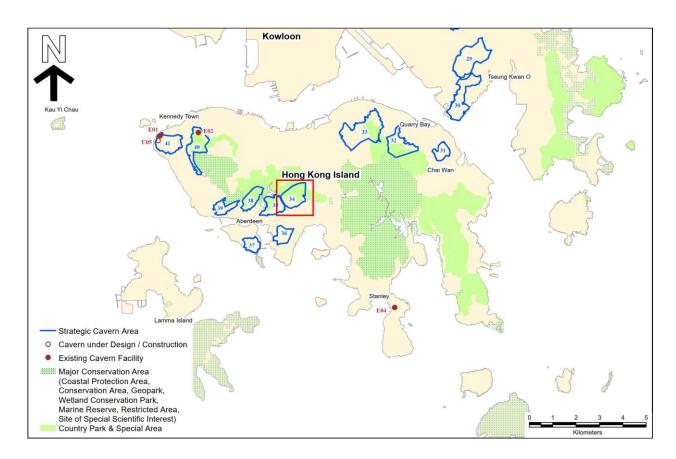
<u>CAVERN MASTER PLAN – INFORMATION NOTE</u>

STRATEGIC CAVERN AREA NO. 34 – WONG CHUK HANG

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 34 - Wong Chuk Hang (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: The Peak Area OZP

Aberdeen and Ap Lei Chau OZP

Area: 78.6 ha

Maximum elevation in the SCVA: +277 mPD

Minimum elevation in the SCVA: +27 mPD

3. District Context

Location

The SCVA is located in the southern part of Hong Kong Island. It occupies the foothill area of Mount Cameron in Wong Chuk Hang. Aberdeen Country Park is to the north of the SCVA, Shouson Hill is to the southeast, Wong Chuk Hang is to the south, and Shek Pai Wan is to the southwest.

The SCVA is generally hilly with a maximum elevation of about +277 mPD. A majority of the SCVA encroaches onto Aberdeen Country Park. To the southeast of the SCVA, the area of Shouson Hill is predominantly residential communities with low-rise developments, including Manderly Garden (about 500 m to the southeast of the SCVA) and Unicorn Garden (about 600 m to the southeast of the SCVA). To the southwest 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 information technology and telecommunications industries, non-polluting industries, office and other commercial uses, with high-rise developments clustering along Wong Chuk Hang Road and Heung Yip Road. To the southwest of the SCVA, Shek Pai Wan is another residential communities with medium- to high-rise developments, including Shek Pai Wan Estate (about 1,350 m to the southwest of the SCVA) and Yue Kwong Chuen (about 1,400 m to the southwest of the SCVA).

In the proximity of the SCVA, there are a number of key Government, Institution or Community (GIC) facilities supporting the development of surrounding areas as well as the territory, including a cluster of hospitals and related facilities (such as Grantham Hospital, Hong Kong Academy of Medicine, Wong Chuk Hang Hospital, Wong Chuk Hang Complex for the Elderly and Gleneagles Hong Kong Hospital, all to the south of the SCVA), Hong Kong Police College (about 500 m to the south of the SCVA) and Shouson Hill Fresh Water Service Reservoir (about

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/).

750 m to the southeast of the SCVA). Ocean Park, one of the major recreational theme parks in Hong Kong, is located at about 500 m to the south of the SCVA.

Access

The SCVA is accessible from its southern edge via Nam Fung Road, and via the restricted access within Grantham Hospital for possible development of hospital-related uses. Regional connections could be routed through the nearby Wong Chuk Hang Road and Aberdeen Tunnel.

The MTR South Island Line serves the neighbouring areas of the SCVA. The nearest stations include Ocean Park Station (about 400 m to the south of the SCVA) and Wong Chuk Hang Station (about 600 m to the southwest 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 eastern boundary of the SCVA is defined by Aberdeen Tunnel and Nam Fung Road Woodland Site of Specific Scientific Interest (SSSI). The western boundary of the SCVA is defined by the valley topography. The southern boundary of the SCVA is defined by Nam Fung Road, private lots and Granham Hospital.

4.2. Geology

The solid geology of the SCVA is primarily fine ash vitric tuff, which belongs to Ap Lei Chau Formation. The SCVA is with a rock type that is suitable for the uses of rock caverns. A number of geological features, such as faults and photolineaments, are identified within and in areas surrounding the SCVA. 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 11 (Hong Kong & Kowloon) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

4.3. Planning

The SCVA is adjacent to various residential and business areas in Shek Pai Wan, Wong Chuk Hang and Shouson Hill and is also well connected to the rest of the territory by roads and railways. The SCVA is situated in a location adjacent to a cluster of hospitals and related facilities in Wong Chuk Hang, including Grantham Hospital, Hong Kong Academy of Medicine, Wong Chuk Hang Hospital, Wong Chuk Hang Complex for the Elderly and Gleneagles Hong Kong Hospital.

Besides the development of medical industry, Wong Chuk Hang has also gradually been transformed into a business area with information technology and telecommunications industries, non-polluting industries, office and other commercial uses. In particular, various wine storage facilities have been developed, making use of the spacious industrial buildings and good connectivity available in this area.

The areas of Shek Pai Wan and Shouson Hill are major residential communities consisted of low- to high-rise developments (e.g. Manderly Garden, Shek Pai Wan Estate and Yue Kwong Chuen) supported by various GIC facilities (e.g. sports hall, school, hospital, service reservoir, etc.). 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 potential caverns in the SCVA are the nearby existing residential area (i.e. Kau Wai Village), schools (e.g. St. Paul's Co-educational College Primary School and HKUGA College) and hospitals and related facilities (e.g. Grantham Hospital, Wong Chuk Hang Hospital, Po Leung Kuk Wong Chuk Hang Service for the Elderly and Gleneagles Hong Kong Hospital). The SCVA encroaches onto Aberdeen Country Park, Water Gathering Grounds and wooded areas. There are natural and modified water courses within the SCVA. The Rock Carvings at Wong Chuk Hang, which is a Declared Monument, is located at the southern portion of the SCVA. The Old House (No. 10 Wong Chuk Hang San Wai) (Grade 2 historic building) and the Central Ordnance Munitions Depot (alias, Little Hong Kong) (Grade 3 historic building) are located in the vicinity of the SCVA. Nam Fung Road Woodland SSSI is abutting the eastern boundary of the SCVA. It is the only mature forest on Hong Kong Island dated back to 150 years ago. Species of conservation importance including Hong Kong Cascade Frog, Lesser Spiny Frog and Short-legged Toad are recorded within the SCVA and along the catchwater at the fringe of Aberdeen Country Park.

All potential environmental constraints, which may impose restrictions on 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 southern edge via Nam Fung Road, and via the restricted access within Grantham Hospital for possible development of hospital-related uses. Regional connections could be routed through the nearby Wong Chuk Hang Road and Aberdeen Tunnel.

Nam Fung Road is an Urban District Distributor that leads to Wong Chuk Hang Road to the west. It is convenient to access the SCVA from the primary road network via eastbound lane of Wong Chuk Hang Road. Vehicles travelling from the east, i.e. from the main urban areas of Hong Kong via Aberdeen Tunnel need to perform U-turns at the roundabout junction of Ocean Park Road and Heung Yip Road in order to reach the SCVA via Wong Chuk Hang Road. Project proponents shall be aware of the potentially arduous detour that may affect the accessibility of the SCVA.

The project proponents 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.

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 any potential traffic impact on both local and district bases.

4.6. Other Key Issues / Constraints on Cavern Development

A railway tunnel of the MTR South Island Line passes through the SCVA in its middle portion. Two small abandoned tunnels are located within the northeastern portion of the SCVA. Due to the difference in elevation, these tunnels would not pose any insurmountable constraint to the potential uses of rock caverns within the SCVA.

A Drainage Services Department's tunnel, namely the Hong Kong West Drainage Tunnel, is located approximately 300 m to the northeast of the SCVA. A vehicle tunnel of Aberdeen Tunnel is located approximately 50 m to the eastern of the SCVA. A cable tunnel, namely the Hong Kong Electric Nam Fung-Parker cable tunnel, is approximately 200 m to the east of the SCVA. Several tunnels used as wine cellar are located approximately 300 m to the southeast of the SCVA. As these tunnels are far away from the SCVA, they would not pose any insurmountable constraint to the potential uses of rock caverns within the SCVA.

Hong Kong Trail Section 4 is 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 locations is shown on the Reference Drawing.

The extent of potential portal location on Nam Fung Road is at slopes adjacent to the carriageway and access could be made via provision of suitable run-in/out or priority controlled junction, depending on the proposed use. The road leading to the potential portal location is relatively steep. Considering the possible disruption to the existing traffic flow, it may be appropriate for this potential portal location to accommodate low or moderate traffic-generating activities.

Access to the extent of potential portal location within Grantham Hospital is restricted to the hospital-related traffic only. The current access arrangement would be suitable to accommodate low traffic-generating activities. Major road upgrading/widening works may be required in order to support moderate to high traffic-generating activities. Since this extent of potential portal location is adjacent to Grantham Hospital, the potential portal location and the potential cavern facility would be appropriate to support any development of Grantham Hospital for hospital and related uses. The project proponents should consult Grantham Hospital should access via the restricted access within Grantham Hospital is required.

The extent of potential portal locations on Nam Fung Road is located at cut slopes with natural terrain above. The extent of potential portal locations adjacent to Grantham Hospital is at natural slopes. 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.

