCVA.

All potential environmental constraints, which may impose restrictions on cavern development, 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 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

This SCVA can be accessed from its southern and southwestern edges via Mei Tin Road and Heung Fan Liu Street respectively. Regional connections could be routed through the nearby Shing Mun Tunnel, Tsing Sha Highway and Tai Po Road.

Heung Fan Liu Street connects to Mei Tin Road at its east. Mei Tin Road provides convenient connections to the primary road network and a number of expressways that pass through Tai Wai. It is considered that the road connections to the SCVA may have sufficient capacity to accommodate a range of traffic generating land uses, subject to further detailed traffic assessments. The capacity of the connecting roads, including Tsing Sha Highway, should also be assessed when planning potential land uses in the SCVA.

4.6. Other Key Issues / Constraints on Cavern Development

Four Water Supplies Department's tunnels are located in the vicinity of the SCVA, namely the Lower Shing Mun Diversion and Spillway Tunnel about 400 m to the southwest of the SCVA, the Plover Cove Stage 1 Tunnel (and its six adits to Yau Oi Tsuen Shaft, Needle Hill Shaft, Heung Fan Liu Shaft, Heung Fan Liu No. 2 Shaft, Lower Shing Mun No. 2 Portal and Lower Shing Mun No. 3 Portal) about 50 m to the northwest of the SCVA, an unnamed tunnel between Yau Oi Tsuen Shaft and Pai To Hang No. 3 Portal about 200 m from the northeast of the SCVA, and the Plover Cove Draw-off Tunnel about 600 m to the south of the SCVA. Owing to the horizontal separations, the tunnels would not pose any insurmountable constraint to the cavern development in the SCVA.

Shing Mun Tunnel Road runs across the SCVA and connects the Shing Mun Tunnel in the west of the SCVA. The potential impact to the road and tunnel due to cavern development shall be duly assessed and addressed by the project proponents.

5. Potential Land Uses

The potential land uses for the SCVA are as follows:

Land use	Description
<p>Leisure Centre/ Sports Centre</p> <p>Civic Centre</p>	<p>The SCVA is located adjacent to various existing major residential communities in Sha Tin New Town and Tai Wai, such as Mei Lam Estate. There is potential for the SCVA to support the future development of these areas by providing additional supporting community facilities, such as leisure centre/sports centre and civic centre to meet the rising demand from the local communities, including the planned population arising from the committed residential development above Tai Wai Station, in a scale proportionate to the then development context.</p> <p>Some potential portal locations are in close proximity to the existing residential developments (e.g. Mei Chung Court and May Shing Court) which provide easy access for the local residents. This further enhances the potential for housing such uses in the SCVA.</p>

Land use	Description
Service Reservoir	<p>Sha Tin New Town and Tai Wai are homes of various residential developments (e.g. Mei Lam Estate, Mei Chung Court and Festival City) and have the potential for further growth given they are located in an urban setting equipped with well-established infrastructural systems. There is thus opportunity to develop suitable land use to support the potential expansion of these residential areas, by relocating some of the suitable infrastructure facilities, such as service reservoir, to caverns.</p> <p>Existing service reservoirs are found in the vicinity of the SCVA. Relocation of the facilities to caverns may be considered, thereby releasing the surface land for other beneficial uses (e.g. residential developments and/or community facilities).</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.

This SCVA is accessed from its southern and southwestern edges via Mei Tin Road and Heung Fan Liu Street respectively. The potential portals along the access road to Sha Tin 400kV Substation off Heung Fan Liu Street and at Mei Tin Road are located on roadside slopes. Direct road accesses could be provided via suitable connection arrangement associated with the portal formation to suit the proposed land use in future cavern development project.

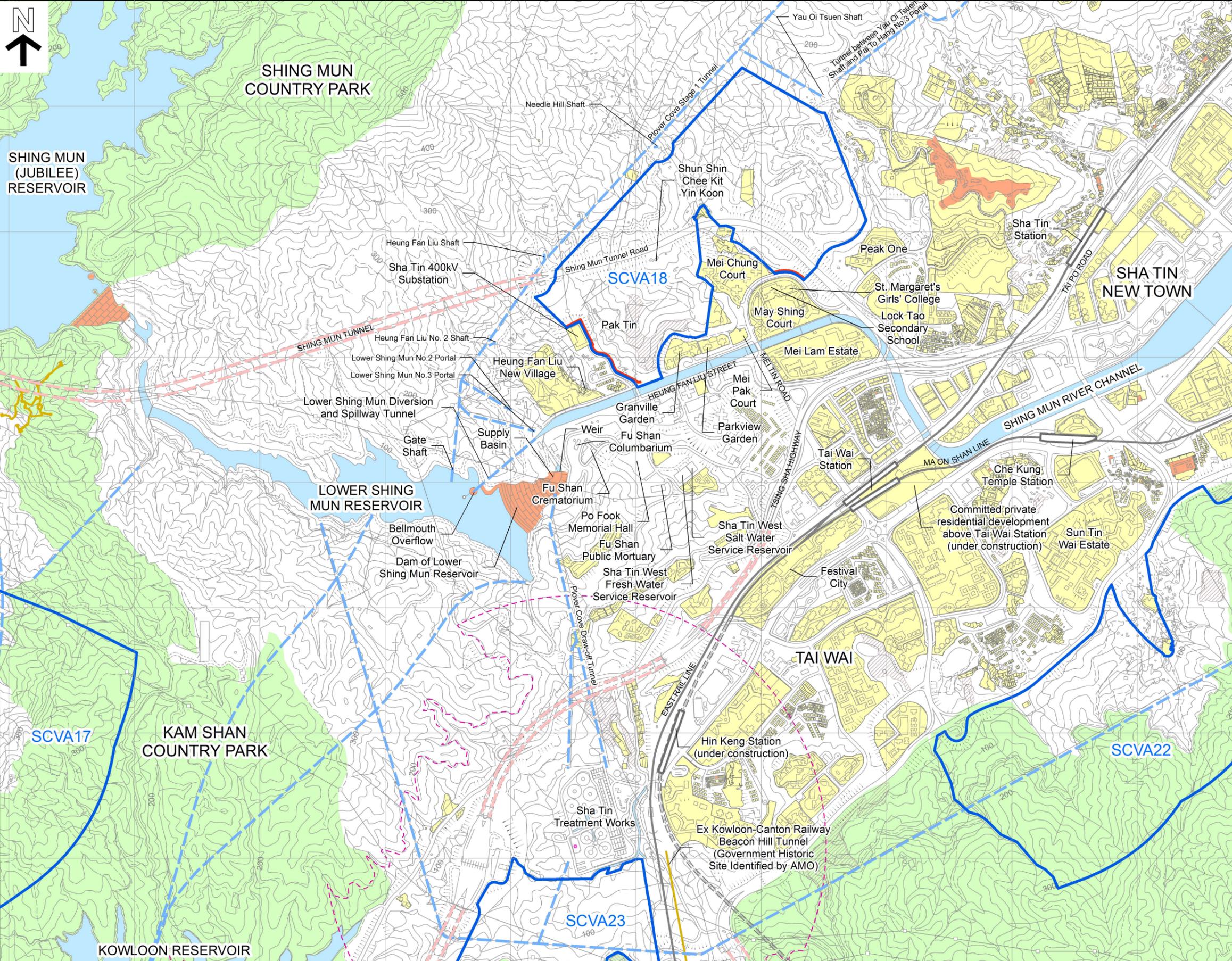
There are natural slopes above the potential portal locations. There may be potential natural terrain hazards in the vicinity of the potential portals which may require further study by the project proponents.

7. Concluding Remarks

The SCVA presents an opportunity for placing suitable land uses in rock caverns to serve the neighbouring residential communities (e.g. by housing service reservoir). The SCVA could also utilise its locational advantage to house suitable land uses, such as leisure centre/sports centre and civic centre, which could meet the increasing local demand. Project proponents for cavern development should take due consideration of the existing and potential residential developments, accessibility for cavern development, as well as environmental sensitive receivers to minimise the interfacing issues and bring about greater synergy and opportunities.

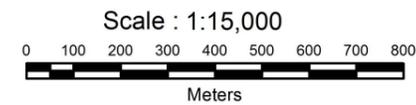
8. Notes

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
 - Committed Railway Line
 - Vehicle Tunnel
 - Water Supplies Department Tunnel
 - Abandoned Tunnel
 - Reservoir / River / Nullah
 - Graded Historic Building
 - Declared Monument (Historic Building)
 - Private Lot
 - Burial Ground
 - Potentially Hazardous Installation
 - Consultation Zone of Potentially Hazardous Installation
 - 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. 18 - LOWER SHING MUN