

Underground Space in Hong Kong

Hong Kong's typical high rise urban landscape with urban fringe on steep hilly terrain with underlying strong rock



About 25% of Hong Kong's land area of 1,105 km² has been developed. The rest is difficult to exploit for environmental reasons, as well as various social and legal issues. With hilly terrain and a compact city, Hong Kong needs to continually explore how to efficiently use its dwindling land resources. Enhanced use of urban underground space and cavern development have been examined to provide solutions to its land supply problems.

Existing urban underground facilities



Metro Subway Basement Retail Pedestrian Subway Flood Storage Tank

Conceptual models for urban underground space and cavern development



Existing rock cavern facilities



Metro Station Refuse Transfer Water Reservoir Sewage Treatment Explosives Magazine

Conference Format & Objectives

The conference will invite globally recognized speakers and world authorities in Urban Underground Space to share their experiences and knowledge with planners, architects and engineers in the region. It is intended to hold keynote presentations to showcase latest thinking and approach in integrated compact city urban design.

Parallel sessions to suit various interests will be organized to further present the state of the art in those related and key underground space disciplines. Discussion and debate will be sought to analyse and assess topical key issues related to urban underground design and implementation.

The conference will seek high quality papers that can provide insight, rigour and useful practical examples of integrated underground solutions for compact metropolitan cities.

Topics to be covered

- Integrated Planning
- Architecture and Design
- Underground Infrastructure
- Sustainability and Environment
- Safety and Human Factors
- Economics and Legal Issues
- Technical Approaches and Innovations

Supported By



Organisers



16th World Conference

Associated research Centers for the Urban Underground Space

5th to 7th November 2018
Hong Kong | China



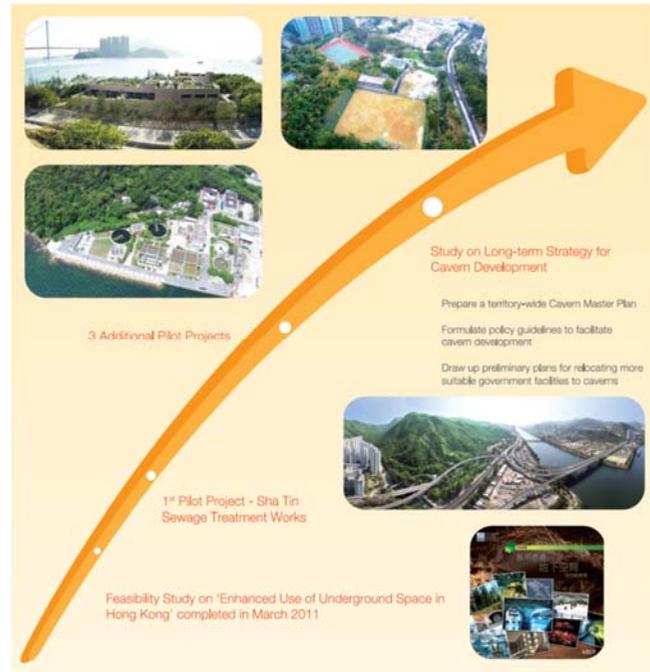
Integrated Underground Solutions for Compact Metropolitan Cities

www.acuus2018.hk

Enhanced Underground Development in Hong Kong

The city is looking to further improve and develop underground space in a more coordinated and holistic manner in the future. There are various new initiatives being considered for the transfer of existing Government facilities underground. Three sewage treatment plants and two surface reservoirs are being studied and one of these relocation projects is currently planned to start construction in 2018.

Cavern development roadmap



Others facilities being considered include archives, refuse transfer stations and laboratories. A Cavern Master Plan will aid the implementation approach and planning standards are to be updated to include the urban underground and cavern development criteria.

Strategic cavern area on the urban fringe



Conceptual cavern schemes



There are new towns (new development areas) being put forward that should explore more integrated underground uses.

The existing urban underground areas are being studied in more detail to identify how they can integrate and function more effectively to assist land and space optimization. These studies are investigating how the underground can solve local problems to improve amenities, circulation and space provisions within our major urban areas.

Strategic urban areas selected for studying their opportunity for underground space development



Five new MTR metro lines are also being considered in addition to the recent new metro lines completed and under construction. There will also be several new highway projects in the near future to improve bypass and through flow of traffic in the city.

Possible Site Visit Opportunities / Options

- Island West refuse transfer station – ERC
- Stanley sewage treatment plant – ERC
- Flood protection schemes – EUP / ERT
- Sha Tin sewage treatment works – UC, 2018
- Various highway projects – UC, 2018

Note: ERC / ERT = Existing rock cavern / tunnel, EUP = Existing Underground Space, UC = Under Construction.

Useful Links

www.cavern.gov.hk & www.undergroundspace.gov.hk

Things to See and Do in Hong Kong

www.discoverhongkong.com

Associated research Centers for the Urban Underground Space (ACUUS)

ACUUS is a world renowned international, non-governmental organization dedicated to partnerships amongst experts who design, analyse and decide upon the use of our cities' underground spaces.

Creation

ACUUS was established in 1996 and was subsequently incorporated as an organisation with learned society functions.

Mission

ACUUS is engaged in actively promoting partnerships amongst all actors in the field of planning, management, research and uses of urban underground space. It strives to bind these public, private and university levels into a cohesive network of mutual cooperation for the benefit of all parties involved.

Objectives

To facilitate the exchanges between Clients, Governments and Expert knowledge and experience worldwide in regard to the study of costs, opportunities and techniques of expansion in the urban underground;

To raise the awareness of the private sector, the governments at all levels and the general public on the specific issues related to the sustainable use of the urban underground;

To provide support and services to members of national organizations and research centers conducting similar activities in view of enhancing their relations and international radiance.

Activities of ACUUS

Various support to other organisations and to promote a biennial conference to showcase best practice and new research into underground space development

www.acuus.org