

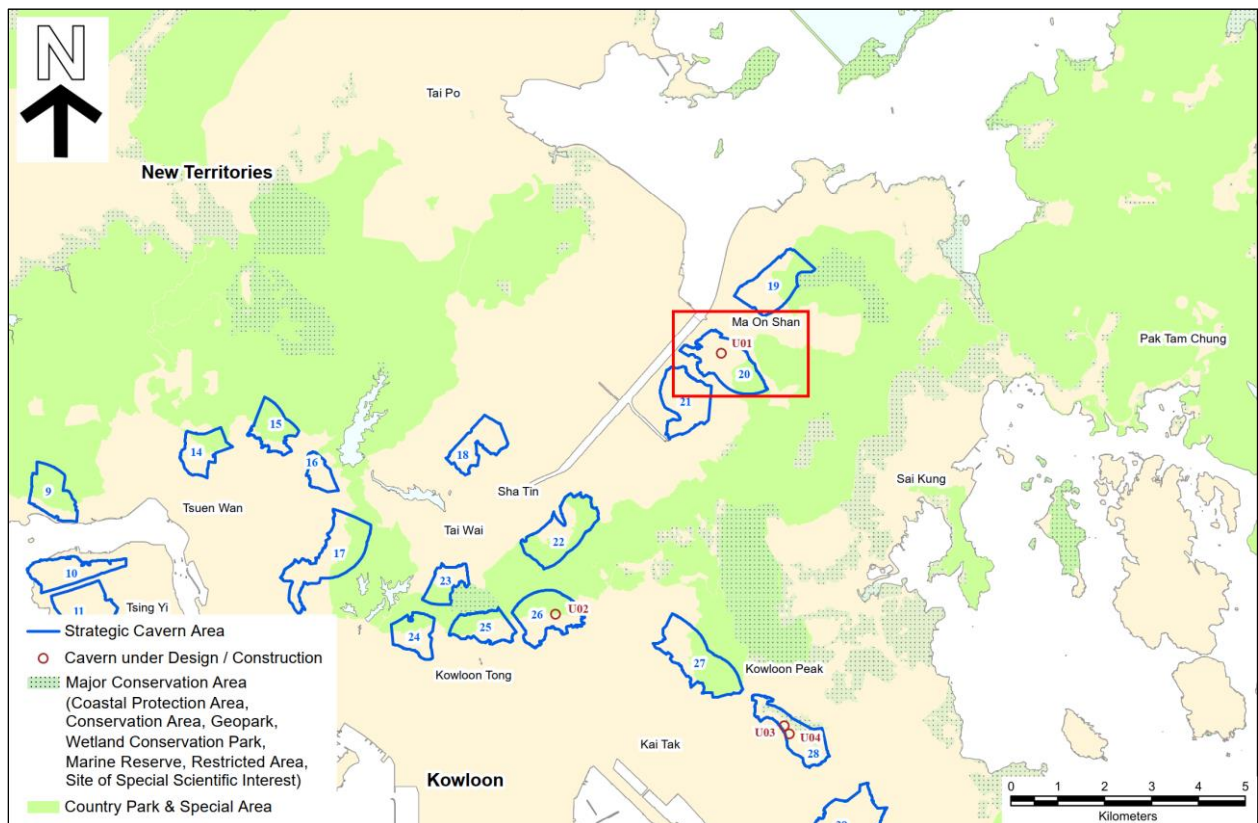
CAVERN MASTER PLAN – INFORMATION NOTE

STRATEGIC CAVERN AREA NO. 20 – A KUNG KOK

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 20 - A Kung 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 Plans (OZPs) ¹ :	Sha Tin OZP Ma On Shan OZP
Area:	125.6 ha
Maximum elevation in the SCVA:	+374 mPD
Minimum elevation in the SCVA:	+4 mPD

3. District Context

Location

The SCVA is located to the northeast of the Shek Mun Industrial/Business Area in Sha Tin. It covers the areas of A Kung Kok and part of Nui Po Shan (Turret Hill). Ma On Shan is to the northeast of the SCVA, Ma On Shan Country Park is to the east, Nui Po Shan (Turret Hill) is to the south, and Shing Mun River Channel is to the west.

The SCVA is generally hilly with a maximum elevation of about +374 mPD. It partially overlaps with Ma On Shan Country Park in the southeastern side. To the southwest of the SCVA, it is the Sha Tin New Town area which mainly consists of medium- to high-rise residential developments including Pictorial Garden (about 800 m to the southwest of the SCVA), and to the west there is some local villages such as Ah Kung Kok Fishermen Village (adjoining the northwestern boundary of the SCVA). To the north of the SCVA, there is the residential area of Ma On Shan which also contains medium- to high-rise residential developments including Chevalier Garden (about 100 m to the north of the SCVA) and local villages including Tai Shui Hang (about 300 m to the north of the SCVA).

Within and in the proximity of the SCVA, there are a number of key Government, Institution or Community (GIC) facilities supporting the development of Sha Tin New Town and A Kung Kok, including A Kung Kok Fresh Water Service Reservoir (in the northwestern corner of the SCVA), Shatin Hospital (about 300 m to the southwest of the SCVA), Customs and Excise Department Shatin Vehicle Detention Centre (about 100 m to the northwest of the SCVA) and Sha Tin Sewage Treatment Works (about 500 m to the northwest of the SCVA). Under Agreement No. CE 30/2014 (DS) “Relocation of Sha Tin Sewage Treatment Works to Caverns: Caverns and Sewage Treatment Works – Investigation, Design and Construction”, the cavern facility is

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/>).

currently under construction. Nui Po Shan is a steep and vegetated hill serving as a natural backdrop to the surrounding communities.

Access

This SCVA is accessible from its eastern, northern and western edges via Mui Tsz Lam Road, a restricted access road to Drainage Services Department's A Kung Kok Portal and A Kung Kok Street respectively. Regional connections could be routed through the nearby Tate's Cairn Highway, Tolo Highway, etc.

The MTR Tuen Ma Line and East Rail Line run by the western side of the SCVA. The nearest station is Tai Shui Hang Station of the Tuen Ma Line located about 400 m to the north of the SCVA boundary.

Existing / Planned Facility in SCVA

There is currently no existing cavern facility in the SCVA. The relocation of the existing Sha Tin Sewage Treatment Works to caverns in this SCVA is currently under construction.²

4. Summary of Characteristics of Strategic Cavern Area

4.1. Boundary

The northern and eastern boundaries of the SCVA are defined by Mui Tsz Lam Road and private lots. The western boundary of the SCVA is defined by A Kung Kok Street, Ah Kung Kok Fishermen Village and a permitted burial ground. The southern boundary of the SCVA is defined by A Kung Kok Shan Road, Breakthrough Youth Village and The Neighbourhood Advice-Action Council Harmony Manor. 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.

² Environmental Permit has been granted to DSD for Sha Tin Cavern Sewage Treatment Works (EP No. 533/2017) under EIAO in March 2017.

4.2. Geology

The solid geology of the SCVA is primarily medium-grained granite, which belongs to Shui Chuen O Granite. The SCVA is with the rock type that is 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 medium-grained granite within the SCVA is suitable for reuse as construction aggregate.

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 development in Sha Tin New Town and Ma On Shan. The relocation of the existing Sha Tin Sewage Treatment Works to caverns in this SCVA is currently under construction.

To the southwest and north of the SCVA, there are the major residential developments in Sha Tin New Town and Ma On Shan respectively. These areas consist of various medium- to high-rise residential developments (e.g. Pictorial Garden and Chevalier Garden) and local villages (e.g. Ah Kung Kok Fishermen Village and Tai Shui Hang) supported by a number of GIC facilities (e.g. Shatin Hospital, Cheshire Home, Breakthrough Youth Village, Bradbury Hospice, KCBC Hay Nien Primary School, Ma On Shan Tsung Tsin Secondary School, A Kung Kok Fresh Water Service Reservoir, Sha Tin Sewage Treatment Works, C&ED Shatin Vehicle Detention Centre, etc.).

4.4. Environmental

Environmental sensitive receivers to the potential caverns in the SCVA are the nearby existing residential developments (e.g. Chevalier Garden, A Kung Kok Government Quarter and Ah Kung Kok Fishermen Village), institutions and schools (e.g. Cheshire Home, Breakthrough Youth Village, Bradbury Hospice, KCBC Hay Nien Primary School and Ma On Shan Tsung Tsin Secondary School), and hospital (i.e. Shatin Hospital). The SCVA comprises wooded area and shrubby hillside. The southeastern part of the SCVA encroaches onto Ma On Shan Country Park and Water Gather Grounds whilst the northern part of the SCVA encroaches onto a wooded area. To the immediate northwest of the SCVA is a traditional permitted burial ground. Two built heritages at Tai Shui Hang namely Cheung Village House (Sha Tin), No. 6 Tai Shui Hang (Grade 3 historic building) and Cheung Village Houses (Sha Tin), Nos. 16-18 Tai Shui Hang (Grade 3 historic building) are located about 350 m to the north of the SCVA. A site of

archaeological interest, namely Pak Kong - Mui Tsz Lam Trackway, is located about 450 m to the southeast of the SCVA. There are natural or modified surface water courses within the SCVA.

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

This SCVA can be accessed from its northeastern, northern and northwestern portions via Mui Tsz Lam Road, a restricted access road to Drainage Services Department A Kung Kok Portal and A Kung Kok Street respectively. Mui Tsz Lam Road and the restricted access road are both single-lane roads, which may pose constraint to the portal formation for cavern projects. Project proponents should take account of the constraint in the cavern project, and carry out necessary detailed assessment and design, and also minimise the possible impacts on the existing land uses.

The access from the potential portal locations to the primary road network is via A Kung Kok Street, which connects to Shek Mun Interchange, and further to Tai Chung Kiu Road. The connection to the expressway network in Sha Tin area allows for easy connections to different parts of the territory via Tate's Cairn Highway, Tolo Highway, Tai Po Road, Shing Mun Tunnel Road, Tsing Sha Highway and Lion Rock Tunnel Road.

4.6. Other Key Issues / Constraints on Cavern Development

A Drainage Services Department's tunnel, namely the Tolo Harbour Effluent Export Scheme Tunnel, passes through the SCVA from north to south. Owing to the difference in elevation, this tunnel will not pose any insurmountable constraint to the potential uses of rock caverns within the SCVA.

5. Extent of Potential Portal Locations

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

The SCVA is accessed from the existing roads at A Kung Kok Street to the west, and Mui Tsz Lam Road and the restricted access road to Drainage Services Department A Kung Kok Shaft-to the north and northeast.

The potential portal locations are located at the slopes alongside the carriageways. Mui Tsz Lam Road and the restricted access road are both single-lane roads, which may constrain the portal formation for cavern projects. Road widening/upgrading may be required to meet the requirement of the proposed use in the SCVA. The project proponent should liaise with the Drainage Services Department on the use of the restricted road. A Kung Kok Street is a two-lane road and may be able to accommodate a range of traffic generating activities.

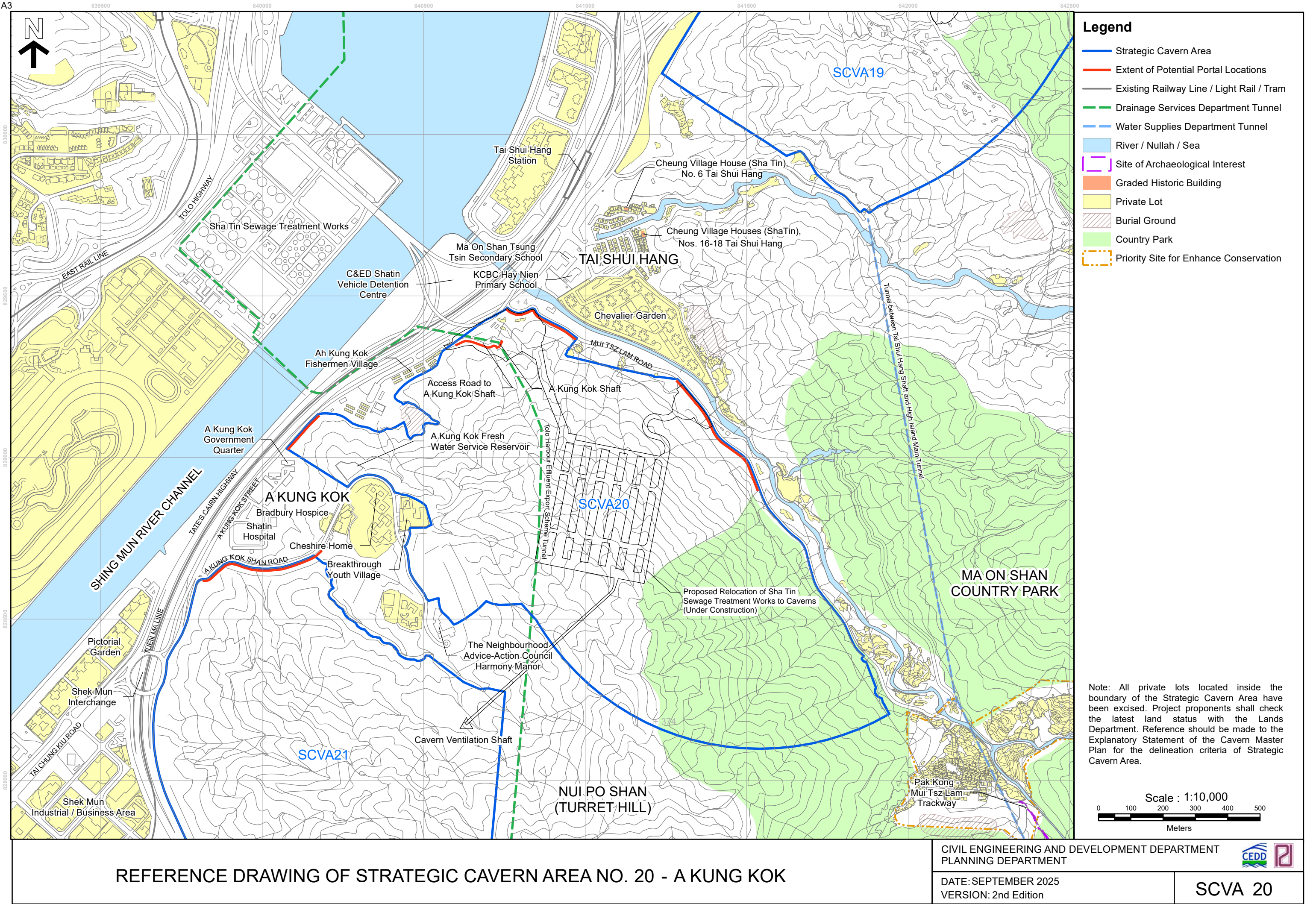
There are natural slopes above the potential portal locations. There may be potential natural terrain hazards in the vicinity which may require further study by the project proponents. Moreover, the presence of thick superficial deposit (colluvium) at the potential portal location at the northeastern portion of the SCVA may affect the design and construction of the portal.

The portal formation and the associated works (e.g. road connection and slope works) at Mui Tsz Lam Road should be away from Ma On Shan Country Park as far as practicable to reduce any possible ecological, visual and recreational impacts to the country park and disturbance to its users.

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



REFERENCE DRAWING OF STRATEGIC CAVERN AREA NO. 20 - A KUNG KOK