

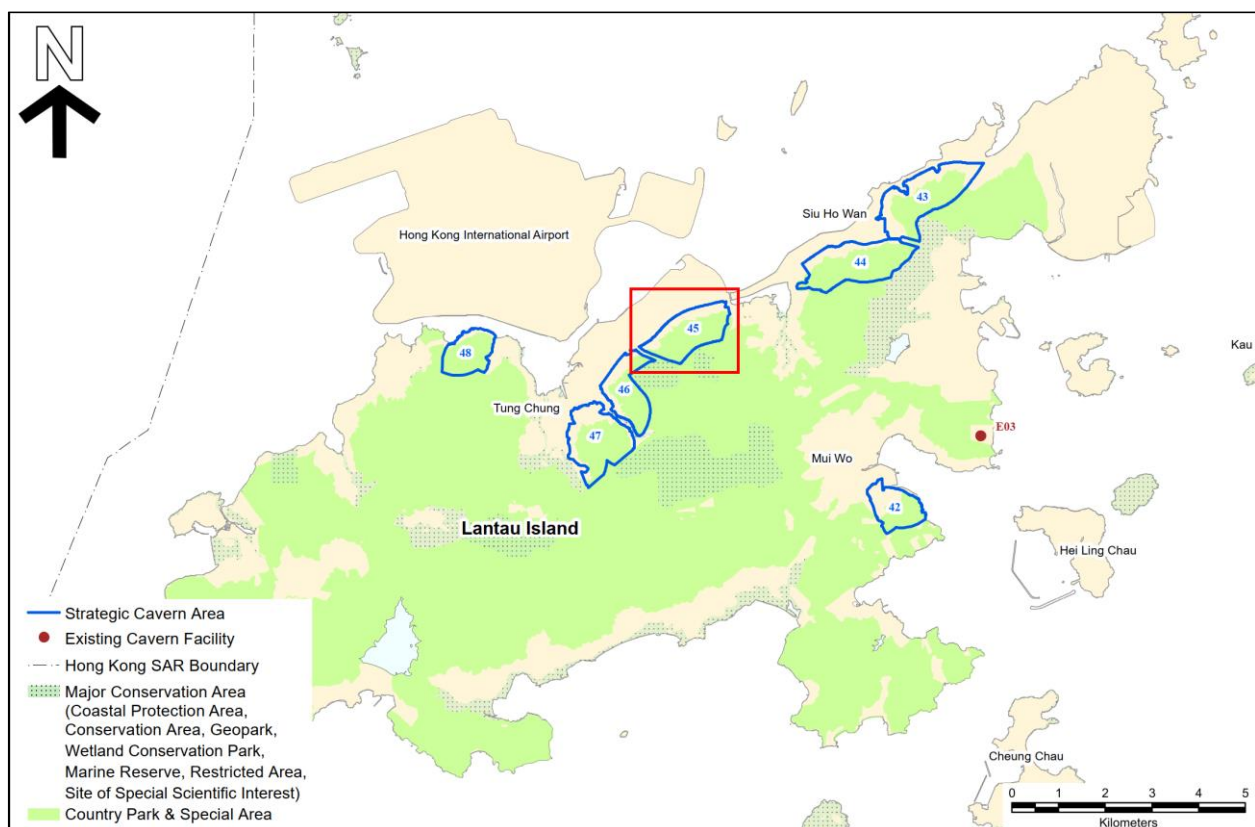
CAVERN MASTER PLAN – INFORMATION NOTE

STRATEGIC CAVERN AREA NO. 45 – TUNG CHUNG EAST

This Information Note describes the characteristics and development constraints of Strategic Cavern Area No. 45 - Tung Chung East (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 :	Tung Chung Town Centre Area OZP Tung Chung Extension Area OZP
Area:	134.0 ha
Maximum elevation in the SCVA:	+361 mPD
Minimum elevation in the SCVA:	+0 mPD

3. District Context

Location

The SCVA is located in the northern part of Lantau Island. It covers the hillside area of Por Kai Shan to the east of Tung Chung. Tai Ho Wan is located to the east of the SCVA, Lantau North (Extension) Country Park is to the south, Tung Chung New Town is to the west, the Hong Kong International Airport (HKIA) is to the further west and Hong Kong Boundary Crossing Facilities (HKBCF) of the Hong Kong-Zhuhai-Macao Bridge (HZMB) are to the north.

The SCVA is generally hilly with a maximum elevation of about +361 mPD. A majority of the SCVA encroaches onto Lantau North (Extension) Country Park. To the west of the SCVA, Tung Chung New Town mainly consists of high-rise residential developments, including Caribbean Coast (about 200 m to the west of the SCVA), Seaview Crescent (about 700 m to the west of the SCVA) and Fu Tung Estate (about 700 m to the west of the SCVA). The development of Tung Chung New Town is supported by various key Government, Institution or Community (GIC) facilities, including Tung Chung Municipal Services Building (about 550 m to the west of the SCVA) and Tung Chung Sewage Pumping Station (about 400 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/>).

There are proposals for development of Tung Chung East and Tung Chung West with a view to extending Tung Chung New Town into a distinct community with supporting community and commercial facilities. Tung Chung East Extension Area is on new land formed by reclamation located to the north of the SCVA, while Tung Chung West Extension Area (Refer to Reference Drawing in SCVA No. 46) is located to the southwest of the SCVA. In addition, several developments, including replacement and rehabilitation of rising mains to Siu Ho Wan, construction of rising mains under Tung Chung New Town Extension project and realignment of Cheung Tung Road under HZMB project, will be/was conducted within the area in Tung Chung.

Access

The SCVA is accessible from its entire northern edge via Cheung Tung Road. Regional and cross-boundary connections could be routed through the adjacent North Lantau Highway, Tuen Mun-Chek Lap Kok Link and HZMB.

The MTR Airport Express and Tung Chung Line run alongside the North Lantau Highway to the north of the SCVA. The nearest station to the SCVA is Tung Chung Station of Tung Chung Line, which is about 750 m to the west of the SCVA. Tung Chung East Station (about 100 m to the north of the SCVA) and Tung Chung West Station (about 2 km to the southwest of the SCVA) are proposed to support the future developments in these extension areas.

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 Cheung Tung Road. The eastern boundary of the SCVA is defined by a permitted burial ground and the Tai Ho Priority Site for Enhanced Conservation. The western boundary of the SCVA is defined by the valley topography.

4.2. Geology

The solid geology of the SCVA is primarily feldsparphyric rhyolite and feldsparphyric rhyodacite within the eastern portion, which belong to East Lantau Rhyolite and East Lantau Rhyodacite respectively; and rhyolite lava and tuff within the western portion, which belong to Lantau Volcanic Group. The SCVA is with the rock types that are 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 feldsparphyric rhyolite and feldsparphyric rhyodacite within the SCVA may be suitable for reuse as construction aggregate, subject to further confirmation by relevant testing on the potential alkali-silica reaction. Nevertheless, 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 published 1:20,000-scale Geological Map Sheet 9 (Tung Chung) published by the Geotechnical Engineering Office, Civil Engineering and Development Department.

4.3. Planning

The SCVA is close to the existing urban development in Tung Chung New Town, HKIA and HKBCF, and is adjacent to the proposed Tung Chung East Extension Area. The SCVA is well connected by major highways and railway to the rest of the territory and cross-boundary connections.

The western and northern sides of the SCVA are respectively the major existing and proposed residential development areas in Tung Chung New Town and its extension. These areas consist of various high-rise residential developments (e.g. Caribbean Coast, Fu Tung Estate and the proposed developments in Tung Chung East Extension Area) supported by a number of GIC facilities (e.g. municipal services building, hospital, school, service reservoir, etc).

The SCVA is situated at a strategic location near the HKIA, HKBCF and Tung Chung New Town and served with major trunk roads including North Lantau Highway, Tuen Mun-Chek Lap Kok Link and HZMB enabling regional and cross-boundary connections.

4.4. Environmental

Environmental sensitive receivers to the potential caverns in the SCVA are the nearby existing residential developments (e.g. Caribbean Coast and the proposed residential developments in Tung Chung East Extension Area). The SCVA encroaches onto Lantau North (Extension) Country Park and its hillside areas comprise natural greenery and lowland forest. Pok To Yan and Por Kai Shan Site of Special Scientific Interest is located to the south of the SCVA. Tai Ho Priority Site for Enhanced Conservation is located to the east of the SCVA. There are natural or modified surface water courses within the SCVA. A traditional permitted burial ground is located at the northeastern boundary of the SCVA. Pak Mong Site of Archaeological Interest and two historic structures namely Watchtower, Pak Mong Tsuen (Grade 2 historic building) and Entrance Gate, Pak Mong (Grade 3 historic building) are located to the east 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 entire northern edge via Cheung Tung Road. Regional and cross-boundary connections could be routed through the adjacent North Lantau Highway, Tuen Mun-Chek Lap Kok Link and HZMB.

The SCVA is located adjacent to the North Lantau Highway which provides access between Chek Lap Kok and other main areas of Hong Kong. Access to the highway from the SCVA can be routed through Sunny Bay Road and Penny's Bay Highway to the east of the SCVA, or Fu Tung Street, Tat Tung Road, Shun Tung Road, Yu Tung Road and Tung Chung Eastern Interchange to the west. The project proponents would be required to assess the traffic impacts to the road networks 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. The SCVA is located relatively close to the HKIA, about 4 km in distance.

4.6. Other Key Issues / Constraints on Cavern Development

The railway tunnel of Tung Chung Line is at about 200 m from the northwestern boundary of the SCVA. As it is far from the SCVA boundary, it 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.

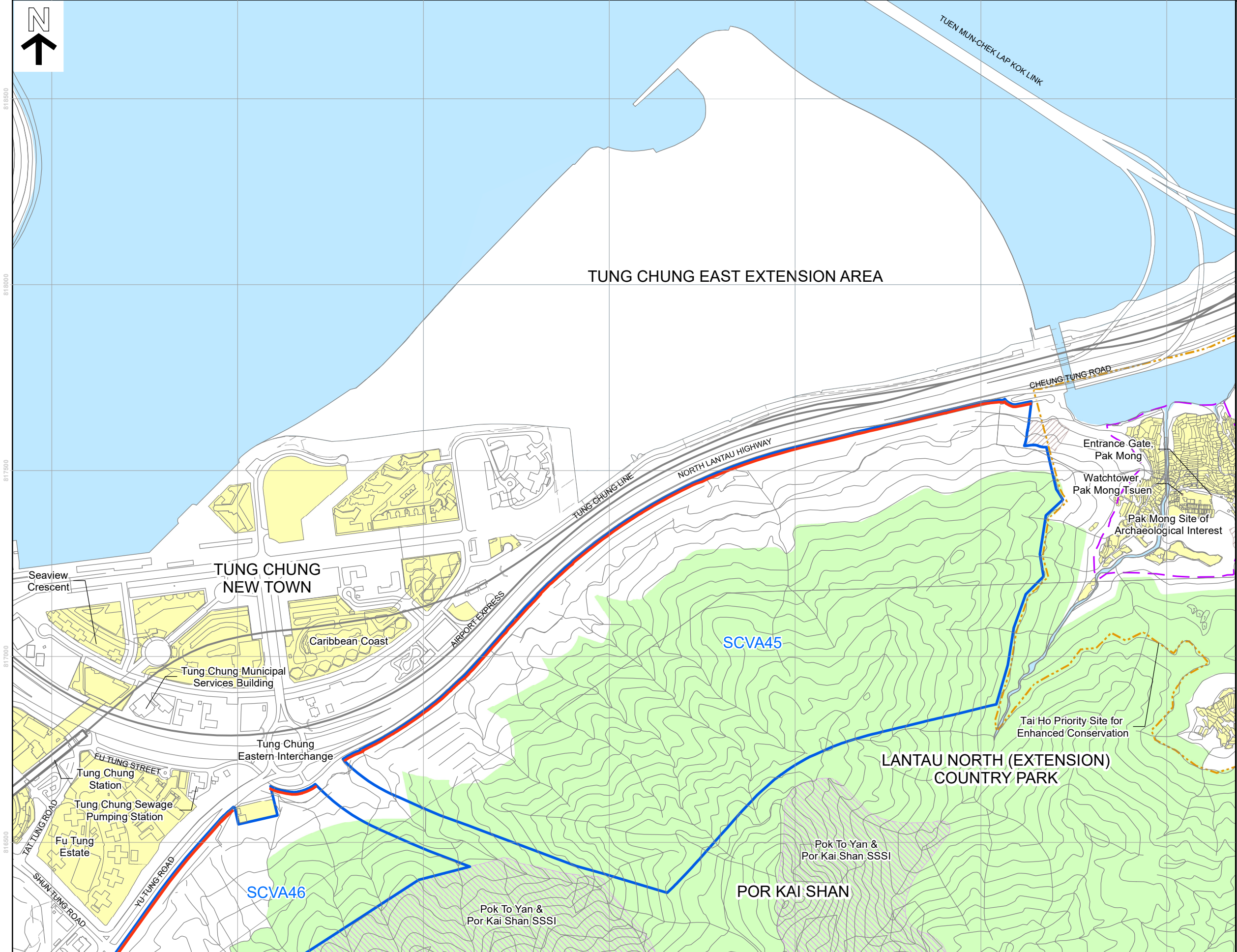
The SCVA is accessible from Cheung Tung Road along the northern boundary of the SCVA. The extent of potential portal location is on the roadside slopes. The SCVA could be accessed by provision of suitable run-in/out or priority controlled junctions, depending on the proposed land-use. The potential portal location is mostly unrestricted by the existing road configurations, and so would be able to support a range of traffic-generating activities subject to detailed traffic impact assessment and engineering design. Connections could be routed through to North Lantau Highway and HZMB interchange.

There is natural slope above the potential portal location. There may be potential natural terrain hazards in the vicinity which may 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

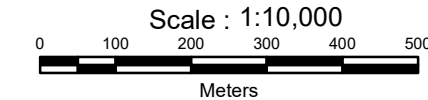
The Cavern Master Plan and all supporting documents do not exempt project proponents for cavern projects from following the relevant statutory procedures. Information including the extent of potential portal locations indicated in this Information Note should serve as reference materials only. In formulation 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.



Legend

- Strategic Cavern Area
- Extent of Potential Portal Locations
- Existing Railway Line / Light Rail / Tram
- Reservoir / Sea
- Site of Archaeological Interest
- Graded Historic Building
- Private Lot
- Burial Ground
- Country Park
- Priority Site for Enhance Conservation
- 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. 45 - TUNG CHUNG EAST

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
PLANNING DEPARTMENT



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