

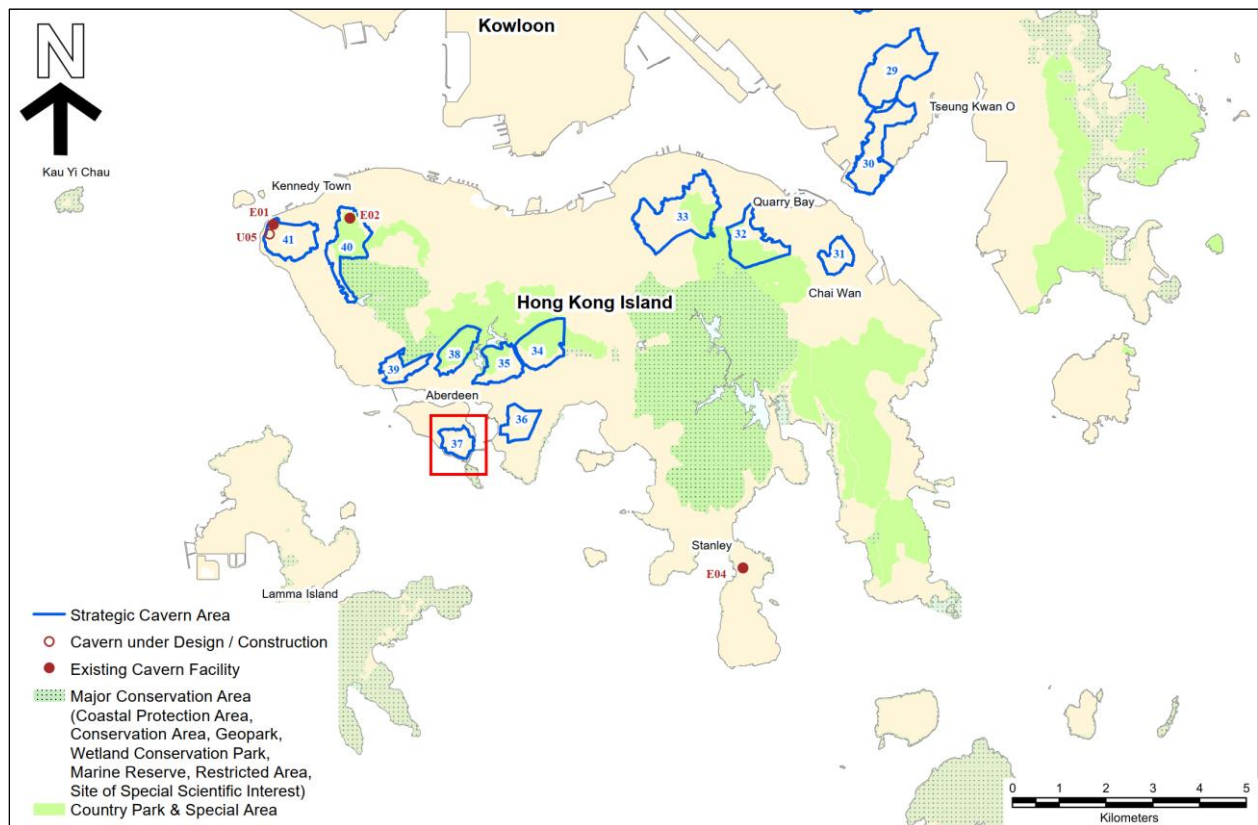
CAVERN MASTER PLAN – INFORMATION NOTE

STRATEGIC CAVERN AREA NO. 37 – AP LEI CHAU

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 37 - Ap Lei Chau (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 :	Aberdeen and Ap Lei Chau OZP
Area:	34.3 ha
Maximum elevation in the SCVA:	+198 mPD
Minimum elevation in the SCVA:	+0 mPD

3. District Context

Location

The SCVA is located in the southwestern part of Hong Kong Island. It occupies the area of Mount Johnston (Yuk Kwai Shan) in Ap Lei Chau. Aberdeen is to the north of the SCVA and Wong Chuk Hang is to the northeast.

The SCVA is generally hilly with a maximum elevation of about +198 mPD. The Ap Lei Chau Salt Water Service Reservoir and Ap Lei Chau Fresh Water Service Reservoir are located in the northern portion of the SCVA. Ap Lei Chau West Business Area is located to the immediate west of the SCVA. The areas to the northeast, north and northwest of the SCVA are the residential areas in Ap Lei Chau consisted of high-rise developments, including Larvotto (at the north-eastern boundary of the SCVA), Lei Tung Estate (at the northern boundary of the SCVA), Yue On Court (about 200 m to the north of the SCVA) and South Horizons (about 500 m to the northwest of the SCVA). The Hong Kong School of Motoring is located about 150 m to the west 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 Ap Lei Chau, including Ap Lei Chau Sports Centre (about 450 m to the north of the SCVA), Ap Lei Chau No. 2 Fresh Water Service Reservoir (about 350 m to the northwest of the SCVA) and Ap Lei Chau Preliminary Treatment Works (about 500 m to the west 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/>).

Access

The SCVA is accessible from its eastern, northern and western boundaries via Ap Lei Chau Praya Road, Lei Tung Estate Road, access road to Ap Lei Chau Fresh and Salt Water Service Reservoirs and Lee Wing Street. Regional connections could be routed through Ap Lei Chau Bridge Road, which is the only road link to Aberdeen and thus to other parts of the territory.

The MTR South Island Line serves the neighbouring areas of the SCVA. The nearest stations include Lei Tung Station (about 100 m to the north of the SCVA) and South Horizons Station (about 400 m to the northwest of the SCVA). The 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 Aberdeen area.

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 northern boundary of the SCVA is defined by the access road to Ap Lei Chau Fresh and Salt Water Service Reservoirs, private lots and residential development of Lei Tung Estate. The eastern boundary of the SCVA is defined by the typhoon shelter and residential development of Larvotto. The western boundary of the SCVA is defined by Lee Wing Street and Ap Lei Chau West Business Area. The southern boundary of the SCVA is defined by the Coastal Protection Area.

4.2. Geology

The solid geology of the SCVA is primarily fine ash vitric tuff with eutaxite, 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 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 15 (Hong Kong South & Lamma Island) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

4.3. Planning

The SCVA is surrounded by various residential and industrial areas in Ap Lei Chau. There is potential for the SCVA to support their development. Road connection of the SCVA to the territory is limited but access for public is enhanced by the MTR South Island Line.

Ap Lei Chau is predominantly with high-rise residential communities (e.g. Larvotto, Lei Tung Estate, South Horizons, and The Corniche). Also, the Ap Lei Chau West Business Area to the immediate west of the SCVA has gradually been transformed into a new business area for information technology and telecommunications industries, non-polluting industries, office and other commercial uses. These areas are supported by various GIC facilities (e.g. sports hall, school, sewage treatment plant and service reservoir, etc.).

4.4. Environmental

Environmental sensitive receivers to potential caverns in the SCVA are the nearby residential developments (e.g. Lei Tung Estate and Larvotto) and schools (e.g. Apleichau Kaifong Primary School). The SCVA comprises natural greenery and lowland forest. Coastal Protection Area adjoins the southern boundary of the SCVA. There are natural or modified surface water courses within the SCVA. The declared monument of Hung Shing Temple (Ap Lei Chau) and the historic building of Shui Yuet Temple (Ap Lei Chau) (Grade 3 historic building) are located to the north of the SCVA. Meanwhile, Aberdeen Battery (New Item Pending for Grading Assessment, N379), is located within the SCVA.

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. 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 eastern, northern and western boundaries via Ap Lei Chau Praya Road, Lei Tung Estate Road, an access road to Ap Lei Chau Fresh and Salt Water Service Reservoirs and Lee Wing Street. Regional connections could be routed through Ap Lei Chau Bridge Road, which is the only road that links to Aberdeen and then to other parts of the territory.

Ap Lei Chau Praya Road and Lee Wing Street can be directly connected to the expressway network via Ap Lei Chau Bridge Road to Aberdeen Praya Road and Wong Chuk Hang Road which further connect to other parts of the territory. Accessing the SCVA via Lei Tung Estate Road will have to route through the restricted access road in Lei Tung Estate. The access road to Ap Lei Chau Fresh and Salt Water Service Reservoirs off Lee Nam Road is also restricted in nature.

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 Drainage Services Department's tunnel, namely the Harbour Area Treatment Scheme Stage 2A tunnel, is located approximately 500 m to the northwest of the SCVA. The railway tunnel of MTR South Island Line is approximately 20 m to the northwest of the SCVA. The Hong Kong Electric Ap Lei Chau cable tunnel is approximately 200 m to the northwest of the SCVA. As these tunnels are away from the SCVA boundary, they would not pose any insurmountable constraint on the potential uses of rock caverns.

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 Lee Wing Street to the west; Ap Lei Chau Praya Road to the east; and the slope adjacent to Ap Lei Chau Fresh and Salt Water Service Reservoirs and the slope adjacent to Lei Tung Estate to the north of the SCVA.

The potential portal locations along Lee Wing Street and Ap Lei Chau Praya Road are on slopes adjacent to the carriageways and could be accessed via the provision of suitable run-in/out or priority-controlled junction, depending on the proposed use. These potential portion locations are mostly unrestricted by the adjacent road configurations, and so are anticipated to be able to support a range of traffic generating activities.

The potential portal location adjacent to Ap Lei Chau Fresh and Salt Water Service Reservoirs is accessed via a single-lane restricted access road off Lee Nam Road. It would be suitable to accommodate low traffic-generating activities. The access road would require major upgrading in order to support moderate to high traffic-generating activities. For the access road off Lei Tung Estate Road to the potential portal location on slope adjacent to Lei Tung Estate, its width is constrained by the adjacent residential buildings. This access road is also restricted for use by the authorised users. Given the configuration and nature of the access road, this potential portal may only be suitable for accommodating low traffic-generating activities. The project proponents should liaise and obtain consent from relevant parties/stakeholders on the use of the restricted road for potential caverns.

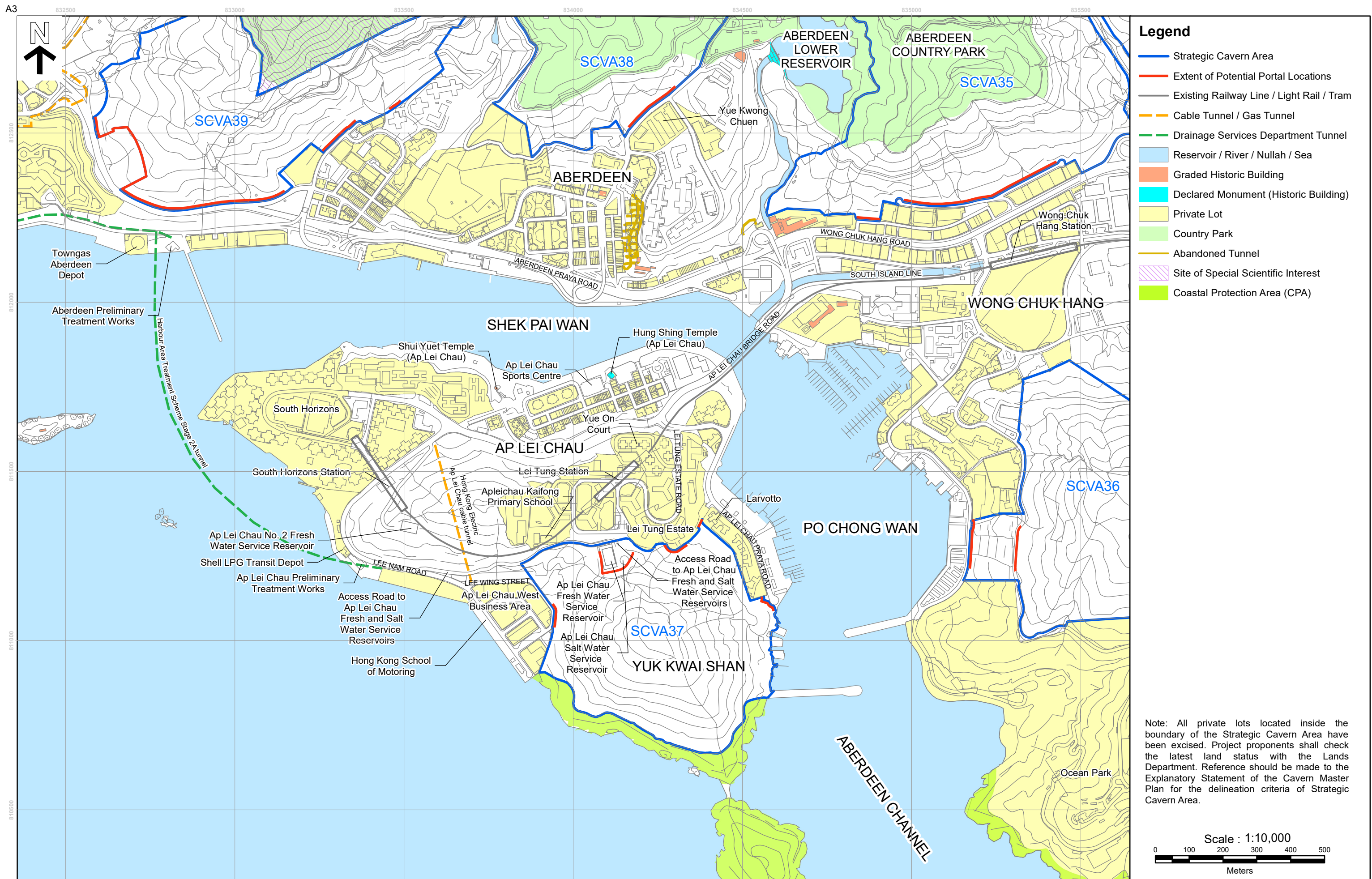
Some potential portal locations are located in close proximity to existing Lei Tung Estate. Project proponent should take the Lei Tung Estate into consideration when considering cavern options in its vicinity and consult relevant Government departments, including but not limited to Planning Department and Housing Department, where appropriate.

There are natural slopes above the potential portal locations. 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.



REFERENCE DRAWING OF STRATEGIC CAVERN AREA NO. 37 - AP LEI CHAU

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
PLANNING DEPARTMENT



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