

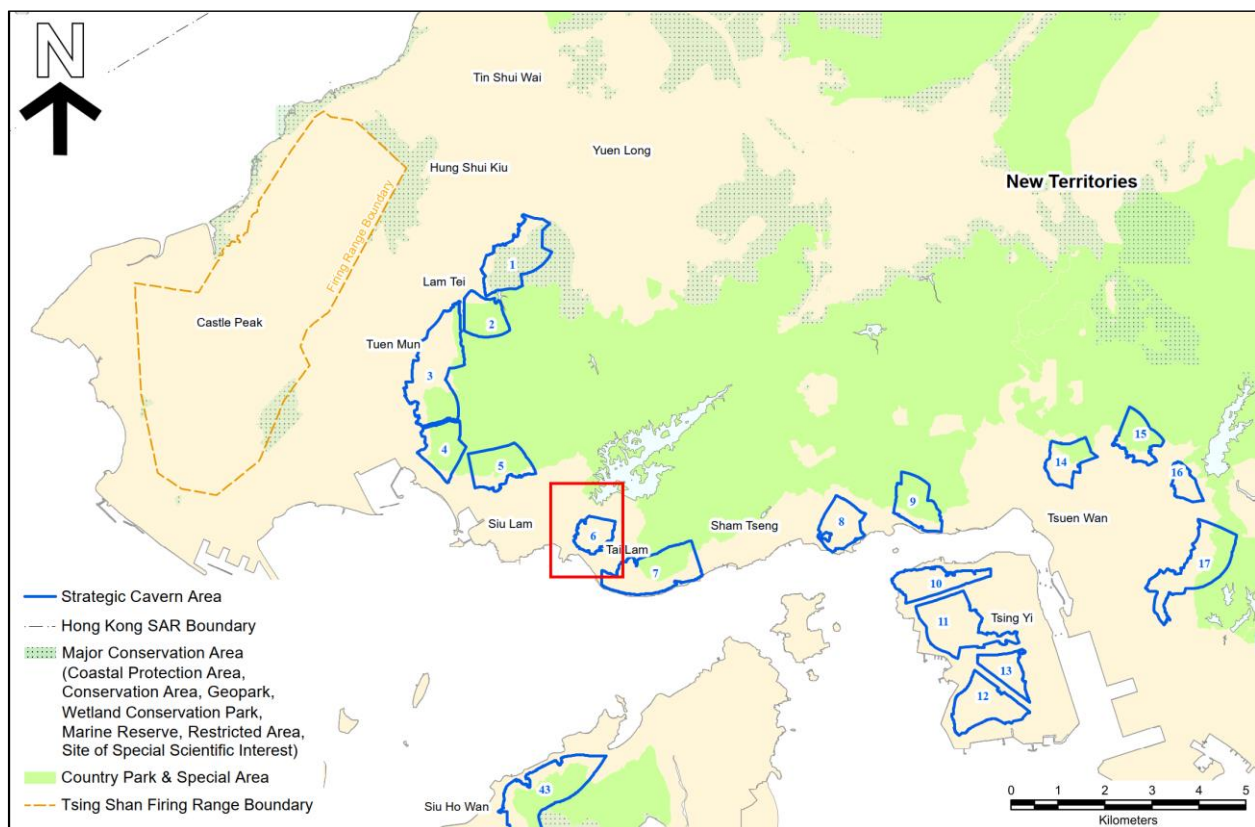
CAVERN MASTER PLAN – INFORMATION NOTE

STRATEGIC CAVERN AREA NO. 06 – SIU LAM

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 06 - Siu Lam (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 :	So Kwun Wat OZP
Area:	48.2 ha
Maximum elevation in the SCVA:	+141 mPD
Minimum elevation in the SCVA:	0 mPD

3. District Context

Location

The SCVA is located at Siu Lam in the western part of the New Territories. So Kwun Wat is to the west of the SCVA, Tai Lam Chung is to its east and Tai Lam Country Park is to its north. Tuen Mun Road and Castle Peak Road (Tai Lam) running by the shore are to the south of the SCVA.

The SCVA is generally hilly with a maximum elevation of about +141 mPD. Within the SCVA, there is a local village namely Luen On San Tsuen located at its southeastern portion. Several Government, Institution or Community (GIC) facilities are located in the SCVA, including Tai Lam Chung Fresh Water Service Reservoir in its centre, Siu Lam Integrated Rehabilitation Services Complex in its southwestern portion and Siu Lam Psychiatric Centre in its southern portion.

Surrounding the SCVA, Siu Lam and So Kwun Wat located to the west of the SCVA are mainly residential areas with low- to medium-rise residential developments and local villages. These include Palatial Coast (adjoining the western boundary of the SCVA), Grandview Terrace (about 750 m to the west of the SCVA), So Kwun Wat Tsuen (about 1,100 m to the northwest of the SCVA) and So Kwun Wat San Tsuen (about 800 m to the northwest of the SCVA). Various sites in So Kwun Wat have been rezoned for residential use (e.g. along Kwun Chui Road and So Kwun Wat Road) and thus the development of this area is expected to grow further. There are also key GIC facilities supporting the development of Siu Lam, including the Siu Lam Fresh Water Service Reservoir (about 750 m to the northwest of the SCVA) and Siu Lam No. 2 Fresh Water Service Reservoir (about 700 m to the northwest of the SCVA). Located to the east of the SCVA and across the Tai Lam Chung River, Tai Lam Chung comprises mainly local villages and GIC facilities, including Tai Lam Chung Tsuen (about 100 m to the east of the SCVA), Tai Lam Correctional Institution (about 300 m to the northeast of the SCVA) and Maritime Services

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/>).

Training Institute (about 300 m to the south of the SCVA). Tai Lam Country Park and Tai Lam Chung Reservoir are located to the north of the SCVA.

Access

The SCVA is accessible from its western boundary via Siu Lam Road, southern boundary via Hong Fai Road and Castle Peak Road (Tai Lam), and eastern boundary via a rural road connected to Castle Peak Road (Tai Lam). Regional connections could be routed through the nearby Tuen Mun Road and Castle Peak Road (Tai Lam). There is no railway serving the locality 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 northern boundary of the SCVA is defined by a Water Supplies Department tunnel, namely the Tai Lam Chung Supply Tunnel to Desalter. The southern boundary of the SCVA is defined by Castle Peak Road and Hong Fai Road. The eastern boundary of the SCVA is defined by Tai Lam Chung River, private lots and an access road to the Luen On San Tsuen area. The western boundary of the SCVA is defined by Siu Lam Road and private lots.

4.2. Geology

The solid geology of the SCVA is primarily fine-grained granite, which belongs to Tai Lam 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 and isolated dykes, are within and in the areas surrounding the SCVA. The excavated fine-grained granite within the SCVA is suitable for reuse as construction aggregate.

Further geological information of the SCVA can be found in the 1:20,000-scale Geological Map Sheet 6 (Yuen Long) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

4.3. Planning

Although the SCVA is not served by railway, the SCVA is close to the existing developments in Siu Lam and there are various proposed residential developments in the vicinity (i.e. along Kwun Chui Road and So Kwun Wut Road) and has good connectivity via major highways namely Tuen Mun Road and Castle Peak Road (Tai Lam). In the vicinity of the SCVA, Siu Lam and So Kwun Wat are mainly residential areas with low- to medium-rise residential developments and local villages (e.g. Palatial Coast and Luen On San Tsuen) which are supported by various GIC facilities (e.g. service reservoir and school).

The project proponents should also take note of the proposed Route 11 under Agreement No. CE 13/2021 (HY) "Route 11 (Section between Yuen Long and North Lantau) - Investigation" which commenced in September 2021 and is in progress. The northern portion of the SCVA will overlap with the alignment of Route 11 which links up Yuen Long and Lantau Island.

4.4. Environmental

Environmental sensitive receivers to the potential caverns in the SCVA include the nearby existing residential areas (e.g. Palatial Coast and Luen On San Tsuen) and occupied facilities including Siu Lam Psychiatric Centre and Maritime Services Training Institute. In addition, the SCVA is proximity to the Water Supplies Department's Tai Lam Chung No. 2 Chlorination Station. Siu Lam Site of Archaeological Interest, Tai Lam Site of Archaeological Interest, and traditional permitted burial grounds are also identified in the vicinity of the SCVA. Tai Lam Country Park is located to the north and east of the SCVA. Natural or modified rivers (e.g. Tai Lam Chung River) and wooded areas are close to the potential portal locations of 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

The SCVA can be accessed from its western boundary via Siu Lam Road, southern boundary via Hong Fai Road and Castle Peak Road (Tai Lam), and eastern boundary via the rural road connected to Castle Peak Road (Tai Lam). Regional connections could be routed through the nearby Tuen Mun Road and Castle Peak Road (Tai Lam).

Siu Lam Road and the rural road connected to Castle Peak Road (Tai Lam) are single-lane roads. Widening/upgrading of these roads may be required to accommodate the potential uses of the SCVA. To minimise the disruption to the existing road network, portal developments at Hong Fai Road and Castle Peak Road (Tai Lam) may require cutting back of existing roadside slopes.

The proposed Route 11 which overlaps with the northern portion of the SCVA may provide additional road access to the SCVA. Project proponents should take account of the latest development of this project.

4.6. Other Key Issues / Constraints on Cavern Development

Three Water Supplies Department tunnels are located in the vicinity of the SCVA, namely the Tai Lam Chung Supply Tunnel to Desalter (at about 50 m to the northern boundary of the SCVA), the water tunnel between So Kwun Wat Portal and Siu Lam No. 2 Portal (at about 100 m to the northwest of the SCVA) and the Western Aqueduct Supply Tunnel to Siu Ho Wan Treatment Works (at about 500 m to the northeast of the SCVA). Due to the differences in locations and elevations with respect to the potential portal locations, these tunnels would 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.

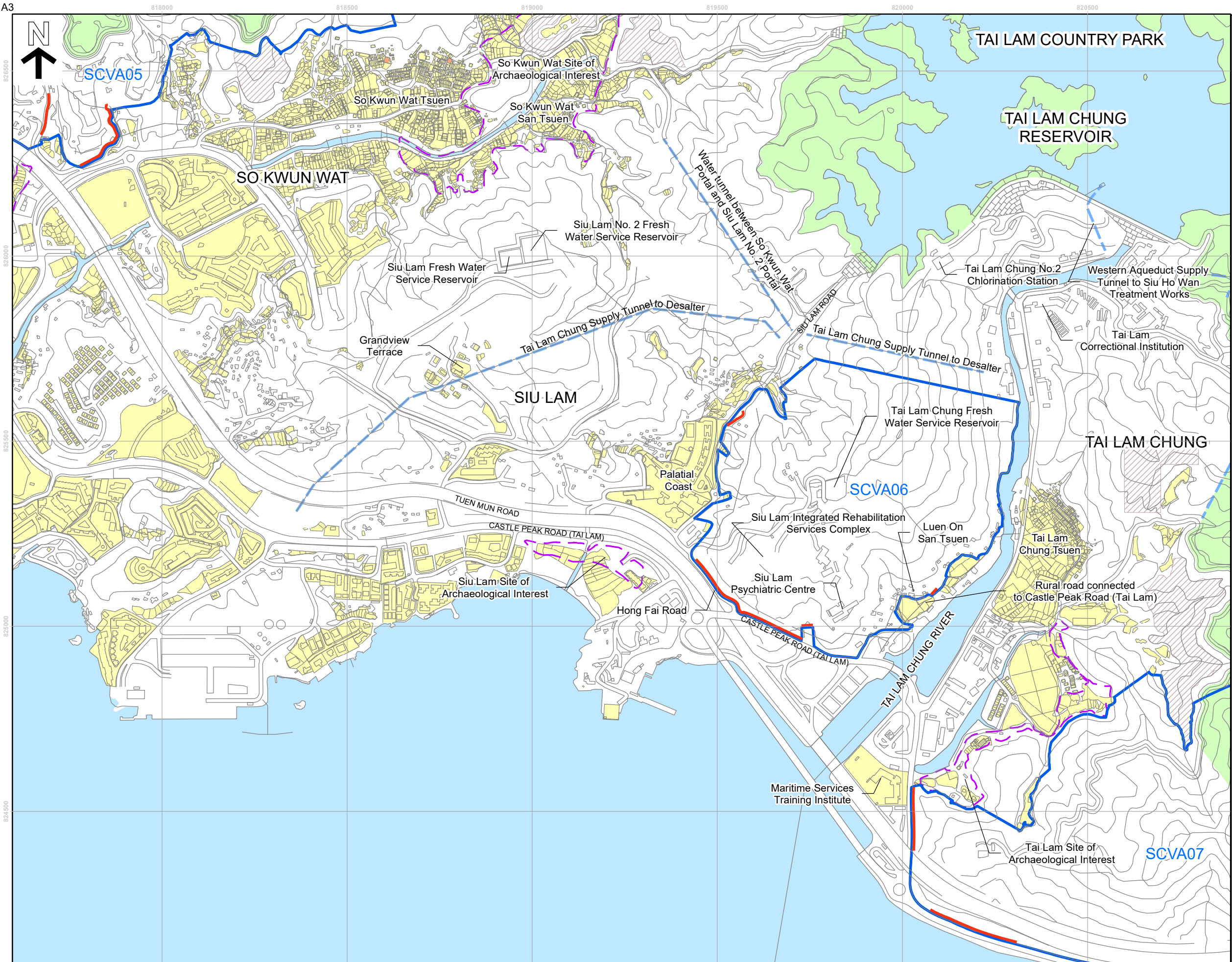
The SCVA is accessible from its western boundary via Siu Lam Road, eastern boundary via the rural road connected to Castle Peak Road (Tai Lam) and southern boundary via Hong Fai Road and Castle Peak Road (Tai Lam). The potential portal locations on Siu Lam Road and on the rural road connected to Castle Peak Road (Tai Lam) are accessed via narrow single-track roads. These existing accesses may be suitable for low traffic-generating activities, but would require significant widening and upgrading if feasible in order to support moderate to high traffic-generating activities. The extent of potential portal locations on Castle Peak Road (Tai Lam) and Hong Fai Road are located at the slope toes alongside the dual-lane carriageways. Formation of portals may require cutting back of existing roadside slopes. This extent of potential portal locations could support a wide range of traffic generating activities given the direct connections to high capacity roads.

The potential portal locations at the Siu Lam Road, Hong Fai Road and Castle Peak Road (Tai Lam) are located at the toe of cut slopes with natural terrain above. The potential portal location at the rural road connected to Castle Peak Road (Tai Lam) is located at the toe of natural slope. There may be potential natural terrain hazards in the vicinity of the potential portal locations, which may require further study by 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
- Water Supplies Department Tunnel
- Reservoir / River / Nullah / Sea
- Site of Archaeological Interest
- Graded Historic Building
- Private Lot
- Burial Ground
- Country Park

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.

