Interpretation Principles and Guidelines for the Lung Tsun Stone Bridge Preservation Corridor

August 2013

EXECUTIVE SUMMARY

The Lung Tsun Stone Bridge (LTSB) Preservation Corridor will be incorporated into Kai Tak Development (KTD) intending for *in-situ* preservation of the remnants of LTSB and ancillary structures. A full excavation was conducted in 2012 to identify the remnants and assess the conditions thereof.

Interpretation for LTSB is necessary for the understanding and appreciation of the Site. Based on recognized conservation principles and guidelines, together with examples from overseas archaeological sites, a set of interpretation recommendations is formulated.

The LTSB Preservation Corridor should be carefully designed to make sure that the display of the features and the design of the interpretation facilities will share information on the Site effectively. They should also anticipate challenges resulting from its protection, including maintaining its authenticity, and respond to concerns arising from the future KTD. Likewise the new development in the surrounding areas should create a setting that respects and supports LTSB.

摘要

龍津石橋保育長廊將會被納入啟德發展計劃，其遺址及相關的構築物將會在原址保留。土木工程拓展署已於 2012 年完成了完整的挖掘，以識別其現存的古物及評估其狀況。

適當的詮釋是了解和欣賞龍津石橋遺址的關鍵。本文件依據公認的保護準則和指引；並參考海外的考古遺址，為龍津石橋的詮釋提出建議。

龍津石橋保育長廊的設計必須謹慎處理，以確保遺址的展現及詮釋設施的設計能有效地分享遺址所傳達的信息；並於不影響遺址之真實性之前題下，為遺址提供保護。展現遺址的手法及詮釋設施的設計亦應呼應啟德未來的發展。同樣地，在周邊地區的新發展亦應予以配合，以建立一個尊重龍津石橋並支持其保育的環境。

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1
INTRODUCTION

1.1 REASONS FOR THE INTERPRETATION PRINCIPLES AND GUIDELINES

Built in 1873, Lung Tsun Stone Bridge (LTSB) and the substantial changes of its Site demonstrate the history and development of Hong Kong. In 2008 remains of the original LTSB were unearthed during an archaeological excavation for the Environmental Impact Assessment (EIA) for Kai Tak Development (KTD). Features of LTSB, Pavilion for Greeting Officials, Former Kowloon City Pier and segments of 1924 and 1930s seawalls were found during further excavations in 2008 to 2009. Public engagement activities were held to receive comments for the conservation approaches of the archaeological features. LTSB Preservation Corridor will be incorporated into KTD intending for *in-situ* preservation of the remnants for public appreciation.

This interpretation principles and guidelines (the Guideline) are prepared to make sure that the display of the features and the design of interpretation facilities will share information on the Site effectively, and anticipate challenges resulting from its protection, including maintaining its authenticity. They also respond to concerns arising from the future KTD.

1.2 SCOPE OF THE STUDY

The Guideline is grounded on existing conservation, archaeological and historical study and research that have been carried out by various scholars and institutes. It also covers the comments received from public engagement activities and the latest Outline Zoning Plan (OZP) S/K22/4 explaining KTD. It also makes reference to international principles / standards / guidelines relating to heritage conservation.

1.3 METHODOLOGY

The Guideline provides the direction for the display and interpretation of heritage resources and the design of new development in the vicinity, supported by a summary of the background information and the statement of significance of LTSB and its Site. A set of interpretation principles and guidelines is derived from studying international conservation / archaeology / interpretation principles, standards and guidelines. Examples of overseas heritage sites adopting different conservation and interpretation approaches are discussed to provide references for the Site. Finally, a detailed recommendation specifying the design requirements of different aspects of an effective interpretation programme is formulated.

The Guideline comprises the following sections:-

1. **Introduction**
   Lists out the basic information, scope of the study, methodology, relevant documents, international conservation principles and guidelines and definition of terms.

2. **What is Interpretation?**
   Describes the definitions, objectives, and means of interpretation.

3. **The Place: Lung Tsun Stone Bridge Preservation Corridor and Its Site as a Cultural Heritage Site**
   Provides a brief account of the history of LTSB, summarizes the past, present and future development of the Site, and states the cultural significance of the Site.

4. **Interpretation Principles**
   Sets out the principles for the interpretation proposals for LTSB.

5. **Interpretation Guidelines**
   Sets out the guidelines for the interpretation proposals for LTSB and new development in the vicinity.

6. **Interpretation Examples**
   Provides examples of overseas heritage sites that have adopted different conservation approaches and interpretative facilities.

7. **Recommendations for Interpretation**
   Lists out the specific requirements for different aspects of the interpretation proposals for LTSB and new development in the vicinity.

8. **Bibliography**

1.4 RELEVANT DOCUMENTS

The relevant archaeological investigations, Conservation Management Plan, concept plan, OZP, historical research and public engagement for LTSB and KTD are listed as follows:-

1. *Archaeological Impact Assessment Report for Kai Tak Development Engineering Study cum Design and Construction of Advance Works – Investigation, Design and Construction* (Maunsell Consultants Asia Limited 2008);
2. *Conservation Management Plan for the Site of Lung Tsun Stone Bridge* (AMO 2009);
3. *Further Archaeological Excavation Report for Kai Tak Development Engineering Study cum Design and Construction of Advance Works – Investigation, Design and Construction* (AECOM August 2009);
4. *Kai Tak Development – Infrastructure at Former Runway and Remaining Areas of North Apron and Improvement of Adjacent Waterways – Design and Construction* (AECOM November 2011);
5. *Kai Tak Development – Urban Design Enhancement Proposal* (Town Planning Board Paper No. 8859);
6. *Kai Tak Development Stage 2 Public Engagement on the Preservation of Lung Tsun Stone Bridge Remnants* (Town Planning Board Paper No. 8791);
7. *Kai Tak Outline Zoning Plan No. S/K22/4* (Town Planning Board);
8. *Preservation Concept Plan for Lung Tsun Stone Bridge for the Kai Tak Development – Infrastructure at Former Runway and Remaining Areas of North Apron and Improvement of Adjacent Waterways – Design and Construction* (Draft / Final Version) (AECOM 2012);
9. *A Research on Lung Tsun Stone Bridge and its Surrounding Area* (Chung Po Yin and Ko Tim Keung 2012);
10. *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (AECOM 2013), unpublished; and
11. Information about the 2- Stage Public Engagement Exercise.

1.5 INTERNATIONAL CONSERVATION PRINCIPLES AND GUIDELINES

The conservation / archaeological / interpretation principles, standards, and guidelines on which this study is based are listed as follows:-

1. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (ICOMOS 1999);
2. *Charter for the Protection and Management of the Archaeological Heritage* (ICOMOS 1990);
3. *Conservation Principles Policies and Guidance for the Sustainable Management of the Historic Environment* (English Heritage 2008);
4. *Heritage, Conservation, and Archaeology: An Introduction* (Frank G. Matero 2008);
5. *The ICOMOS Ename Charter for the Interpretation and Presentation of Cultural Heritage Sites* (ICOMOS 4 Oct 2008);
6. *Interpretation for the 21st Century, Fifteen Guiding Principles for Interpreting Nature and Culture* (Larry Beck and Ted Cable 1998);
7. *Interpretation Handbook and Standard Distilling the Essence* (Department of Conservation, Wellington, New Zealand 2005)*;*
8. *Interpreting Our Heritage* (Freeman Tilden 2007);
9. *Policy Statement on Restoration, Reconstruction, and Speculative Recreation of Archaeological Sites Including Ruins* (English Heritage 2001);
10. *Principles for the Conservation of Heritage Sites in China* (The Getty Conservation Institute 2002);
11. *Standards and Guidelines for the Conservation of Historic Places in Canada, 2nd Edition* (Canada's Historic Places 2010) and
12. *The Venice Charter* (ICOMOS 1964).

1.6 DEFINITIONS OF TERMS ADOPTED IN THIS STUDY

In this Guideline, the following definitions have been used:

Authenticity is those characteristics that most truthfully reflect and embody the cultural heritage values of a place. †

Conservation means all the processes of looking after a place so as to retain its cultural significance. †

Context embraces any relationship between a place and other places. It can be, for example, cultural, intellectual, spatial or functional, so any one place can have a multi-layered context. Understanding context is particularly relevant to assessing whether a place has greater value for being part of a larger entity, or sharing characteristics with other places. ††

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects**.** †

Cultural heritage is inherited assets which people identify and value as a reflection and expression of their evolving knowledge, beliefs and traditions, and of their understanding of the beliefs and traditions of others. ††

Cultural heritage site refers to a place, locality, natural landscape, settlement area, architectural complex, archaeological site, or standing structure that is recognized and often legally protected as a place of historical and cultural significance. †††

Maintenance means the continuous protective care of the fabric and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction**.** †

Place means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views. †

Preservation means maintaining the fabric of a place in its existing state and retarding deterioration. †

Setting is the surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape. ††

Reconstruction means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric. †

Replication means the construction of a copy of a structure or building, usually on another site or near. ††††

Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material. †

Notes:

† *The Burra Charter The Australia ICOMOS Charter for Places of Cultural Significance* (ICOMOS 1999)

†† *Conservation Principles Policies and Guidance for the Sustainable Management of the Historic Environment* (English Heritage 2008)

††† *ICOMOS Ename Charter for the Interpretation and Presentation of Cultural Heritage Sites* (ICOMOS 4 Oct 2008)

†††† *Policy Statement on Restoration, Reconstruction, and Speculative Recreation of Archaeological Site Including Ruins* (English Heritage Feb 2001)

1.7 COPYRIGHT

1.8 CONTRIBUTORS

This Interpretation Principles and Guidelines are prepared by Substance Lab Limited. Members of the team are listed as follows:

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2
WHAT IS INTERPRETATION?

2.1 DEFINITIONS OF INTERPRETATION

There are a numbers of definitions of interpretation, below are the few that are most internationally recognized:

Based on *Interpreting Our Heritage* written by Freeman Tilden, **interpretation** is:

- *A public service.*
- *An education activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information.*
- *Revelation based upon information. It is the revelation of a larger truth that lies behind any statement of fact.*
- *To capitalize mere curiosity for the enrichment of the human mind and spirit.*
- *To aim to present a whole rather than a part.*

Based on the *ICOMOS Ename Charter for the Interpretation and Presentation of Cultural Heritage Sites* (4 Oct 2008),

> ***Interpretation*** *refers* to *the full range of potential activities intended to heighten public awareness and enhance understanding of cultural heritage site. These can include print and electronic publications, public lectures, on-site and directly related off-site installations, educational programmes, community activities, and ongoing research, training, and evaluation of the interpretation process itself.*

Based on *The Burra Charter The Australia ICOMOS Charter for Places of Cultural Significance* (1999),

> ***Interpretation*** *means all the ways of presenting the cultural significance of a place.*

To conclude, **interpretation** is the process and product through which the meaning of a place, both tangible and intangible, is discovered and shared.

2.2 OBJECTIVES OF INTERPRETATION

The objectives of interpretation are as follows:

1. **Facilitate understanding and appreciation** of cultural heritage sites and foster public awareness and engagement in the need for their protection and conservation.

2. **Communicate the meaning** of cultural heritage sites to a range of audiences through careful, documented recognition of significance, through accepted scientific and scholarly methods as well as from living cultural traditions.

3. **Safeguard the tangible and intangible values** of cultural heritage sites in their natural and cultural settings and social contexts.

4. **Respect the authenticity** of cultural heritage sites, by communicating the significance of their historic fabric and cultural values and protecting them from the adverse impact of intrusive interpretive infrastructure, visitor pressure, inaccurate or inappropriate interpretation.

5. **Contribute to the sustainable conservation** of cultural heritage sites, through promoting public understanding of, and participation in, ongoing conservation efforts, ensuring long-term maintenance of the interpretive infrastructure and regular review of its interpretive contents.

6. **Encourage inclusiveness** in the interpretation of cultural heritage sites, by facilitating the involvement of stakeholders and associated communities in the development and implementation of interpretive programmes.

7. **Relate what is being displayed or described to experience that relates to the visitor** by linking historical facts to the present.

8. **Encourage ongoing research** and regular review of interpretative materials.

9. **Observe the continuous evolution** of the natural and cultural settings and social context and synchronize the interpretative materials with current development.

2.2 OBJECTIVES OF INTERPRETATION (cont.)

10. **Inspire, provoke and astonish audiences** to learn the core meaning of things beyond facts by providing the opportunity for self-reflection. The aim is not instruction but provocation.

Notes:
Objectives 1 to 6 are based on the *ICOMOS Ename Charter for the Interpretation and Presentation of Cultural Heritage Sites* (ICOMOS 4 Oct 2008); and objectives 7 to10 are based on *Interpreting Our Heritage* (Freeman Tilden 2007).

2.3 MEANS OF INTERPRETATION

Interpretation and its presentation can come in different forms and means to achieve their objectives.

Based on the *ICOMOS Ename Charter for the Interpretation and Presentation of Cultural Heritage Sites* (4 Oct 2008),

> ***Interpretive infrastructure*** *refers to physical installations, facilities, and areas at, or connected with a cultural heritage site that may be specifically utilised for the purposes of interpretation and presentation including those supporting interpretation via new and existing technologies.*
>
> ***Presentation*** *more specifically denotes the carefully planned communication of interpretive content through the arrangement of interpretive information, physical access, and interpretive infrastructure at a cultural heritage site. It can be conveyed through a variety of technical means, including, yet not requiring, such elements as informational panels, museum-type displays, formalized walking tours, lectures and guided tours, and multimedia applications and websites.*

Based on *Interpreting Our Heritage* written by Freeman Tilden,

> ***Interpretation*** *is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is in some degree* ***teachable***.
>
> *It is an education activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information.*

Based on *The Burra Charter The Australia ICOMOS Charter for Places of Cultural Significance* (1999),

> ***Interpretation*** *may be a combination of the treatment of the fabric (e.g. maintenance, restoration, reconstruction); the use of and activities at the place, and the use of introduced explanatory material.*

2.3 MEANS OF INTERPRETATION (cont.)

In conclusion, although the forms of interpretation may vary, the interpretation process and product should follow the principles set out in the principles and guidelines recognized internationally. Although the principles and process may be taught, the product depends on the ability of the interpreter to communicate effectively the multiple meanings of a place. This ability is a form of art.

3
THE PLACE:
LUNG TSUN STONE BRIDGE
AS A CULTURAL HERITAGE SITE

LTSB is a cultural heritage site that embodies historical/political/military, social, cultural townscape and landscape, archaeological, and architectural significance. This section provides a summary of its history in relation to the area of Kowloon City, the current archaeological findings during recent excavation, and its preservation within KTD. It is concluded by the Statement of Significance at the end. The significance of the site should be fully reflected by the future display of the remnants and interpretation programme.

3.1 Description of Lung Tsun Stone Bridge

Constructed from 1873 to 1875, Lung Tsun Stone Bridge (龍津石橋, the Bridge, LTSB) which was also known as *Longin* Bridge was a landing pier in the area of Kowloon City. It linked the East Gate of Kowloon Walled City (九龍寨城, KWC) and Kowloon Street (九龍街, the Street) to the coast of Kowloon Bay (九龍灣) from the late 19th century to early 20th century.

The Bridge that was physically connected to Lung Tsun Pavilion (龍津亭, the Pavilion, also known as Pavilion for Greeting Officials (接官亭)) and the concrete Kowloon City Pier (the Pier) had undergone extension, reconstruction, maintenance and repair, demolition, and burial. LTSB was partially covered in the 1920s, and completely covered in the 1940s. Its Site had also been used for different purposes. In 2008 remains of the Bridge were unearthed.

As a landing pier facilitating water transport, LTSB witnessed the evolution of commercial activities in Kowloon City, change in political power of Hong Kong, and the flourishing trade of opium and gambling. Its burial for Kai Tak Airport development also reflected the emergence of Hong Kong as an international city.

3.2 Past: Lung Tsun Stone Bridge and Kowloon City

Settlement

Being a plain surrounding by hills and flowing streams, the area of present day Kowloon City had been well-developed for its waterway business. It is believed that from *Han* (漢) (206 BC- 220AD) to Southern *Song* (宋) (1127-1279) Dynasty the region was once dominated by salt production and it is believed that the surrounding areas were demarcated as forbidden zone to prevent smuggling. It was not until the late 12th century that village settlements appeared in the area.

By the mid 14th century Ng, Lee and Chan clans settled down in Kowloon City area. The establishment of a Tin Hau Temple reflected that regional identity had been developed. One of the oldest villages in Kowloon Peninsula, Nga Tsin Wai (衙前圍) was believed to be developed jointly by the three clans.

From 1662 to 1669, *Qing* (清) (1644-1911) government implemented the Great Evacuation to resist the beat back of *Ming* (1368-1644) Dynasty loyalists, which resulted in severe economic downturn of villages in Kowloon. After the lifting of the evacuation in 1669, the *Qing* (清) government encouraged villagers especially Hakka people, to set up villages along coastal areas. Dramatic changes were witnessed in Kowloon that many villages, including Kowloon Tsai, Kowloon Tong, Mongkok, Shum Shui Po, Cheung Sha Wan, Hung Hom and Tsim Sha Wai etc., were established in less than a century. In the 19th century, there were more than twenty villages established in Kowloon City area.

Village alliances such as Kowloon seven *yeuk* (九龍七約) and six *heung* (六鄉) were formed to solve internal problems among villages as well as external matters such as pirate defence. The former was dated back to the first *Dajiao* (打醮) after Great Evacuation.

Kowloon Street

'Kowloon Street' was not a street as indicated by its name, but an area / market between the foot of Bak Hok Mountain (白鶴山) to the coast of Kowloon Bay, deposited with mixed use buildings for shops and houses. It was concededly the most important location for commercial activities in Kowloon City area whose development was strongly related to its strategic location next to Kowloon Bay, a place with flat land and natural bay ideal for boat parking. The area was well connected to other areas by road and water transport network.

Early history of the Street could not be retrieved as it was not a market endorsed by the imperial government. In the late 18th century, the Street developed into a mature commercial district with a substantial concentration of shops. In 1846, a few hundreds of shops and houses where found in the area implying its prosperity. Its population was much bigger than other places on Hong Kong Island.

Before the mid 19th century, most trading activities at 'Kowloon Street' were performed by fishermen and residents outside Kowloon Peninsula. By the late 19th century restaurants and entertainment venues such as teahouses, wine shops, tobacco stores, opium dens, and gambling dens started to emerge. By then new markets had been formed in Yau Ma Tei (油麻地) and Shum Shui (深水) etc., but Kowloon Street was still the most significant market attracting business from the New Territories, *Huishou* (惠州) and *Tamsui* (淡水) etc. for its better prices. The flourishing commercial activities such as trading, fishing, and smuggling of opium, salt and commodities had undoubtedly created a basis for the conversion of an original pier into LTSB in 1873.

Kowloon Walled City

After the loss in the First Opium War (1840-42), Hong Kong Island was ceded to Britain under the Treaty of Nanking《南京條約》in 1842. Forts at Tsim Sha Tsui and Kwun Chung providing maritime defence were forced to be demolished and bombarded respectively. To strengthen the defence of Kowloon Peninsula, KWC was constructed between 25th November, 1846 and 31st May, 1847. It was a walled garrison-city that measured about 6.5 acres for the stationing of civil and military officials. Enclosed by massive stone walls with six watchtowers and four gates, *Yamen*, military buildings, gunpowder and ordnance magazines were deposited within KWC. It was physically separated from Kowloon Street and had no business activity.

The signing of Convention of Peking《北京條約》in 1860 after the loss in the Second Opium War (1856-60) extended Britain's colony – Kowloon (south of present day Boundary Street) was ceded to Britain. KWC located to the north of Boundary Street was not involved.

In 1898, under The Convention Between Great Britain and China Respecting an Extension of Hong Kong Territory《中英展拓香港界址專條》the area north of present day Boundary Street to south of Sham Chun River and surrounding islands were leased to Britain except KWC and the area of existing pier (LTSB) for the convenience of Chinese men-of-war, merchant and passenger vessels, which might come and go and lie there at their pleasure; and for the convenience of movement of the officials and people.

However, as the colonial government encountered strong resistance to its occupation in the New Territories in early 1899, the Governor Sir Henry Blake arranged a flag hoisting ceremony and delivered a speech to the elders of the villages of the Kowloon area on the 17th of April, in front of the Chinese Customs Station, which was only a few yards from the beach outside KWC. On the 19th of May British troops were sent to force all Chinese civil and military officials to vacate from KWC. Subsequently the Order-in-Council was issued to legalize British jurisdiction in KWC in December. Despite the fact that the issue of LTSB was not mentioned, the colonial government repaired LTSB in 1900.

Opium and Customs

After the end of the Second Opium War, *Qing* (清) imperial government was forced to sign a series of unequal treaties with Western powers. The terms included the legitimization of the trade of opium. Since then, opium smuggling using Hong Kong as the base drastically increased. Almost all the opium delivered to China came from Hong Kong.

According to the treaties the import of opium would incur both import tax (進口稅) at trading ports controlled by Western powers and regional tax (地方稅) to the imperial government. In order to avoid import tax, smugglers opted for water transport from Hong Kong by wooden boats to non-trading ports.

In 1868, the imperial government established six Chinese Customs Stations (the Customs) at the east and west side of the boundary of Kowloon and Macau in order to collect regional tax from the wooden boats. The imperial government also ordered customs force vessels to block the smuggling. In 1871, the imperial government set up Chinese Customs Stations in *Guangdong* waters to impose customs tax (常關稅). Four of the Customs were found at the outbound of Hong Kong including Kowloon City. It is believed that the predecessor of LTSB and LTSB itself had served Chinese Customs force vessels in blocking opium smuggling.

Gambling

Despite the enforcement of "An Ordinance for the Suppression of Public Gaming in the Colony of Hong Kong" in 1844 by the colonial government, illegal gambling dens were found everywhere. In 1867, the enactment of "The Order and Cleanliness Ordinance" was passed to control gambling by legitimizing it. In 1872 when public gambling was prohibited again, gambling dens moved to KWC that was then under Chinese jurisdiction to continue their operation.

The flourishing gambling business in KWC increased the use of water transport to Kowloon City, with LTSB as the landing pier.

Kai Tak Airport

In October 1910, an 85-meter long new concrete structure (Kowloon City Pier, the Pier) was constructed to replace the 1892 timber extension of LTSB. The latter ended in a "T" shape on plan was financed by fund raising led by Lok Sin Tong. In 1916, Kai Tack Land Development Company (KTLDC) owned by Sir Ho Kai and Mr Au Tak commenced reclamation at Kowloon Bay for Kai Tack Bund. A residential development scheme whose first stage development was completed in 1924 buried the northern portion of the LTSB. The Pavilion was demolished in 1920s for the construction of new roads.

In view of the rapid urban development of Kowloon Peninsula, the Hong Kong colonial government established Town Planning Committee in 1922 and issued Town Planning Scheme in the same year. The scheme created the grid morphology of rectangular blocks of buildings served by parallel streets. The residential development at Kai Tack Bund was the pioneer example of the grid system, followed by others coastal areas in Kowloon Peninsula.

Following the bankruptcy of KTLDC the Hong Kong colonial government took over the development project and designated the eastern part of the reclamation as the airfield for Royal Air Force (RAF) in 1925. In the same year the first recorded flight from Kai Tack took place. Kai Tak Airfield was constructed between 1927 and 1930. The first control tower and a hangar were built in 1935. The landing of the first commercial passenger flight in 1936 began its history as a civilian airport for public use.

Kowloon City Pier was reconstructed in ca.1932, and between 1936 and 1937. Before the Japanese Occupation, the remaining stone structures of LTSB and the new concrete structures still served as a landing pier in the Victoria Harbour.

Soon after the Japanese capture of Hong Kong in 1941, the new Japanese military government modified facilities of the airfield for their planes. This led to the demolition of tenement buildings and shop houses in Kai Tack Bund and eradication of villages in today's San Po Kong. Debris from the site clearance together with rocks from the stone walls of KWC, Sacred Hill, Hammer Hill and Po Kong Village *fung shui* hill were used as fill materials for airfield extension. From 1943 to 1945 the Japanese built two new runways and used the airport solely for military purpose. The remaining parts of LTSB and the Pier structure were then entirely covered.

Kai Tak Airport (cont.)

After the Second World War, in 1945 the colonial government re-opened the Japanese military airport as an RAF airfield, and in 1946 the civilian airport resumed its operation. In 1947, the unsatisfactory seafront of the Japanese reclamation was reinforced by a newly constructed seawall across its front.

In 1954, the colonial government approved a master plan for Kai Tak Airport (the Airport) development. In 1958, a new northwest / southeast heading 2529 meter runway was constructed on a promontory into Kowloon Bay. It was also the year when the name Hong Kong International Airport (HKIA) was officially adopted.

The Airport continually expanded to cater for the ever-increasing capacity. The Terminal Building was extended five times, twice for the runway, and at least three times for the apron. It is noted that the works relating to the former Terminal Building and associated facilities has disturbed the underlying LTSB from 1950s to 1990s.

Timeline showing the development of and historical events related to the Site

Year	Events
Song (宋) (960-1279)	Present day Kowloon City was a part of Koon Fu Cheung (官富場), one of the salt yards (鹽場) governed by Chinese officials where trade of salt also took place
Yuan (元) (1271-1368)	「宋王臺」(Sung Wong Toi) wordings were craved on a stone at the south of Kowloon City to commemorate the arrival of *Duanzong* (端宗) and *Weiwang* (衛王)
Qing (清) (1644-1911)	In 1668 first fortified when a signal station was established
	In 1810 a small fort (九龍寨炮台) was built at the head of the beach
1840-42	First Opium War
1842	Signing of Treaty of Nanking《南京條約》on the 29th of August, Hong Kong Island was ceded to Britain
1846-47	Between 25th November 1846 and 31st May 1847, a walled garrison-city (later known as Kowloon Walled City (KWC)) was constructed for maritime defence
1847	Completion of *Yamen* (衙門) within KWC and establishment of the *Longjin* Free School
1854	KWC was captured by rebels during the Taiping Rebellion (太平天國)
1856-60	Second Opium War
1860	Signing of Convention of Peking《北京條約》on the 18th of Oct, Kowloon (south of present day Boundary Street) was ceded to Britain
1860s	Hong Kong became the centre of opium smuggling
1871	Setting up of Chinese Customs Station in Kowloon City for opium tax collection
1872	Re-prohibition of public gambling
1873-75	Construction of LTSB
1892	Construction of timber extension of LTSB, ending with "T" shape on plan. Lok Sin Tong played a leading role in the fund raising
1898	Signing of The Convention Between Great Britain and China Respecting an Extension of Hong Kong Territory《中英展拓香港界址專條》on the 9th of June, KWC and LTSB remained under Chinese jurisdiction
1899	Sir Henry Blake's flag hoisting ceremony and speech on the 17th of April, in front of the Chinese Customs Station, outside KWC
	Chinese civil and military officials were forced to vacate from KWC on the 19th of May
1900	Repairing of LTSB by the Hong Kong colonial government
1910	Erection of a new concrete pier in Kowloon City (Kowloon City Pier, the Pier) in October to replace the timber extension of 1892
1916-24	First stage Kai Tack reclamation at Kowloon Bay to develop Kai Tack Bund, a residential housing scheme by Kai Tack Land Development Company (KTLDC)

Timeline showing the development of and historical events related to the Site (cont.)

Year	Events
1920s	Demolition of Lung Tsun Pavilion and burial of northern part of LTSB for the reclamation
1925	Kai Tack reclamation used as Royal Air Force (RAF) airfield with the first recorded flight
1927-30	Construction of Kai Tak Airfield
ca.1932	Reconstruction of the Pier with a wooden shelter
1933	Construction of a causeway joining the seaward end of LTSB
1935	Completion of the first control tower and a hangar in Kai Tak
1936	Landing of the first commercial passenger flight in Kai Tak
1936-37	Reconstruction of the Pier with a ramp linking LTSB
1941-45	The walls of KWC were modified for the extension of Lung Tsun River (龍津河) (present day Kai Tak Nullah (啟德明渠) or Kai Tak River (啟德河))
1942	Part of LTSB and the Pier were buried under the airfield during further reclamation of Kowloon Bay
1943-45	Construction of airport runways during the Japanese Occupation period covering the remaining LTSB and the Pier
1943	The walls of KWC were demolished during Japanese Occupation to provide fill material for Kai Tak Airfield extension. Sung Wong Toi was also demolished
1945	Japanese Occupation ended on the 15th of August. RAF airfield was re-opened
1946	Civilian airport re-opened
1954	Approval of master plan for the development of Kai Tak Airport on the 16th of June
1957	Completion of reclamation for Kai Tak Airport
1958	Construction of a new runway on a promontory into Kowloon Bay. The name Hong Kong International Airport (HKIA) was officially adopted for Kai Tak Airport
1959	Completion of expansion of HKIA
1962	Completion of a passenger terminal building (PTB) in HKIA
1965	Demolition of the old Kai Tak Terminal Building
1974	Completion of Airport Runway extension
1975	Extension of Airport runway to 3,390 meters to meet the long haul flight requirements
1981	Completion of Stage 4 development of the PTB, HKIA
1984-88	Stage 5 development of the PTB, HKIA
1987-94	Kowloon Walled City was demolished
1995	Kowloon Walled City Park was opened on the site of Kowloon Walled City
1998	Relocation of HKIA from Kai Tak to Chek Lap Kok

3.3 Present: The Archaeological Site of Lung Tsun Stone Bridge

Background

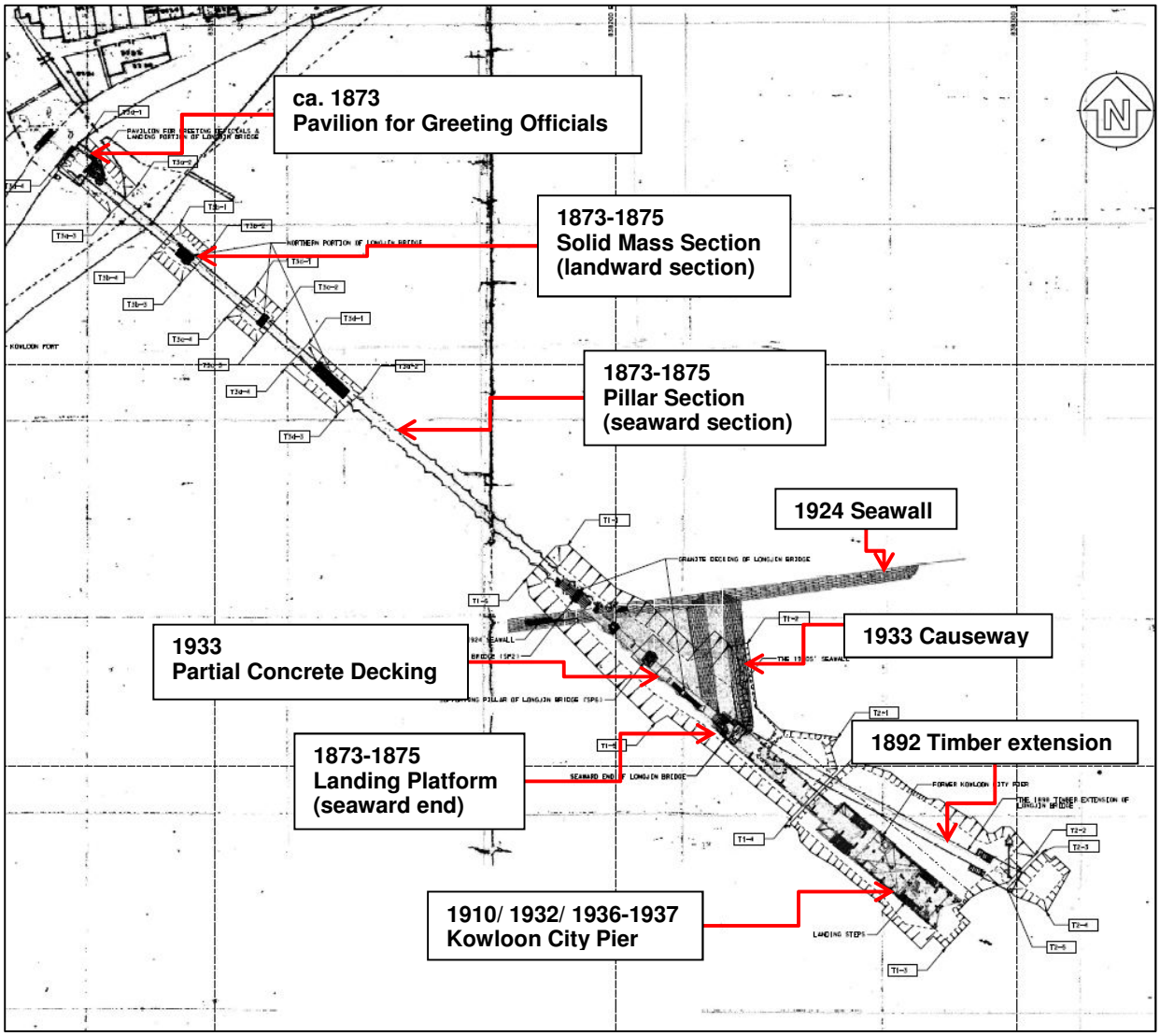
In 2008, an archaeological investigation was conducted in the EIA study for KTD. Remains of the southern section of LTSB were first discovered. Following the recommendation of the EIA report, a further investigation was completed in February 2009. Several sections of the northern part of LTSB as well as the three foundation walls of the Pavilion were found at a level below the basement floor of the former Terminal Building. Forty-seven broken concrete supporting pillars and landing steps of the Pier were also discovered at the open area of former North Apron.

In 2012, a full archaeological excavation was carried out to unearth all the remaining features of LTSB and the ancillary structures along its entire length of 224 meters, including Pavilion of Greeting Officials, Solid Mass Section, Pillar Section, Partial Concrete Decking, Seawall, and Landing Platform.

The LTSB features were exposed after the excavation in 2008 and 2009. The loose fragments at the surface of the remains, such as (a) individual or small granite blocks, and (b) concrete or sandy mortar was affected by soil movement, storm water, surface runoff, ground water changes, and the growth of vegetation etc. After the 2012 excavation study the whole length of the exposed features was backfilled to the current ground level for proper protection.

Structural defects of LTSB are observed. Corresponding mitigation measures are recommended in this section for necessary conservation and reinforcement of the archaeological features.

Brief Description of Lung Tsun Pavilion, Lung Tsun Stone Bridge, Kowloon City Pier, Seawall and Causeway



General layout plan of further archaeological excavation overlaid with historical maps. Different sections of LTSB and the ancillary structures are indicated. (Source: AECOM August, 2009 *Further Archaeological Excavation Report for Kai Tak Development Engineering Study cum Design and Construction of Advance Works – Investigation, Design and Construction*)

LTSB and the Pavilion were prominent landmarks on the Kowloon coastline in the late 19th century.

The **Pavilion** marked the landward end of LTSB. It was used by the local elders to greet new officials to the *yamen* (Chinese court) in KWC. A stone lintel of 1873 inscribed with two large Chinese characters 龍津 (Lung Tsun / *Longin*) was placed at its main entrance but no direct evidence was available to confirm its year of construction. The Pavilion was a two-storey building constructed of bricks and stones with Chinese traditional roof system. It was 8 meters wide and 7 meters long.

The **LTSB** built between 1873 and 1875 was around 200 meters long. It was composed of three major sections namely (1) Solid Mass Section (landward section), (2) Pillar Section (seaward section) and (3) Land Platform (seaward end):

1. **Solid Mass Section (SMS)**: The landward section was in the form of a solid mass with its walls constructed of granite blocks. Each span of its decking was composed of nine longitudinal granite slabs placed in parallel with the centreline of the LTSB.

2. **Pillar Section (PS)**: The seaward section looked like a bridge. It had twenty stone pillars (SP) of granite to support granite slabs or decking of LTSB. Each span of its decking was composed of five longitudinal granite slabs placed in parallel with the centreline of LTSB between two supporting pillars. Each stone pillar was consisted of nine tiers of granite slabs in a hexagonal shape on plan and was constructed in an alternating straight-cross manner. The hexagonal shape could eliminate flood effects on pillars and was given a technical term as “point for break water” (分水尖).

3. **Landing Platform (LP)**: The seaward end was a solid mass with rocks and sandy mortar infill, forming a “T” shape on plan. Its side walls and decking were constructed of longitude and transverse granite blocks. In plan there were two landing steps located on the eastern and western sides. However, five steps were discovered in the western end during excavation.

LTSB was extended. The extension was reconstructed for several times:

1. As the beach silted up and LTSB was not suitable for cross harbour ferries during low tides, in 1892 **a timber extension** in a slightly different orientations was added. Similar to the seaward end, it also ended with a "T" shape on plan.

2. In 1910, the timber extension was modified by the Public Works Department.

3. In ca.1932 a new replacement concrete structure namely **the Kowloon City Pier** (the Pier) with a wooden shelter was constructed.

4. Between 1936 and 1937 the extension was reconstructed. It was the last modification of LTSB. A ramp was built between the northern portion of the Pier and LTSB. The Pier was supported by forty-seven concrete pillars with or without inclined pillar(s).

A **Seawall** was built in 1924 to reinforce the LTSB during the development of Kai Tak Bund. It was later modified in the 1930s. The Seawall was constructed of granite boulders and rubbles that were glued together by concrete paste.

A **Causeway** was added to the seaward end in 1933. It was constructed of a granite rubble core / foundation faced with rough-dressed granite blocks that were mostly sub-square in form. Partial concrete decking with iron fence holes and a suspected base of lighting post were discovered replacing the original granite decking among the last three SP approaching the LP. It might have also served as an alternative ramp for passengers and lorries to reach the Pier.

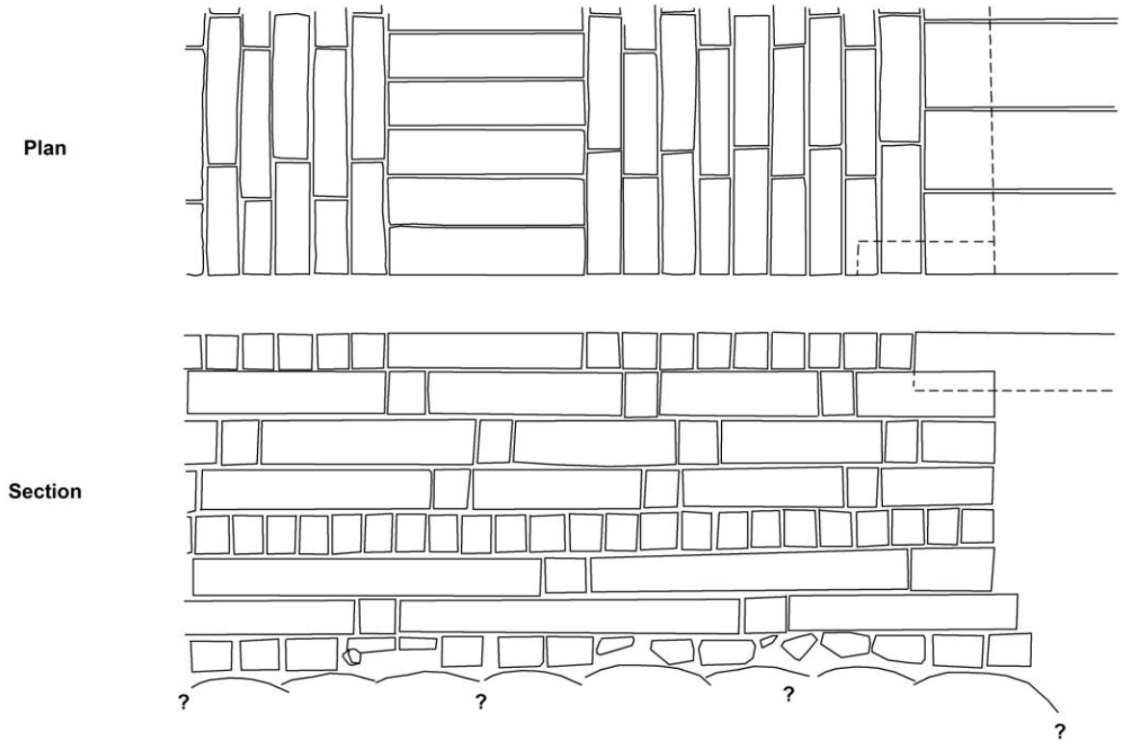
The Pavilion, LTSB, Pier, Seawall and Causeway disappeared from sight either by demolition or burial. In 1920s, the Pavilion was demolished for the construction of new roads and the northern portion of LTSB was buried for Kai Tack Bund development. The remaining parts of LTSB and the Pier were buried in the 1940s during the construction of Japanese military airport, the predecessor of Kai Tak Airport.

Timeline showing the development of LTSB and ancillary structures

Year	Development of LTSB and Ancillary Structures
ca. 1873	Construction of Lung Tsun Pavilion
1873-1875	Construction of Lung Tsun Stone Bridge
1892	Addition of a wooden extension in different orientation to the seaward end of LTSB
1900	Repairing of LTSB by the Hong Kong colonial government
1910	Erection of a new concrete pier
1916	Renewing reinforced concrete beams and repairing masonry piers
1920s	Partial burial of LTSB by Kai Tack Bund, demolition of the Pavilion to make way for the construction of new roads
1921	Maintenance
1922	
1923	The decking of the concrete pier was badly damaged and general repairs were carried out
1924	Construction of Seawall
1925	Maintenance
1926	
1927	
1930	Rewiring, navigation light and general repair
1931	Maintenance
ca. 1932	Reconstruction of the Pier
1933	Construction of Causeway to the seaward end of LTSB
1934	Raising level of causeway to the Pier
1936-1937	Reconstruction of the Pier
1940s	Complete burial of the site by Japanese Army to extend the Kai Tak airfield for Japanese military airport
1950s-1990s	Continual expansion of Kai Tak Airport

Archaeological Findings

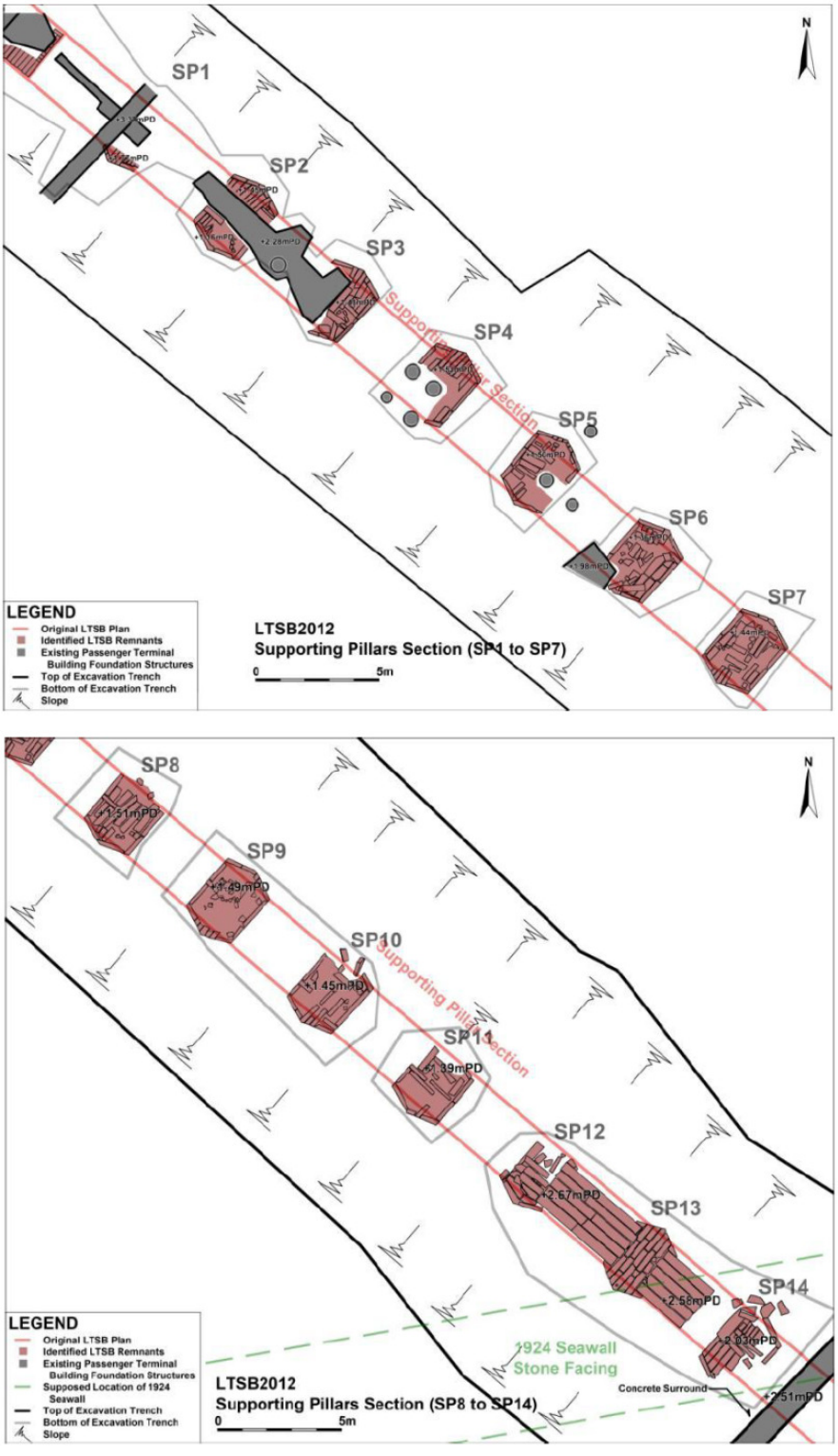
Desktop research depicting the development of LTSB was conducted prior to the excavation in 2012. Four grids and one trench of three bays set up by information obtained from the desktop research and previous excavations were excavated along the footprint of LTSB and the Pavilion. The solid mass section of the Pavilion and the upper most surface of all stone pillars were exposed through excavation by hand, backhoe, or mechanical drill.



Reconstruction of Solid Mass Section. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Bird's eye view of solid mass section, excavated in Dec. 2008. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Solid mass section southern ending. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))



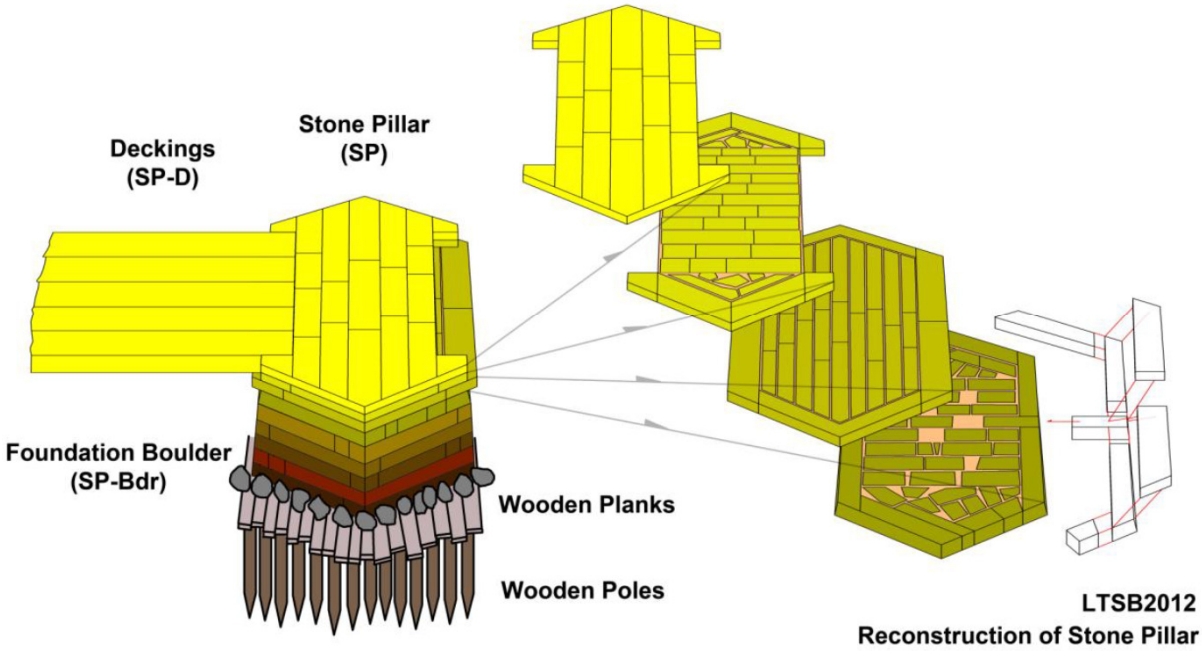
Test pit records of SP1 to SP14. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Remnants of SP12 to SP14 and rubble of 1924 seawall (view from southwest) (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

SP15 to Landing Platform (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

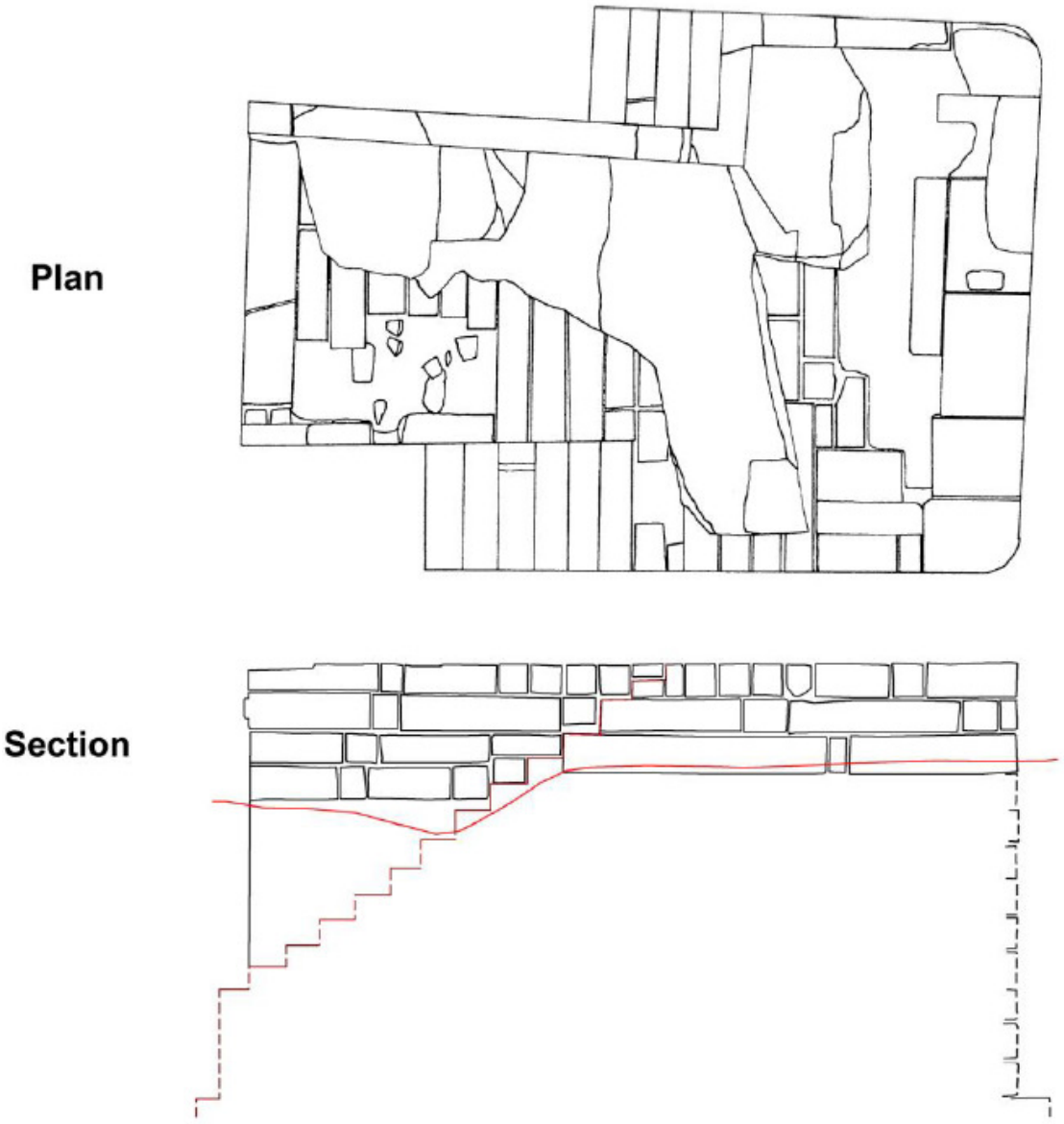
Details of decking between SP12 and SP13 (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Bird's eye view of SP12, SP13 and the adjacent decking, Dec 2008. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))



Reconstruction of Stone Pillar. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

SP17 was completely excavated in Dec. 2008 (view from west). (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))



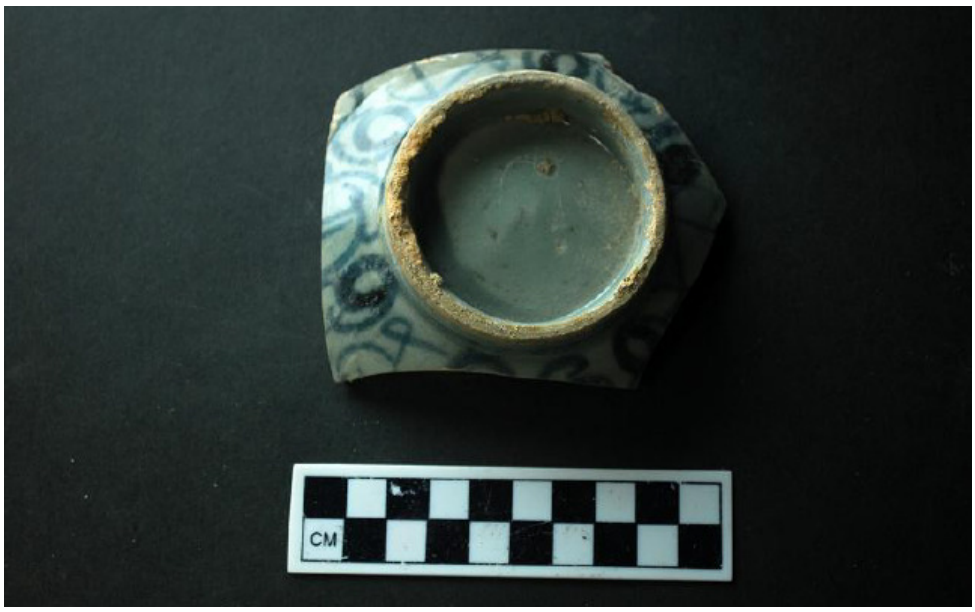
Reconstruction of Landing Platform. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Western side of Landing Platform. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Aerial photo of Landing Platform, 2008 (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Remnant of the 1936/37 Kowloon City Pier (view from North) (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Blue and white porcelain plate. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))



Blue and white porcelain bowl shred. (Source: *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft)* (February 2013))

Existing Structural Defects and Suggested Mitigation Measures

Defects of LTSB were observed in the excavation in 2012 during visual inspections of (1) rubble fill materials of Solid Mass Section, (2) side walls of Solid Mass Section, (3) Granite Decking, (4) stair steps of Landing Platform, (5) plant growth, and (6) land contamination.

All unearthed features identified are standalone elements resting on the marine deposits of coarse sand and mud. They are currently preserved *in-situ* under stable condition.

Due to long-term exposure since 2008, loose fragments such as isolated or small slabs, rubbles, concrete pavement, and lime mortar that lie on the surface have been subjected to physical, chemical and biological movement.

The identified defects are:

- Decay of rubble filled materials and collapse of side wall granite blocks at Solid Mass Section
- Lateral deformation at SP13, SP17, and Landing Platform caused by raining and plant growth
- Decay of masonry structure and lime mortar at Landing Platform
- Soil contamination at areas of SP18 and SP19 where machine oil may make stains on slab surface
- Settlement

Repairs and reconstruction measures may be necessary to reinforce some exposed features with decay of masonry structure or collapsed granite blocks. Speculative or generalized re-creation must not be allowed.

Please refer to the table on the next pages for the observed structural defects, and causes thereof. The corresponding suggested mitigation measures are also listed.

Structural Defects	Physical, Chemical and Biological Movements	Suggested Mitigation Measures
Cracking	1. Soil settlement from the change of water table and the conducted work during excavation, subway and tunnel construction works; 2. Vibration from nearby construction works; 3. Salt crystallization; 4. Stone weathering; and 5. Plant growth.	▪ Cracking monitoring; ▪ Visual inspection of cracking location and pattern; ▪ Structural analysis, including analysis of the distribution of stress; ▪ Mathematical modelling; ▪ Visual inspection of cracking location and pattern; ▪ Load paths within the structure may be provided; and ▪ Water table level maintenance.
Tilting	1. Soil settlement; 2. Vibration from nearby construction works; 3. Rock weathering; and 4. Plant growth.	▪ Tilting monitoring; ▪ Visual inspection of tiling location and pattern ▪ Structural analysis; ▪ Mathematical modelling to evaluate present safety and stability levels; and ▪ Water table level maintenance.
Lateral Deformation	1. Soil settlement; 2. Reduction in existing load; and 3. Water seepage.	▪ Vertical or transverse reinforcement; ▪ Reformation of earthworks; ▪ Use water in-and-out mortar for restoration works; and ▪ Strengthening of footing slabs and timber support if necessary.
Settlement	1. Soil settlement from the change of water table and the conducted work during excavation; and 2. Vibration from subway, tunnel construction and subway construction.	▪ Settlement monitoring; ▪ Visual inspection of settlement location and pattern ▪ Structural analysis; ▪ Geological investigation; and ▪ Mathematical modelling to evaluate present safety and stability levels; and ▪ Water table level maintenance.

Defects	Physical, Chemical and Biological Factors	Suggested Mitigation Measures
Decay of Masonry Structure	1. Exposure and deterioration of rubble fill materials; 2. Water seepage; 3. Vibration of nearby construction works; 4. Plant growth; and 5. Soil contamination.	▪ Repair and reconstruction on some bridge remnants to ensure the structural stability; ▪ Reinstatement of masonry structure; and ▪ Decontamination of soil, especially oil pollutants.
Deterioration of Mortar and Rubble Fill Materials	1. Weathering and exposure to air; 2. Deposition of air pollutants (including acid rain); 3. Salt crystallization; 4. Plant growth; and 5. Change of moisture and temperature.	▪ Strengthening of rubble and mortar fill materials; ▪ Use of water in-and-out mortar for restoration works; and ▪ Reformation of earthworks.
Collapse of Isolated Granite Slabs	1. Stone weathering; 2. Change of moisture and temperature; 3. Deposition of air pollutants; 4. Plant growth; and 5. Salt crystallization	▪ Replacement of collapsed granite blocks; ▪ Reinstatement of masonry structure; ▪ Use of water in-and-out mortar for restoration works; and ▪ Reconstruction of certain granite blocks.
Stone Weathering and Stains	1. Deposition of air pollutants (including acid rain); and 2. Soil contamination from underground construction.	▪ Visual inspection of weathering and stain location and pattern; ▪ Wash stains with fresh water; and ▪ Provision of shelters for certain remnants.

Note:

This section is based on the *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report (Final Draft),* (February 2013)

3.4 Lung Tsun Stone Bridge Preservation Corridor as an Integral Component of Kai Tak Development

Lung Tsun Stone Bridge Preservation Corridor

The Kai Tak site is proposed to be developed as the "Heritage, Green, Sports and Tourism Hub of Hong Kong". Six sub-districts linked by its definitive open space system are created within Kai Tak, including Kai Tak City Centre, Sports Hub, Metro Park, Runway Precinct, Tourism and Leisure Hub and South Apron Corner.

The LTSB Preservation Corridor (the Preservation Corridor) is located within Kai Tak City Centre. It is located to the north of Sports Hub and to the west of Metro Park. It is a long stretch of land with its centreline aligned to that of the remains of LTSB, covering the original footprint of Lung Tsun Pavilion, LTSB and Kowloon City Pier. It is 30-meter wide and approximately 330-meter long. It runs parallel to Kai Tak River and has the same orientation as the runway of Kai Tak Airport.

Longin Bridge is a site of archaeological interest and the Preservation Corridor forms part of the future heritage trail in Kai Tak.

The Explanatory Statement of Kai Tak Outline Zoning Plan NO. S/K22/4

Designated Use

The 30m wide Preservation Corridor is designated as "Open Space (3)" ("O(3)") under the latest Kai Tak Outline Zoning Plan No. S/K22/4 gazetted on 14th September, 2012.

Open Space is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public, and "O(3)" is intended for ***in-situ*** **preservation** of the Lung Tsun Stone Bridge remnants for public appreciation.

A strip of land to the west of the Preservation Corridor is also under the "O(3)" zoning to allow greater flexibility to accommodate interpretive displays and related activities.

Areas in the Vicinity

On the two sides of the Preservation Corridor are three sites designated as Comprehensive Development Areas (CDA) namely "CDA(3)", "CDA(4)" and "CDA(5)".

Areas in the Vicinity (cont.)

"CDA" is to facilitate appropriate planning control over the development mix, scale, design and layout of development. Podium development is discouraged and this zone is also subject to site coverage restriction. Planning briefs setting out the planning parameters and the special design requirements will be prepared to guide the future development in the "CDA" sites.

The planning intention of "CDA(3)", "CDA(4)" and "CDA(5)" is to ensure their disposition and design would be in harmony with the Preservation Corridor for Lung Tsun Stone Bridge. "CDA(3)" and "CDA(4)" are intended for commercial use while "CDA(5)" is intended for residential use. They can have basement(s). Their design parameters are as follows:

Sub-area	Max. Plot Ratio	Max. Site Coverage (excluding basement(s))	Max. Building Height	Intended Use
CDA(3)	5	65%	80mPD, except at the east part towards the Kowloon City and the Lion Rock that is 13mPD	Commercial
CDA(4)	4.5	65%	70mPD	Commercial
CDA(5)	5	40%	110mPD	Residential

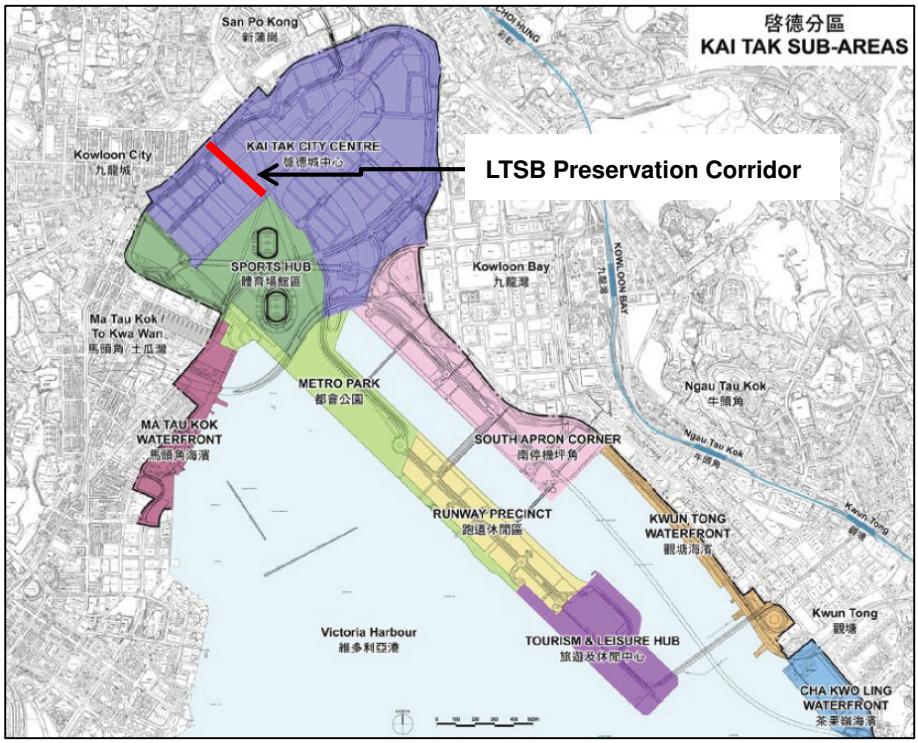
A site with an area of 1.16 ha at the western end of the curvilinear landscaped elevated walkway is zoned "Other Specified Uses" ("OU") annotated "Arts and Performance Related Uses". This zone is intended primarily for arts and performance related uses with a platform above for public viewing as well as outdoor performance. Grand Steps, similar to those in the Hong Kong Cultural Centre Piazza, cascading down to the open space leading to the southern entrance of the Preservation Corridor and the Stadium site will be provided.

Pedestrian Connection

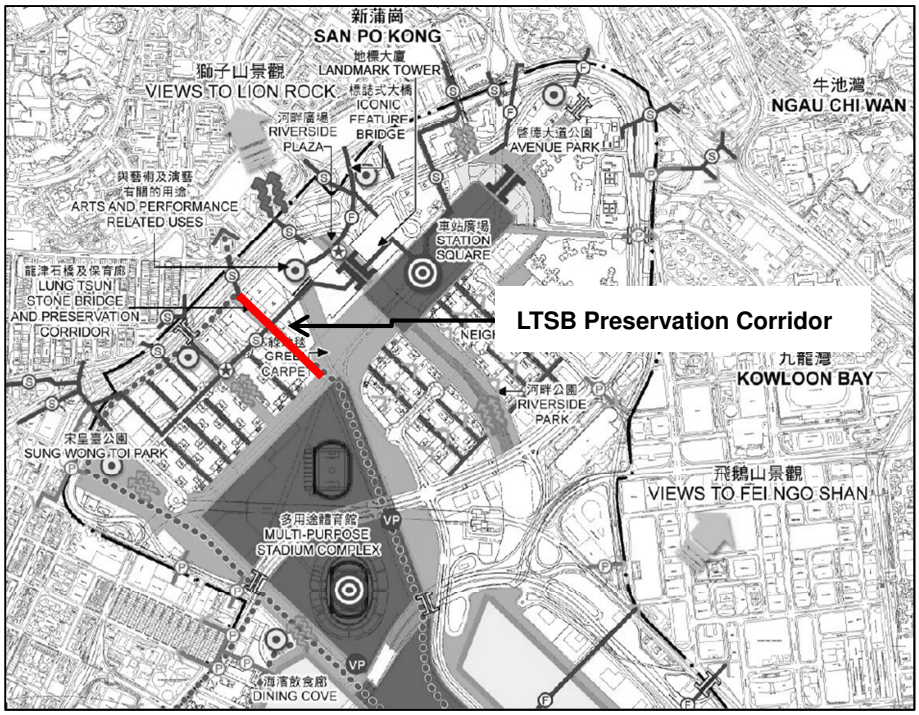
The Preservation Corridor has a wider area at the southern entrance to allow a more open view and better design flexibility and integration with the connecting Station Square.

At the northern entrance of LTSB Preservation Corridor there is a proposed subway with heritage theme across Prince Edward Road East to link with Shek Ku Lung Road Playground through which a walkway is proposed to allow visitors to continue their trip to Kowloon Walled City Park. The subway is one of the entries to Kai Tak. The northern end of the Preservation Corridor abuts the district distributor.

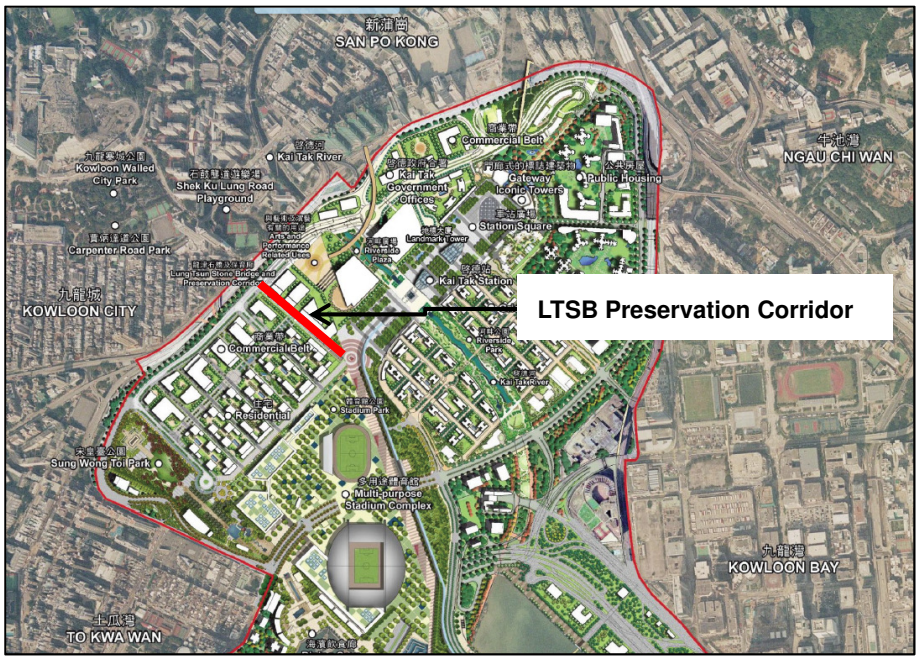
The proposed Underground Shopping Street connecting Nga Tsin Wai Road in Kowloon City to the Sports Hub and the proposed Shatin Central Link Kai Tak Station will pass under the Preservation Corridor.



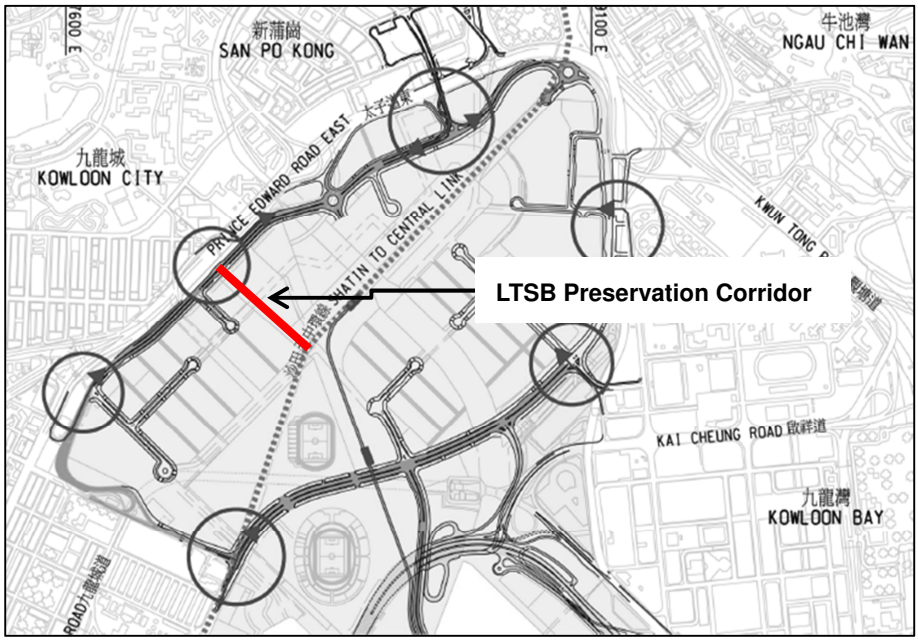
Kai Tak Sub-Areas (Source: Outline Zoning Plan NO. S/K22/4, 2012)



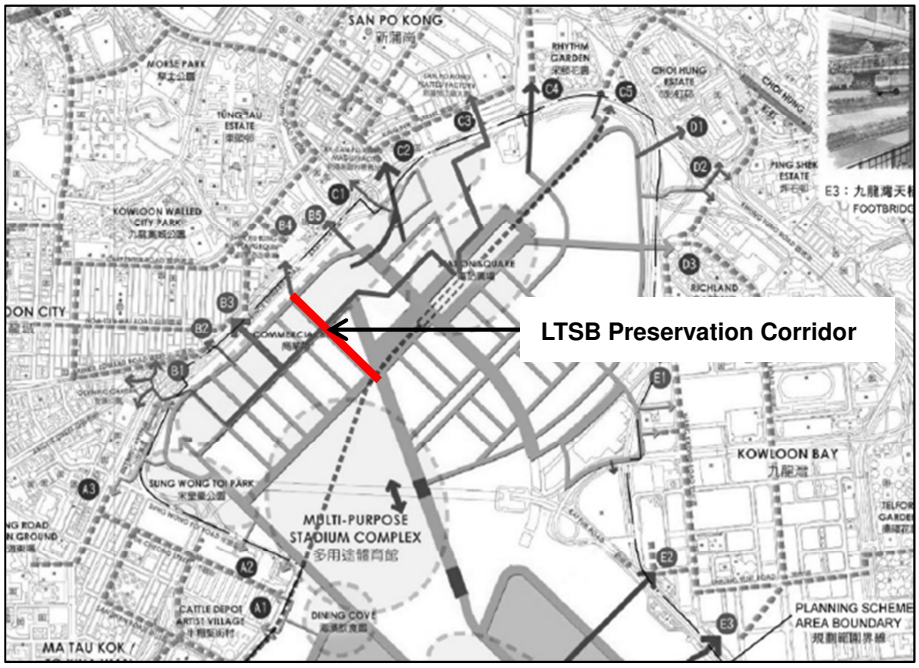
Urban Design Framework (Source: Outline Zoning Plan NO. S/K22/4, 2012)



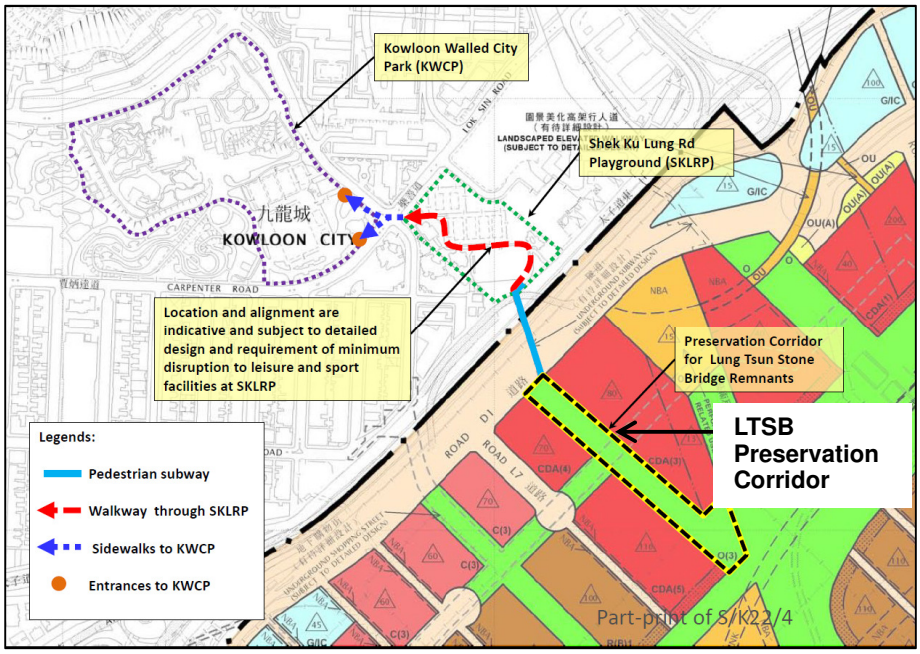
Landscape Plan (Source: Outline Zoning Plan NO. S/K22/4, 2012)



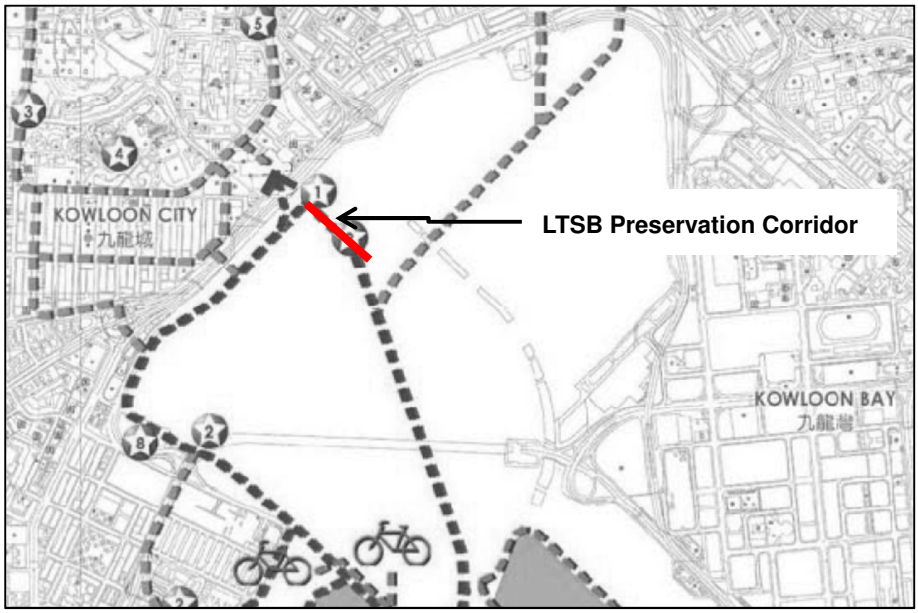
Proposed Road Network and Reserve for Future Possible Rail-Based Environmentally Friendly Transport System (Source: Outline Zoning Plan NO. S/K22/4, 2012)



Pedestrian Connections. (Source: Outline Zoning Plan NO. S/K22/4, 2012)



Proposed linkage connecting the northern entrance of LTSB Preservation Corridor and KWC Park. (Source: Civil Engineering & Development Department)



Heritage Trail and Cycle Track (Source: Outline Zoning Plan NO. S/K22/4, 2012)

3.5 Statement of Significance

Having studied the past, present and future of LTSB and its Site, the significance is concluded as follows:-

Historical/Political/Military Significance

LTSB is of high historical significance due to its emergence relating to the Chinese civil and military establishment as well as the local community in late 19th century. First, it represented the sovereignty of Chinese government over Kowloon and the New Territories during the rule of the British, and facilitated Chinese civil and military forces stationed in KWC overseeing the City of Victoria in Hong Kong Island after the Treaty of Nanking. Second, it served as an important location for customs' operations such as opium tax collection and blocking of opium smuggling after the Second Opium War. Third, it demonstrated the deprivation of Chinese jurisdiction on KWC as stated in the 1898 *Convention between Great British and China in respect of An Extension of Hong Kong Territory*. Fourth, its burial illuminated the development of Kai Tack Bund in 1920s and the airport development since the Japanese Occupation period in 1941.

Social Significance

As a landing pier the LTSB and its previous structures facilitated the imports and exports of goods, the creation of the prosperous Kowloon Street as a commercial and entertainment hub, and the operation of illegal gambling dens. It also enhanced the social development in Kowloon City including villages such as Ngau Tsin Wai, and community organizations such as Lok Sin Tong.

Cultural Significance

The Site is an epitome of pre / post war development in Hong Kong. The remnants of LTSB, Kowloon City Pier and seawall of Kai Tack Bund etc. could provide physical evidence to illustrate how the bridge / pier was built by the Chinese, taken over by the colonial government, damaged by the Japanese Army, and how the Site was associated with the airport development of Hong Kong. Undoubtedly, the archaeological discovery in Kai Tak area would facilitate Hong Kong's citizen to understand their cultural and social roots and to create a sense of continuity that is an essential part of cultural identity.

Townscape and Landscape Significance

LTSB was once an important landmark on the coastline, linking with Kowloon Street and KWC. Before the extension of the colony's territory, it was a visual reminder of the presence of Chinese Officials and Imperial navy of *Qing* (清) dynasty.

The burial of LTSB for Kai Tack Bund residential development began the town planning history in the Kowloon Peninsular characterized by the grid morphology with arrays of rectangular blocks separated by parallel streets. The lift-up of building height restriction after the removal of the airport stimulated the redevelopment of tenement blocks creating the current juxtaposition of aged small buildings and new slender towers.

The archaeological features identified in the existing burial context could represent the rapid change of townscape and landscape in Kowloon from 1875 to 1998.

In the future its *in-situ* preservation within KTD will mark the metamorphosis of once the threshold of Hong Kong into the new model of urban development embracing "Heritage, Green, Sports and Tourism".

Archaeological Significance

The archaeological features identified within the original site of LTSB are physical evidences relating to the KWC, Lok Sin Tong, Kowloon City Pier, Kai Tack Bund and airport development during the colonial and Japanese Occupation periods. All these archaeological features recovered are significant in terms of urban and historical archaeology in Hong Kong. Similar to the archaeological discovery at Kowloon Walled City, the significance of remnants relating to LTSB are remarkably high against Hong Kong's colonial background.

Architectural Significance

The construction of the original LTSB consisted of two main parts: the solid stone structure of its northern/landward part and the supporting pillars of its southern/seaward part. The construction process required profound knowledge of the local tidal movements. Structural details of the supporting pillar and landward part could illustrate how its layout and design met the needs for longer spans and heavier load-bearing capacities in the sea. As time went on, remnants of LTSB in Kai Tak Area and the four existing bridges in rural areas became the surviving examples of typical *Qing* (清) stone bridge in Hong Kong.

Architectural Significance (cont.)

LTSB was not an ordinary bridge but a landing pier adopting the style of stone cutwater (supporting pillar in hexagonal shape) commonly used in most river bridges of Guangdong province during the *Qing* (清) dynasty. Moreover, the Bridge comprised the traditional Chinese cutwater, pavilion and Pier End Structure with landing steps similar to other pre-war piers in Hong Kong. The stonework style of Pier End Structure at the Site is found heterogeneous from the unearthed supporting pillars (traditional Chinese cutwater).

The material of LTSB, granite blocks, should have been quarried locally in Hong Kong. These granite blocks recorded the history of the once booming quarrying industry in Hong Kong and the techniques of stone masons that came from Mainland China.

Scientific Significance

LTSB had been covered for more than sixty years until the first excavation conducted in 2007. The techniques employed in the excavation of the site and uncovering of the remains have added new experience and knowledge to the archaeological study and practice in Hong Kong.

The conservation of the stone structure will involve a wide range of engineering measures such as reinforcement of the original seabed, dewatering of the site etc. that will become a pioneering conservation project of this kind in Hong Kong.

Group/Contextual Significance

LTSB is politically related to other historic sites. After the Evacuation Order *Qing* (清) Government set up a number of forts strengthen coastal defences including Kowloon Fort (九龍墩台) at Beacon Hill in 1668. It was changed to Kowloon Military Station (九龍汛) in 1682. After Hong Kong Island was ceded to the British in 1842, the Military Station was expanded to become the walled garrison-city KWC in 1847 to overlook Victoria City across the Victoria Harbour. The defensive walls of KWC spread along the ridges of Pok Hok Shan to preserve against attack from the back. The later built LTSB facilitated Chinese civil and military forces stationed in KWC.

Group / Contextual Significance (cont.)

LTSB is also close to the Sung Wong Toi inscription rock at Sacred Hill which was made to memorize the arrival of two *Song* (宋) Emperors: Sung Duen Zung (宋端宗) and Sung Tai Bing (宋帝昺) due to the pursuit of *Yuan* (元)'s army. The Hau Wong Temple at the junction of Junction Road and Tung Tau Tsuen Road is to commemorate Yeung Leung Zit (楊亮節) who followed *Song* (宋) Emperors during their exile. All these historic sites together created the group / contextual significance of the LTSB.

Note:

Section 3 is based on:-

1. *Archaeological Impact Assessment Report for Kai Tak Development Engineering Study cum Design and Construction of Advance Works – Investigation, Design and Construction* (Maunsell Consultants Asia Limited 2008);
2. *Conservation Management Plan for the Site of Lung Tsun Stone Bridge* (AMO 2009);
3. *Further Archaeological Excavation Report for Kai Tak Development Engineering Study cum Design and Construction of Advance Works – Investigation, Design and Construction* (AECOM August 2009);
4. *History / Background, Kowloon Walled City Park* (http://www.lcsd.gov.hk/parks/kwcp/en/index.php);
5. *History, Public Engagement for Preservation of Lung Tsun Stone Bridge* (http://www.ktd.gov.hk/lung%20tsun%20stone%20bridge/pda/eng/history.html);
6. *Kai Tak Airport 1925-1998* (http://www.cad.gov.hk/english/kaitak.html);
7. *Kai Tak Development – Urban Design Enhancement Proposal* (Town Planning Board Paper No. 8859);
8. *Kai Tak Development Stage 2 Public Engagement on the Preservation of Lung Tsun Stone Bridge Remnants* (Town Planning Board Paper No. 8791);
9. *Kai Tak Outline Zoning Plan No. S/K22/4* (Town Planning Board);
10. *Preservation Concept Plan for Lung Tsun Stone Bridge for the Kai Tak Development – Infrastructure at Former Runway and Remaining Areas of North Apron and Improvement of Adjacent Waterways – Design and Construction* (Draft / Final Version) (AECOM 2012);
11. *A Research on Lung Tsun Stone Bridge and its surrounding area* (Chung Po Yin and Ko Tim Keung 2012), unpublished;
12. *Full Excavation for Defining the Preservation Approach of Lung Tsun Stone Bridge Remnants Full Excavation Report* (Final Draft) (AECOM February 2013); and
13. Information about the 2- Stage Public Engagement Exercise.

4
INTERPRETATION PRINCIPLES

This section is intended to set out the principles for the interpretation proposals of LTSB. The principles indicating the direction of the interpretive programmes will be further elaborated in the next section.

4.1 Interpretation Principles

Principle 1 - Access and Understanding

Interpretative and presentation, in whatever form deemed appropriate and sustainable, should facilitate both physical and intellectual access by the public to the cultural heritage site and be effective in enhancing the understanding of the Site by the public.

Principle 2 - Information Sources

Interpretation and presentation should be based on evidence gathered through accepted scientific and scholarly methods as well as from living cultural traditions.

Principle 3 - Context and Setting

The interpretation of the cultural heritage sites should relate to their wider artistic, contemporary cultural, historical, natural, physical, political, social, spiritual, and traditional etc. contexts and settings.

Principle 4 - Authenticity

The interpretation and presentation of a cultural heritage site must respect the basic tenets of authenticity in the spirit of the Nara Document (1994).*

Principle 5 - Sustainability

The interpretation and presentation for a cultural heritage site must be sensitive to its natural and cultural environment, with social, financial, and environmental sustainability among its central goals.

Principle 6 - Inclusiveness

The interpretation and presentation of a cultural heritage site must be the result of meaningful collaboration between heritage professionals, associated communities, and other stakeholders.

Principle 7 - Research, Evaluation and Training

Research, training, and evaluation supported by on-going research are essential components of the interpretation of a cultural heritage site.

Principle 8 - Interpretation Facilities

Interpretive facilities and structures at a cultural heritage site in whatever size and scale must be introduced out of genuine needs.

4.1 Interpretation Principles (cont.)

Principle 9 - Means of Interpretation

Interpretation tools of diversified means and forms are encouraged.

Principle 10- New Development

Development in the vicinity that will directly affect the ambience of a cultural heritage site must be carefully designed.

Note:

Principles 1 to 7 are based on the *The ICOMOS Ename Charter for the Interpretation and Presentation of Cultural Heritage Sites* (ICOMOS 4 Oct 2008); and Principle 9 is based on *Interpreting Our Heritage* (Freeman Tilden 2007).

* The Nara Document (1994), also known as The Nara Document on Authenticity, was drafted by the 35 participants at the Nara Conference on Authenticity in Relation to the World Heritage Convention, held at Nara, Japan, from 1-6 November 1993, at the invitation of the Agency for Cultural Affairs (Government of Japan) and the Nara Prefecture. The Agency organized the Nara Conference in cooperation with UNESCO, ICCROM and ICOMOS. This final version of the Nara Document has been edited by the general rapporteurs of the Nara Conference, Mr. Raymond Lemaire and Mr. Herb Stovel.

5

INTERPRETATION GUIDELINES

This section is intended to set out the requirements for the interpretation proposals for LTSB. The requirements are based on the need to (1) share information on the site effectively, (2) anticipate challenges resulting from its protection, including maintaining its authenticity, and (3) respond to concerns arising from the future KTD.

5.1 Access and Understanding

a)	Interpretative content should be clear and well organized.	*Basis*
b)	Effective interpretation should be more than information; it should transcend fact and reveal deeper meanings and the underlying truth.	*Beyond information*
c)	Effective interpretation and presentation should (1) enhance the experience of LTSB, (2) increase understanding of the values and significance of the place, and (3) encourage its conservation through appropriate actions.	*Enhance experience, significance, and conservation*
d)	Effective interpretation should relate to the interests of the target audience. Interpretive messages should be relevant so that they capture people's attention, are meaningful and compelling so people may think differently. Messages should provoke and inspire people to broaden their thinking.	*Relate and inspire audience*
e)	Effective interpretation should convey messages without dilution, or without overwhelming them with too much information.	*Convey messages*
f)	Effective interpretation should (1) encourage the target audience to reflect on its own perception of LTSB, and (2) help provide relevant insights.	*Provide insights*
g)	Effective interpretation encourages people to visit and navigate a place by themselves.	*Motivate*
h)	Effective interpretation can instil in people the ability and the desire to sense, appreciate, treasure, and care about the beauty in their surroundings – to provide spiritual uplift and to encourage resource preservation.	*Provide spiritual uplift*
i)	Effective interpretation can be designed as a story that informs, entertains, and enlightens.	*Approach: Story telling*
j)	The art of effective interpretation is to "peel away" layer after layer of the past from the natural and cultural world.	*Approach: Historical layers*

5.1 Access and Understanding (cont.)

k) Effective interpretation and presentation should address as wide an audience as possible – both demographically and culturally.
(1) Children. Interpretation for children should not be a simplified version of that for adults, but a separate programme following a fundamentally different approach – one of surprise. It should encourage vocalization and movement. Structures and materials should be childproof (safe and nontoxic).
(2) Teenagers. Interpretation for teenagers should be at the level of a young adult. Historical messages that relate past events to current and future consequences should be considered.
(3) Adults. Interpretation for adults should include in-depth materials and provide the opportunity for social interaction with peers.

Presentation: Receivers

l) Effective interpretation should provide accessibility through language choices. Such choices should reflect the languages of the majority of visitors, including those of associated communities. The multi-language text used in interpretative constructs, such as brochures and display boards should be in large font size(s). Support services for ethnic minorities and people with disabilities should be provided. Braille characters, for example, should be provided whenever possible.

Presentation: Language

m) Interpretation and presentation activities should be physically accessible to the public, in all its variety. Requirements stipulated in the latest Design Manual on Barrier Free Access should be followed.

Physical access

5.2 Information Sources

a)	Interpretation and presentation of LTSB should be based on the information provided in Section 3, material remains, written sources, oral history, linked traditions, relevant research materials, old photographs, reports, stories and/or personal memories / meanings etc.	*Types of sources: Common ones*
b)	Intangible elements, such as cultural and spiritual traditions, and social and economic activities should be included.	*Types of sources: Intangible ones*
c)	Alternative historical hypotheses and local myths / stories should be included.	*Types of sources: Alternative ones*
d)	Other information can also be incorporated provided it is collected through accepted methods and comes from reliable sources.	*Types of sources: Other options*
e)	Evidence gathered from different sources should be encouraged.	*Diversity of sources*
f)	Visual reconstructions, whether by artists, architects or computer modellers, should be based upon detailed, thorough, accurate and systematic analysis of the evidence gathered. The demolished *Pavilion for Greeting Officials* should not be reconstructed as there is no accurate information about the original structure; it can be interpreted by other means.	*Virtual reconstruction dependent on accurate information*
g)	Information sources should be clearly indicated, documented, and archived for future reference and evaluation.	*Citation of information sources*

5.3 Context and Setting

a)	Interpretation and presentation of LTSB should not be limited to the pier itself but should include its significance in a broader context – artistic, contemporary, cultural, historical, natural, physical, political, social, spiritual, and traditional etc. It should consider all aspects of the cultural and environmental significance of the place.	*Context: Extensive*
b)	The evolution of the place in relation to Hong Kong's contemporary history should be illustrated comprehensively.	*Context: Contemporary*
c)	The surrounding cityscape, geographical setting and natural environment are all integral parts of the cultural and historical significance of the place – the natural setting with Lion Rock in the background and Kowloon Bay as the threshold; the historical settlements, such as Kowloon Street, Kowloon Walled City etc.; the artificial landscape of Kai Tak Bund reclamation and Kai Tak River; and the future structures of the Kai Tak Development.	*Context: Physical setting*
d)	No part of the past, present or, indeed, future context of the place should be neglected as all three contribute to the on-going significance of the site. Although particular eras and themes may be highlighted, all periods of the history of the place as well as its contemporary context and significance should be considered, such as its past use as a pier, its silent underground presence in the old Kai Tak Airport and its future reincarnation as a preservation corridor.	*Context: Sense of time*
e)	Past interventions should be respected as part of the history of the place.	*Physical / time: Past interventions*
f)	The cultural contributions of all associated communities, such as Lok Sin Tong, past users and workers, ethnical groups etc. should be included / acknowledged.	*Social / people: Cultural contributions*
g)	Co-existing or contested points of view should become part of the interpretation, providing outside visitors as well as local residents and associated communities with a deeper understanding of the place and its "ownership".	*Social / people: Stakeholders*

5.4 Authenticity

a)	Interpretation and presentation of LTSB should respect the traditional social function of the place and the dignity of local residents and associated communities. The traditional socio-economic function of the site as a physical connection, linking the East Gate of the Kowloon Walled City and Kowloon Street to the coast in the late 19th century should be acknowledged.	*Basis: Respect for function / people*
b)	Interpretation and presentation should communicate the significance of the place without altering its fabric or adversely impacting its cultural values.	*Approach: Communicate significance / protect fabric*
c)	Careful preservation of the surviving fabric and archaeological deposits is critical. The archaeological remains provide the source for on-going appraisal and reappraisal by future scholars, which, in turn, can further enhance the interpretation of the place.	*Approach: Protect fabric for future research*
d)	To balance the growing trend of seeing archaeological places as predominately outdoor museums, it will be appropriate (authentically) to approach the place as a cultural landscape.	*Approach: Place as cultural landscape*

5.5 Sustainability

a)	Since LTSB is a vulnerable and non-renewable cultural resource, its conservation, interpretation and presentation, and maintenance have to be well planned.	*Preamble*
b)	The design of interpretative facilities and structures should respond to and/or reflect surrounding development, land use and planning as well as cultural, environmental, sport and tourism policies for the entire KTD. It should form an integral and coherent component anticipating future works in evolving physical and social contexts.	*Responsive design*
c)	Interpretation and presentation should achieve a wide range of cultural, educational, and social objectives, not merely those associated with tourism.	*Range of objectives*
d)	The archaeological study and conservation of the place should be documented and incorporated in the interpretive programme as a means to (1) enhance the public's awareness of the conservation process and (2) explain the efforts undertaken to protect the authenticity and integrity of the Site.	*Awareness*
e)	The interpretative programme should strive for a balance between visitor numbers and the protection of the place, especially the impact on surviving fabric and archaeological deposits.	*Impact of visitors*
f)	Interpretation activities, such as guided tours by tour guides and/or site interpreters should provide equitable and sustainable cultural, economic, and social benefits to the host community at all levels. Programmes that support local industry should be encouraged.	*Community benefits*
g)	Long term management (including maintenance) of interpretation facilities and structures should be considered. Technical or technological elements should be designed and constructed in a manner that will allow regular and effective maintenance. A maintenance plan should be prepared to assist in the efficient and effective management of the place.	*Management / maintenance*
h)	The budgeting of the interpretive programme should be considered during the planning stage.	*Budgeting*

5.6 Inclusiveness

a) Public consultation should take place (1) during the planning stage (and before the design stage); and (2) during the concept design stage, perhaps by design competition. In addition, the public should be updated regularly on the progress during the actual conservation and interpretation works, and when the interpretation is completed. *Public consultation*

b) Interpretation and presentation of LTSB should be based upon collaboration between a broad cross-section of community members and professional experts. The design team in particular should include conservation experts, representatives of local communities, site managers, tourism operators etc. This should help ensure that both the hardware and software of the interpretation programme respond to the interests of different stakeholders / interest groups. *Design team: Composition*

c) The proposed interpretative facilities and structures should take into account future development in the vicinity during the planning stage in order to achieve a design solution that benefits all stakeholders. The interests and rights of property owners, nearby residents and associated communities should be noted and respected. *Beneficial design*

d) Because the questions of intellectual property and traditional cultural rights are especially relevant to the interpretation process and its expression in various communication media (such as digital media, on-site multimedia presentations, and printed materials), legal ownership and the right to use images, texts, and other interpretative materials should be discussed and clarified in the planning process. Consent of the owner must be obtained prior to use. *Intellectual property*

e) A good interpretative programme should be capable of attracting whatever support in needed for the programme to flourish – administrative, financial, political, and voluntary support. *Support*

5.7 Research and Evaluation

a)	Interpretation is a process that never ends. Continuing research, consultation, evaluation, and review are important to further the understanding and appreciation of the significance of LTSB.	*On-going process*
b)	The interpretation programme and related infrastructure should (1) be based on in-depth, broad-based research / analysis with as much public input as possible and (2) allow for future expansion and regular revision to enhance content and presentation.	*Research scope / future review*
c)	The interpretative programme should be seen as an educational resource and its design should take into account its possible use in communications and information media, school curricula, and seasonal volunteer involvement as well as special activities and events.	*Educational resource*
d)	Interpretation and presentation programme and its physical impact on the site should be continuously monitored and evaluated by heritage professionals.	*Monitoring*
e)	The public, including visitors, members of associated communities etc. should be provided with opportunities to express their opinions and comments on - and evaluate the success of - the interpretative programme.	*Public feedback*
f)	International cooperation and sharing of experience are essential to developing and maintaining standards in interpretation methods and technologies. To this end, international conferences, workshops and exchanges of professional staff as well as involvement in national and regional meetings should be encouraged. These will provide an opportunity for the regular sharing of information about the diversity of interpretive approaches and experiences in various regions and cultures.	*International exchange*

5.8 Interpretation Facilities

a)	All visible interpretative facilities and structures (information panels, interpretative panels, kiosks, protective barriers, tourist centre or museum, walking paths etc.), when deemed appropriate and necessary, must be sensitive to the character (including Character-defining Elements), scale, and setting of LTSB. They must not distort or obscure the cultural and natural significance of the place.	*Recognition of character*
b)	The design of interpretative facilities should relate visually / coherently to the LTSB and the future KTD. Simple and sympathetic design may be the most suitable approach.	*Sympathetic design*
c)	Interpretative facilities should also respect available vistas and views of the site.	*Recognition of vistas / views*
d)	Interpretative facilities should be easily identifiable as such.	*Identifiable facilities*
e)	Protective structures may be necessary for archaeological remains that remain exposed *in-situ*.	*Protective structures*
f)	Site additions (such as, benches [seating], lightweight shelters) may be appropriate as part of a programme to provide better visitor access or beneficial community uses.	*Additions to the place*
g)	In some instances, site constraints (including the retention of cultural significance) may prevent the introduction of interpretative facilities. Alternative interpretative solutions should be sought.	*Alternative solutions*

5.9 Means of Interpretation

a)	New and effective means of interpretation should be explored. A variety of interpretative materials should be used in order to attract the attention of visitors.	*Diversification*
b)	Interpretation should engage as many of the visitor's senses (hearing, seeing, smelling, tasting, touching) as possible. This should allow interpretation to go beyond meeting intellectual needs alone. Such engagement should create a holistic experience for the visitor.	*Engaging senses*
c)	Full-scale replications of portions of LTSB could be powerful tools for interpretation providing that they are clearly labelled as such.	*Replication*
d)	Oral histories / testimonies could be incorporated directly / indirectly through interpretation, or directly through the active participation of members of associated communities as on-site interpreters.	*Oral history / living history*
e)	Interactive, multi-media, and multi-sensory installations as well as educational simulation games operated under an interactive projection and visual display system etc. can stimulate further interest in the site. Although the use of advanced technology can reveal the site in exciting new ways, it must be handled with foresight and care.	*New technology*
f)	Interpretation can also creatively use animatronics, holograms, interactive computer exhibits, the internet, smartphone apps, videos etc.	*New technology*
g)	Production and sale of audio-visual products, innovative souvenirs and publications suited to the interests of various categories of visitors can increase the understanding of the site and may provide economic benefits.	*Products, souvenirs and publications*

5.10 New Development

a)	New development of the CDA sites on either side of LTSB Preservation Corridor should support the preservation, conservation and interpretation of the place. New buildings and heritage elements should work together to create an appropriate ambience that benefits both.	*New development: Objective*
b)	New development should respect the place in terms of design (including signage), function (uses), and placement in space.	*Design, function and placement*
c)	The construction of the CDA sites constitutes one of the greatest physical threats to the site. A Conservation Management Plan (CMP) should be carried out before development schemes are approved.	*Mitigation by CMP*

Note:

The above guidelines are based on:-

1. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (ICOMOS 1999);
2. *Charter for the Protection and Management of The Archaeological Heritage* (ICOMOS 1990);
3. *Conservation Principles Policies and Guidance for the Sustainable Management of the Historic Environment* (English Heritage 2008);
4. *Heritage, Conservation, and Archaeology: An Introduction* (Frank G. Matero 2008);
5. *The ICOMOS Ename Charter for the Interpretation and Presentation of Cultural Heritage Sites* (ICOMOS 4 Oct 2008);
6. *Interpretation for the 21st Century, Fifteen Guiding Principles for Interpreting Nature and Culture* (Larry Beck and Ted Cable 1998);
7. *Interpretation Handbook and Standard Distilling the Essence* (Department of Conservation, Wellington, New Zealand 2005);
8. *Interpreting Our Heritage* (Freeman Tilden 2007);
9. *Policy Statement on Restoration, Reconstruction, and Speculative Recreation of Archaeological Sites including Ruins* (English Heritage 2001);
10. *Principles for the Conservation of Heritage Sites in China* (The Getty Conservation Institute 2002);
11. *Standards and Guidelines for the Conservation of Historic Places in Canada, 2nd Edition* (Canada's Historic Places 2010); and
12. *The Venice Charter* (ICOMOS 1964).

6
INTERPRETATION EXAMPLES

This section will discuss some examples of conservation projects and interpretation of archaeological sites. It is hoped that by referencing these representative examples of a variety of approaches, interesting ideas will be generated and be employed in the LTSB Preservation Corridor.

6.1

Galleria Vittorio Emanuele II and The Arengario Palace (Italian: *Palazzo dell' Arengario*) Cathedral Square (Italian: *Piazza del Duomo*), Milan

The Cathedral Square, Milan is a historical public open space supported by buildings whose diversified uses, architectural excellence and spatial arrangement attract visitors from all over the world. (Source: Yu Ka Sing 2012)

Cultural Heritage Site		**Galleria Vittorio Emanuele II**	**The Arengario Palace** (Italian: *Palazzo dell' Arengario*) which currently houses the Museum of Twentieth Century (Italian: *Museo del Novecento*)
Location		Cathedral Square, Milan (Italian: *Piazza del Duomo, Milano*)	
Use	**Original/ Past**	Shopping arcade with F&B	Government office
	Current	Shopping arcade with F&B	Museum
Time of Completion		1867	1950s
Setting		The historic Cathedral Square (originally constructed in the 14th century) of 17,000 square meters with the dominating *Duomo*	
Admission Fee as in 2012		Admission free	€ 5 (Full price)
Pedestrian Flow		High	Moderate
Conservation Approach		Preservation	Adaptive reuse

The Site

With an area of 17,000 square meters, the Cathedral Square, Milan (the Square) was originated in the 14th century. It is the centre of the city both geographically, socially and spiritually. Surrounding the rectangular open space are the most important architecture of Milan, including the *Duomo* (the Cathedral) from which the Square gets its name to its East, the Galleria Vittorio Emanuele II (the Galleria) and *Palazzi dei Portici Settentrionali* (the Northern Palace of the Portico) to its North, Arengario Palace (the Palace), *Palazzi dei Portici Meridionali* (the Southern Palace of the Portico) and the Royal Palace to its South etc. Its current form is largely contributed by architect Giuseppe Mengoni (1829-1877) who designed most of the monumental buildings enclosing the Square with the exception of the Cathedral and the Royal Palace.

The Galleria, the oldest shopping arcade in Italy was completed in 1867 by Giuseppe Mengoni at the height of 19th century belle époque. It is a four-storey complex inscribing two intersecting streets. These streets are galleries covered by an arching glass and cast iron roof with the central octagonal space topped with a glass dome. It accommodates some restaurants and cafes and the most luxurious retailers selling fashion, books, paintings etc. Joined with the Southern Palace of the Portico, the Galleria creates a continuous covered walkway to the North of the Square.

Opposite across the Square to the Galleria is the Palace, which is a complex of two symmetrical buildings with three storeys completed in 1956. The Palace was designed by architects Piero Portaluppi, Giovanni Muzio, Pier Giulio Magistretti and Enrico Agostino Griffini. Its façade was decorated with bas reliefs by Arturo Martini placed above the porticoes on the ground floor featuring epic figures, the old city gates of Milan etc. One of its original functions was for the local officials to give speeches to the public. The Palace is currently used as the Museum of Twentieth Century (the Museum), one of the most important art galleries displaying art of Italian and the world in the twentieth century. Its arcades on the ground floor together with the Southern Palace of the Portico provide a dissected covered walkway to the South of the Square.

Conservation

The Galleria has always maintained its original use as a shopping arcade. In the central mosaic under the glass vault there is a depiction of the bull from the Coat of Arms of Turin. The myth goes that if a person put its right heel on the bull's genitals and turn on himself or herself three times, it will bring good luck. This practice has caused a serious indentation to the mosaic.

The Palace was restored and adaptively reused by architects Italo Rota and Fabio Fornasari to house the Museum in the 2000s. Inaugurated in 2010, the new expressive renovation with a spiral ramp at the entrance leads visitors up to the galleries, creating a simple and linear museum journey within the historical building. It's opened first and second levels are now substantially glazed from floor to ceiling borrowing the view of the lively Square. It makes the *Duomo* and the Square the most stunning pieces of art for the journey.

Creating the Ambience

With the majestic Gothic *Duomo* centres at the east end, the Square is an open public room flanked by the Galleria at its north and the Palace at its south. Supporting to the authoritative *Duomo*, the Galleria and the Palace are shorter in height and much less decorative.

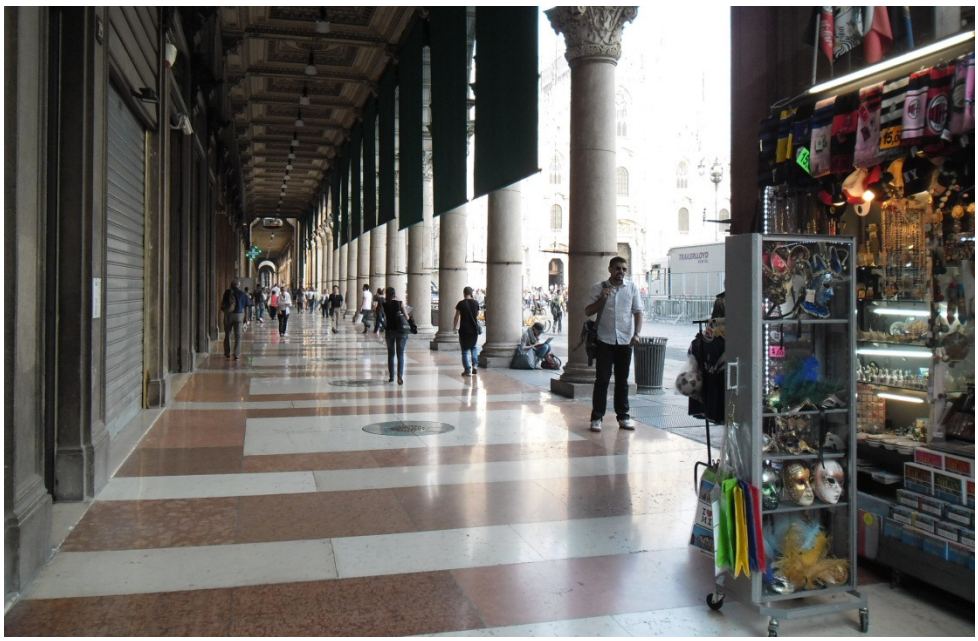
To the North of the Square, the Galleria restrains the prestigious retail activities inside its covered and vibrant galleries. The galleries with arched skylight are of generous width, high headroom and are intricately paved. The arcade of the Northern Palace of the Portico is deposited on the ground floor for the entire length of its façade that faces onto the Square. It sets back the shop front and provides a covered walkway for retail patronage. It also provides space for portable market stalls selling souvenirs. Names of the shops are printed uniformly in white on the green roller blinds at the arcade, sharp and organized. Bustling commercial activities on the inside do not disturb the appreciation of the Square.

To the South of the Square, the adapted Palace housing the avant-garde museum also plays a subtle role by containing a strikingly modern architecture inside the existing building, but only until the sky turns dark. At night, the interior lighting demonstrates the new architectural form fully and tells the nature of the exhibits of the museum bluntly.

What Can We Learn From It?

- Ambience of a heritage open space can be formed collectively by buildings designed at different periods, orchestrated by their architectural forms, spatial arrangement and the types of activities they accommodate
- Thoughtful spatial, signage and lighting design can be supportive of the creation of an appropriate ambience
- New architecture with greater flexibility in design can provide new viewing angles for appreciation of heritage places
- Façades of the newer buildings can be utilized to tell the story of the heritage place
- Heritage architecture or site can enhance the view and value of new ones
- Myth of heritage place involving visitor's action or verification on site can always grasp attention

The Galleria Vittorio Emanuele II and the Northern Palace of the Portico compose a continuous covered walkway for retail patronage. The use of roller blinds at the arcade as signage is tidy and fulfils the need of advertisement for the shops. (Source: Yu Ka Sing 2012)



The arcade of generous headroom and beautiful pavement provides a pleasant walking environment and enhance the shopping experience. It functions as a buffer zone between the Square and the Galleria where retail activities are vaguely contained. It is a transparent boundary of easy access that facilitates the movement of shoppers and visitors. The presence of portable stalls widens the variety of goods serving the needs of different visitors. (Source: Yu Ka Sing 2012)

The gallery covered by an arching glass and cast iron roof creates the highlight to the internalized shopping street and provides soft natural lighting to the interior.(Source: Yu Ka Sing 2000)

The mosaic of Turin's coat of arms is a tourist attraction of the Galleria. (Source: Yu Ka Sing 2012)

The two symmetrical blocks of Arengario Palace and the Southern Palace of the Portico create a dissected covered walkway that flanks the boundary of the Square at the South. Bas-reliefs above the porticoes of the Palace tell the history of Milan. (Source: Yu Ka Sing 2012)

The adaptation of the Palace as the Museum of the Twentieth Century respects the setting of the Square by restraining the new architecture within the existing building. (Source: Yu Ka Sing 2012)

Artificial lighting from different sources contributes to the atmospheric night scene collectively. (Source: Yu Ka Foon 2012)

The Museum expresses its new dramatic space relating to its exhibition by the use of interior lighting at nights. It helps to create the ambience of the Square. (Source: Yu Ka Foon 2012)

6.2
The Chapter House and Cloister of the Medieval Cathedral
London

The ground marking of the Medieval Cathedral does not only demarcate the footprint of the reburied archaeological finds, it also creates a visually pleasant playground that is separated from the access path. (Source: Yu Ka Sing 2012)

Cultural Heritage Site		**The Chapter House and Cloister of the Medieval Cathedral**
Location		South Churchyard of St. Paul's Cathedral, London
Archaeological Remains		Two massive central piers, parts of both the internal and external cloister walls, and the paved floor of the cloister
Use	**Original/ Past**	Cathedral
	Current	Garden
Period of First Construction		1332
Earliest Year of Excavation		2004
Setting		A constrained site between the church proper and boundary fence of the St. Paul's Cathedral
Admission Fee as in 2012		Admission free for the garden
Pedestrian Flow		Medium
Level of the Remains		Buried approximately 1 m from current street and garden levels
Conservation Approach		Preservation *in-situ*
Enclosure		Completely reburied
Mechanical Systems		Nil
Protective Barrier		Nil
Interpretation Tools		Text, historical drawing, 3-D ground marking, plans
Interpreter/ Guided Tour		A guided tour of the St. Paul's Cathedral is available at an entrance fee of £15 for adults

The Site

Designed by the royal mason William Ramsay in 1332, the Chapter House and Cloister of the Medieval Cathedral were destroyed by the Great Fire of London in 1666. In the same site stands the St. Paul's Cathedral consecrated in 1708 and built by Sir Christopher Wren.

The octagonal Chapter House and square Cloister were among the first and finest examples of the "perpendicular" style that dominated English architecture for the next two hundred years. They were two-storey enabling the prominent buttresses at each angle to form "a crown surrounding the casket within". The Chapter Room with huge windows was located on the first floor above an open undercroft. It was the venue where the Chapter or governing body of the Cathedral held their meetings.

Conservation

The plan to re-landscape the access paths and garden at the South Churchyard of the St. Paul's Cathedral uncovered the pre-Wren Medieval Cathedral. In 2004, a team from the Museum of London Archaeology Society, led by Senior Archaeologist Robin Wroe-Brown, carried out a five-week evaluation. Archaeology students assisted in the excavation and recording process as part of their training exercise. Archaeological finds that had survived approximately one meter beneath the street and garden levels then included two of the massive central piers, parts of both the internal and external cloister walls, and a large stretch of the paved floor of the cloister.

All surviving masonry was eventually reburied to avoid complications with long-term conservation in the open air. It allows the continuation of its existing use as a garden and access path. The garden was re-landscaped as planned, however, instead of the original proposal, a three-dimensional ground marking of the footprint of the Chapter House was employed that simultaneously provide seating, demarcate access and create a grassed platform that is accessible by a ramp, all of which resting literally above the surviving finds. The ground marking is made of a combination of Purbeck stones including Barnfield Whetson, Featuer and Grub whose inlay was hand worked to fine tolerances. The Architect of the project was Purcell Miller Tritton incorporating Martin Stancliffe. Construction took place between 2006 and 2008.

Interpretation

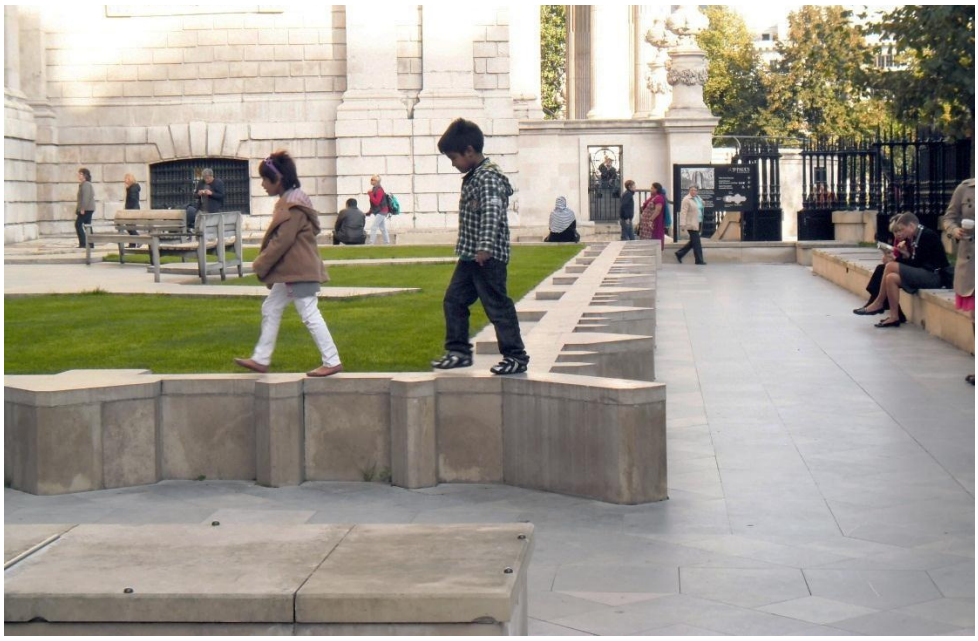
The interpretation facilities include:

1. A landscaped garden composed by the three-dimensional stone ground marking of the discovered archaeological features of the Medieval Cathedral
2. An interpretive panel with description and drawing of the Medieval Cathedral
3. A plan superimposed with the outlines of the two Cathedrals showing the differences in scale, structure and alignment that is inlaid on the stone pavement, coupled with a description
4. A stone engraving that acknowledges the year and the support from the City of London Corporation for the creation of the garden

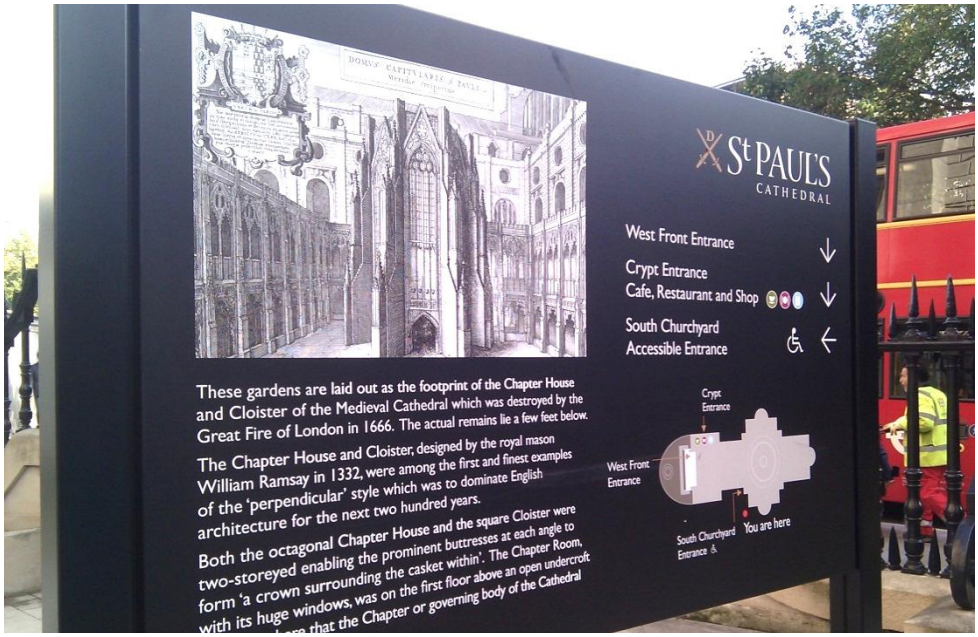
What Can We Learn from It?

- Long-term maintenance and site constraints have to be considered
- Conducting detailed site survey, measurement, cartographic and photographic records prior to decisions on the precise nature of future work is necessary
- Three-dimensional ground marking is innovative. It can be better comprehended from a high viewing point
- Blending interpretation into landscape design can turn a serious historical site into a welcoming urban living room
- When ground marking and interpretive plan are on the same plane, easy cross-referencing can be facilitated
- Repeating the interpretive description is necessary for sites with more than one entrance
- The provision of vegetation such as a grassed platform or trees can help to create a tranquil ambience, provided that there is adequate space
- Acknowledging the conservation and interpretation work can add a new page to the history of a historical site

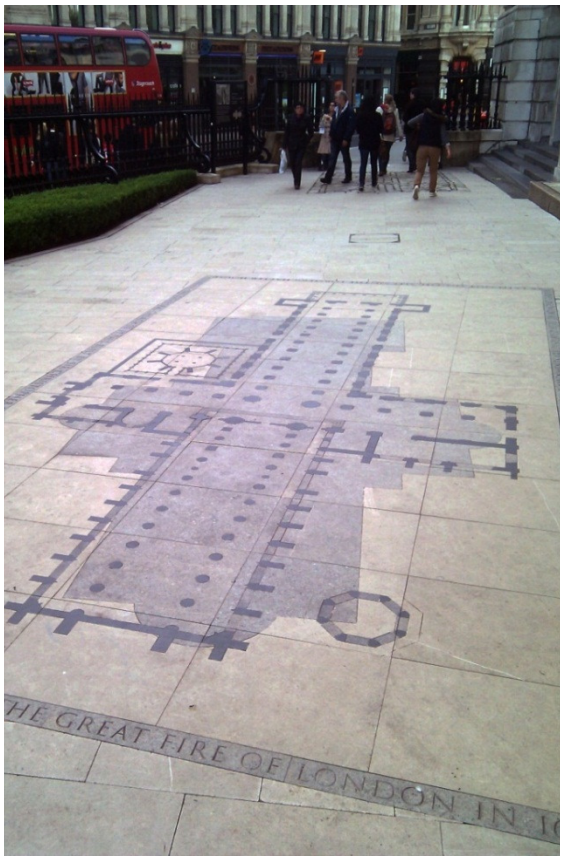
The pavement ramps up gently to provide access to the platform with lawn. (Source: Yu Ka Sing 2012)



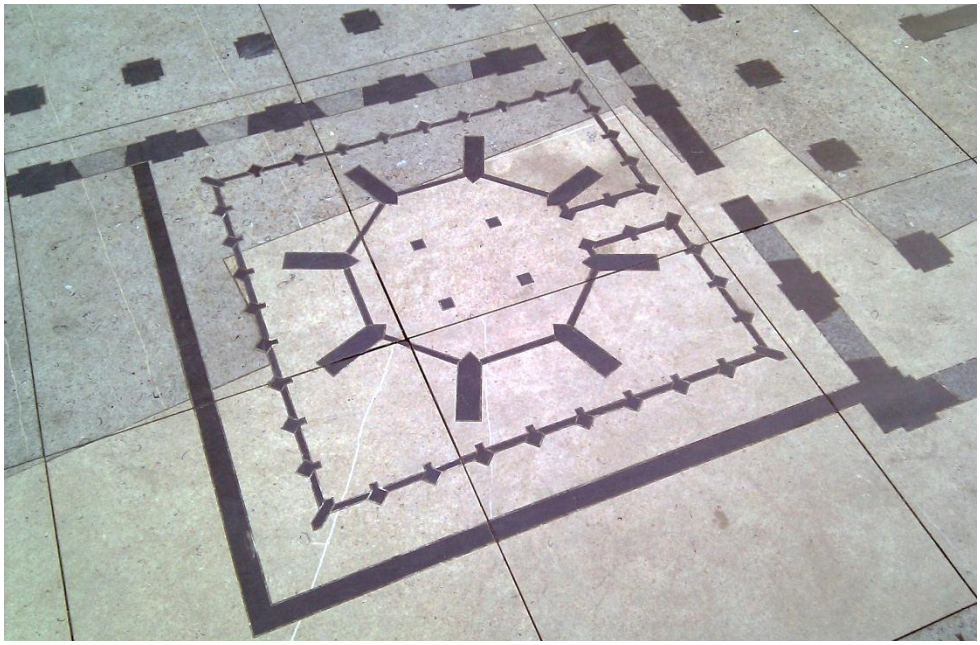
The ground marking provides seating and a place for children to have fun. Its height has to observe public safety. (Source: Yu Ka Sing 2012)



Same description and drawing of the Medieval Cathedral are printed on both sides the interpretation panel placed next to the East entrance of the garden. The drawing helps visitors to visualize the original form of the Cathedral. The text is not lengthy and nicely spaced that encourages reading. (Source: Yu Ka Sing 2012)



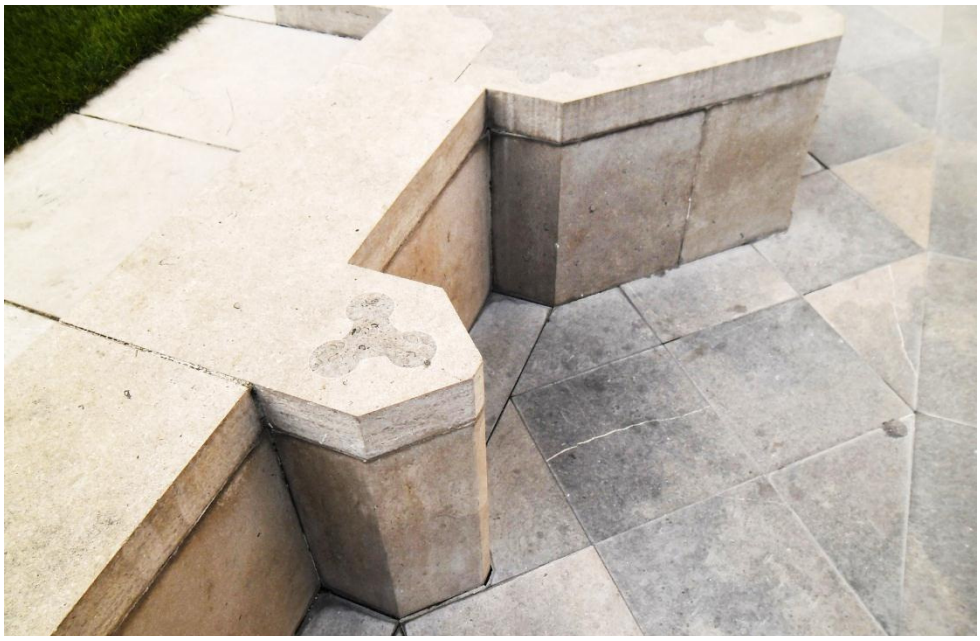
The plan superimposed with the footprints of the two Cathedrals by colour coding is located near the entrance at the West. It is fringed by text that echoes the description printed on the black interpretation panel. (Source: Yu Ka Sing 2012)



A close-up of the plan overlapped with the footprints of the two Cathedrals. (Source: Yu Ka Sing 2012)

The plan is oriented according to the actual orientation of the Cathedrals. Being laid on the ground, visitors can easily relate the plan to the ground marking. (Source: Yu Ka Sing 2012)

A close-up of the stone ground marking representing the internal cloister wall. (Source: Yu Ka Sing 2012)



The stone inlaid shows top craftsmanship. (Source: Yu Ka Sing 2012)

A close-up of the stone ground marking representing one of the buttresses of the Chapter House. (Source: Yu Ka Sing 2012)

Being laid on ground this piece of stone acknowledges the year of the creation of the garden. (Source: Yu Ka Sing 2012)

6.3
Serpentine Gallery Pavilion 2012
Kensington Gardens, London

By the manipulation of levels, the Serpentine Gallery Pavilion 2012 matches harmoniously with its hosting Gallery at the back. (Source: Yu Ka Sing 2012)

Cultural Heritage Site		**Serpentine Gallery Pavilion 2012**
Location		Kensington Gardens, London
Remains		Remains of former foundations of previous pavilions
Use	**Original/ Past**	Multi-functional
	Current	Multi-functional
Period of First Construction		2012
Earliest Year of Excavation		2011
Setting		The peaceful historical Hyde Park
Admission Fee as in 2012		Admission free
Pedestrian Flow		High
Interpretation Tools		Interpretive panel, publication, postcard
Interpreter/ Guided Tour		Nil

The Site

Originally a classical tea pavilion constructed in 1934, the Serpentine Gallery was established in 1970 as an art gallery in Kensington Gardens, Central London to showcase modern and contemporary art. Its programme consisted of exhibitions, architecture, education, and public involvement has attracted approximately 750,000 visitors a year. Every year, since 2000, the gallery commissions internationally acclaimed architects to design a pavilion on its lawn. The aim is to provide an outdoor covered venue for cultural activities in summer that can simultaneously demonstrate the possibility of contemporary architectural practice.

Conservation

The Serpentine Pavilion 2012 designed by Herzog & de Meuron and Aiweiwei is characterized by the flat and not perfectly circular water pond roof floating above the cork-paved amphitheatre seating that submerges into the ground. “Like a team of archaeologists”, the designers dug down into the earth to reach the groundwater and recorded the diversity of constructed realities such as remains of former foundations or backfills, telephone cables etc. that had solidified the existence of the former Pavilions.

The resulting artificial landscape is a form of ground marking constructed to reveal the different layers of significance including the topography, the retrieved remains, the intervention of the past foundations in the natural environment etc. The structure composed of twelve discreet load bearing elements that varied in form. This is derived from the traces of each of the previous eleven pavilions plus a new column added by the designers. The practical need for circulation is also incorporated.

Interpretation

The interpretation facilities include:

1. An interpretive panel explaining the concept of the design
2. Publications recording and explaining the entire design and construction process of the Pavilion

What Can We Learn From It?

- Provision of a buffer area such as a lawn or open space between the old and new architecture can allow appreciation of both
- Layers of significance of a site can be presented poetically and architecturally
- Innovative architecture can create a harmony with heritage building through thoughtful design such as the use of levels and forms
- A welcoming multi-functional space with versatile setting can accommodate the needs of different users
- An amphitheatre seating encourages visual communication and is ideal for holding of lecture
- Removable and portable furniture provides visitors the freedom to create their preferred seating and enhances the flexibility of use of the building. The use of cork in brown colour can remind people that excavation is involved. The material is soft and may not be durable enough for long term use
- Calm water reflection can create a sense of tranquillity. It can bring nature and architecture together. The use of water has to be handled cautiously as it assists the breeding of mosquitoes

The simple form of the Pavilion which seems to be floating in the air respects the historical Gallery. It also maintains the peaceful setting of the Kensington Gardens. (Source: Cristy Ho 2012)

The flat canopy does not cover the entire site providing open and covered seating. The black interpretive panel is placed next to the major access. (Source: Yu Ka Sing 2012)

The amphitheatre functions as steps and seating. It encourages visual communication. A reception selling publication is also incorporated. (Source: Yu Ka Sing 2012)

The canopy when filled with water reflects the surrounding environment, when empty can function as a performance stage. (Source: Yu Ka Sing 2012)

The canopy is supported by structures derived from the foundations of former pavilions. Its earthy tone relates to the excavation involved during the design process of the Pavilion. (Source: Yu Ka Sing 2012)

The welcoming design can accommodate all kinds of uses. (Source: Yu Ka Sing 2012)

6.4
Archaeological Excavation Site, St. Michael Square, (German: *Archaeologisches Grabungsfeld, Michaeler Platz*) Vienna

The Archaeological Excavation Site fronts the entrance to Hofburg. (Source: Yu Ka Sing 2012)

Cultural Heritage Site		**Archaeological Excavation Site** (German: *Archaeologisches Grabungsfeld*)
Location		St. Michael Square, Vienna
Archaeological Remains		Structural remains of Roman settlement, enclosure wall to *Paradeisgartel* belonging to the Hofburg, foundation walls of the Hofburg Theatre, rented houses etc.
Use	**Original/ Past**	Residential, palace, theatre
	Current	Exhibition
Period of First Construction		Roman Empire (27 BC – 476)
Earliest Year of Excavation		1989
Setting		Public square at the intersection of historical monuments and streets
Admission Fee as in 2012		Admission free
Pedestrian Flow		High
Level of the Remains		Varies from 0.4m (D) to 6m (D) measured from current street level
Viewing Distance*		Less than 0.2m (W)
Conservation Approach		Preservation *in-situ*
Enclosure		Features are completely exposed to air
Mechanical Systems		Artificial lighting
Protective Barrier		Solid balustrade and metal railing of 1m(H)
Interpretation Tools		Maps, plans, text, an off-site museum
Interpreter/ Guided Tour		Nil

The Site

Michaeler Platz is one of the most famous squares in Vienna. It is an oval-shaped open space fronting Hofburg, Vienn's imperial palace. It is also the place where vehicular and pedestrian streets meet. The square thus provides a vital link between the imperial palace and the pedestrian zone. Surrounding the square is architecture completed in different periods including *Michaelerkirche* (1221), *Michaelertrakt* (1893), and *Looshaus* (1911). *Michaelerkirche* was the former parish church of the Austrian monarchy whose Baroque interior is decorated with Renaissance frescoes built in 1714. *Michaelertrakt* is the most exuberant wings of the palace. *Looshaus* whose façade void of decorations received attacks when it was being built but considered as a groundbreaking modern architecture today etc.

Ruins uncovered at the square between 1989 and 1991 can be seen before the grand entrance to the palace. The archaeological features include the structural remains of *canabae legionis*, the settlement outside the Roman legionary fortress *Vindobona* of the Roman Empire, the Renaissance-period walls enclosing the *Paradeisgartel* belonging to the *Hofburg*, the foundation walls of the *Hofburg* Theatre built in 1776, as well as rented houses of the early eighteenth century that were demolished in 1889. The findings suggest that the palace that we see today is founded on Roman foundations.

Conservation

Located in the centre of *Michaelerplatz*, the ruins subtlety appeared as an elongated landscaped feature articulating tourists' journey to *Hofburg*. The exhibited ruins are entirely exposed and only occupy a portion of the circular square. It does not obstruct pedestrian traffic and leaves considerable space for stepped seating at its two longitudinal sides and some portable kiosks.

Solid and thick grey marble walls of colour matching that of *Hofburg* and the pavement are built to fence off two major sides of the ruins against which visitors can lean. It is coupled with metal bars at the remaining sides providing a higher level of transparency for the viewing of the ruins.

The final form of presentation completed in 1992 was designed by the Austrian Architect Hans Hollein (1934-) who was awarded Pritzker Prize in 1985. Haas-Haus (1985-1990) in Vienna was one of his works. The display of the remains is dramatized by varying the depths of the backfill materials. The shallower portion with higher level of backfill provides a sense of safety and the place on which the robust-looking interpretive panel can rest. The deeper portion creates excitement and acknowledges the scale of the ruins by exposing the remains

till six meters down from the current street level. This deeper portion is treated as a well for making wishes and filled with coins, the Viennese version of Trevi Fountain.

Interpretation

The interpretation facilities include:

1. Name tags right above the features
2. One exhibition panel that rests on back-fill between the remains with a brief introductory text in German and English arranged in different directions, a plan superimposed with the footprints of the structures from different periods, and a map showing the location of and the way to the Roman Museum which is 650m away from the Site. The Museum is accessible on foot and provides detailed information of the ruins
3. A separate information panel outlining the 2000 years of architectural history was later added by the City of Vienna to acknowledge the archaeologist, the architect and the patron of the conservation and interpretation works.

What Can We Learn From It?

- Co-existence of heritage sites of different periods and nature can create synergy
- Careful planning of space is necessary to handle newly excavated archaeological features in the middle of built environment. The display of archaeological features on-site can be selective. Information that cannot be completely revealed on-site can be provided in more details at a separate venue
- Varying the levels of backfill makes the display more interesting without affecting the condition of the features
- The protective barriers of different designs and solidity ratios can fence off the archaeological features and provide different angles for appreciation
- The design of the barriers has to take into account of the surrounding environment, harmonious yet distinguishable
- A highly distinguishable interpretive panel can attract visitor's attention. It should not overwhelm the archaeological finds
- Locating the interpretive panel between remains can allow visitors to understand the site with ease by straight forward cross referencing. It must not impair the conditions of the features. Associated facilities such as thicker balustrade, seating, kiosk etc. can lengthen visitors' stay at the site
- Providing information of the team responsible for the conservation can add another layer of significance to the site

The ruins located at the centre of major pedestrian roads and significant historical buildings are selectively displayed as an elongated landscaped feature, sparing room for other activities. (Source: Cristy Ho 2012)

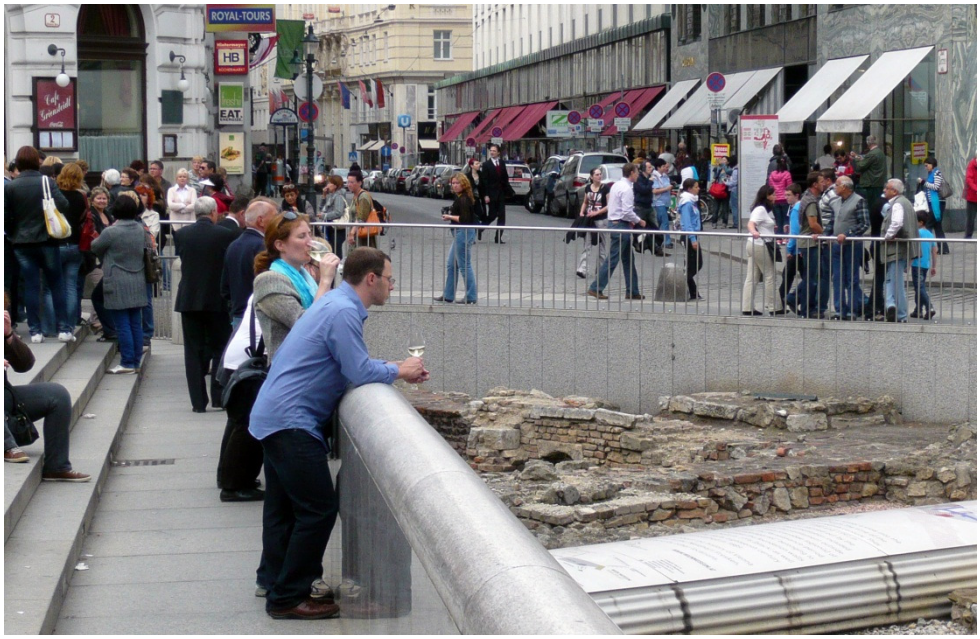
The ruins are fenced by two types of barriers; heavy marble walls at the two longitudinal sides and metal bars at the short ends. Responding to the existing street network, the more transparent barriers seem to allow *Herrengasse* (the street in the middle of the photo) to run through. A few steps are found at the two long sides providing seating that also help to demarcate the archaeological site. (Source: Yu Ka Sing 2012)

Names tags are placed above the archaeological finds. (Source: Yu Ka Sing 2012)

Text is written in both directions serving viewers from both sides of the display. A portable kiosk selling food and beverage is found at the back of the photo. (Source: Yu Ka Sing 2012)

The difference of the back-fill levels arouses visitors' curiosity to take a peek of the "well". (Source: Yu Ka Sing 2012)

The Viennese Trevi Fountain is filled with coins implying public's interest of the site. It however leads to a site management issue. (Source: Yu Ka Sing 2012)



The heavy marble wall serves as a good arm rest. (Source: Yu Ka Sing 2012)

The heavy marble wall can be leaned against, lengthening the time people spent at the site. (Source: Yu Ka Sing 2012)

6.5

Villa of the Quintilii

(Italian: *Villa dei Quintili*)
Via Appia Nuova, Rome

The Villa of the Quintilii is a complicated archaeological site requiring extensive interpretation facilities.
(Source: Yu Ka Sing 2012)

Cultural Heritage Site		**Villa of the Quintilii** (Italian: *La Villa dei Quintili*)
Location		Via Appia Nuova, Rome
Archaeological Remains		Bath complex, hot room, cold room, residential section, flooring paving etc.
Use	**Original/ Past**	Villa
	Current	Museum
Year of First Construction		2nd Century
Setting		Situated on a vast lush green fields
Admission Fee as in 2012		Adult/ European Union 18-24 years old/ European Union under 18 or over 65 years old €6/ 3/ Free
Pedestrian Flow		Low
Level of the Remains		Same as visitors' level
Viewing Distance		Up-close
Conservation Approach		Preservation *in-situ*
Enclosure		Features are completely exposed to air
Electrical/ Mechanical Systems		Artificial lighting
Protective Barrier		Timber and metal balustrade of 1m (H), metal chain and rope
Interpretation Tools		Maps, plans, text, museum, observation platform
Interpreter/ Guided Tours		Nil

The Site

Located on a knoll outside the traditional boundaries of Rome and set on lush green fields between Via Appia Antica and Via Appia Nuova, the Villa of the Quintilii was the largest villa of the Roman suburbia. In 1985 the Italian government bought 24 hectares of the ancient complex that develops also on its adjacent properties. The Villa, now an archaeological site is very extensive in size. It was indicated either as *Statuario* ("A place of Statues") as a result of the sculpture finds from the area, or as *Roma Vecchia* ("Old Rome") in view of the impressive monumental remains.

The 2nd century villa was built by the brothers Sextus Quintitius Maximus and Sextus Quintilius Condianus that were consuls in 151 and were subsequently appointed to important official posts in Greece and in Asia during the reign of Antoninus Pius and Marcus Aurelius. The Villa was taken over by Emperor Commodus after putting the brothers to death in 182. The Emperor expanded the original villa by adding new extensions.

With the nucleus built in the time of Hadrian, remains of the villa include the well-preserved *thermae* (baths complex with a pool) served by its own aqueduct, *caldarium* (hot room) and *frigidarium* (cold room). There is also an indoor museum with marble friezes and sculptures that were found in the vicinity.

A team of archaeologist works permanently in this area.

Recent Development

After rigorous campaign of excavation and restoration, new sectors of the ruins have been opened for public viewing since the end of 2010. The new area covers a residential section of approximately 4,000 square meters with columns whose bases have been found on the spot. Some rooms and corridors have retained almost intact floorings with mosaics and coloured marbles dateable to the times when the Villa was owned by the Quintitius brothers. Works aimed at providing public access have been carried out that encompasses access to the different environments by means of ancient stairways and modern platforms resting carefully on the vulnerable flooring pending repair or consolidation.

The extent of the Villa has been enlarged by the acquisition of the bordering estate of S. Maria Nova. Despite that works aimed at providing public access to the greater part of this new complex are on-going, a new connection in the form of a small footbridge between the two areas has been created to reach to the grand circular cistern where a panoramic 360 degree view onto the Ancient Appian Way, surrounding monuments and landscape is made possible.

Conservation

Different conservation approaches have been adopted in the Villa. Portions of the ruins are preserved as it is where public access is prohibited and fenced off by barriers. The barriers are of different design, such as timber fences that match the natural landscape, and metal balustrades that indicate the spaces originally indoor.

Repair to the marble and mosaic floor is carried out to the extent to facilitate understanding of the original design without jeopardizing its authenticity. Regular cleaning is carried out to remove vegetation grown on the exposed floor. Structural reinforcement has also been provided to the fabrics that have structural concerns.

Interpretation

The interpretation facilities include:

1. A tourist centre that is located at the entrance for the sale of entrance ticket and publications
2. An indoor museum with the archaeological finds of the area located next to the tourist centre. (Both the tourist centre and the museum are at a distance from the ruins)
3. Quick Response (QR) Code
4. Interpretive panels with description in Italian and English, an index plan, isometric drawings showing the construction of certain spaces such as the heating system etc.
5. Visiting path composed of ancient stairs and new elevated platforms to protect the vulnerable floor
6. Different types of protective barriers
7. Metal chain is occasionally used to provide best viewing opportunity
8. Viewing platform with a panel indicating the structures appeared in the panorama
9. Temporary installation of contemporary art that echoes the form and setting of the ruins
10. Continuous review and improvement of the display and interpretive content

What Can We Learn From It?

- Experience of visitors can be heightened by allowing direct feeling of, and movement within, the heritage spaces, provided that the space is rendered safe and the heritage floor planned for walking is stabilized, reinforced and protected
- Conditions of the archaeological features must not be jeopardized for tourism. Effective protective measures can achieve both aims
- Contemporary art such as sculpture, installation art, performance etc. representing the understanding of the site by artists provides an interactive form of interpretation. Changing the art regularly can bring visitors to come to the site more often
- The use of simple and subtle interpretive panels can be an appropriate means for a site overwhelmed by sculptural and dramatic forms
- A series of interpretive panels with content organized and structured systematically can help to describe and explain the space, use, materials, development etc. in details for a site with complicated context
- The use of panorama can help to indicate structures visible from the site and acknowledge the setting
- Lighting can help to highlight the features
- The increased popularity of smartphone can help to provide additional information via the internet
- Heritage resources can be fully utilized by exploring new possibilities of viewing
- Investigation for a more important truth should never stop

Note:

Emperor Commodus is the villain in the film *Gladiator*.

The ruins not assessable by public are fenced off by barriers matching its natural landscape. (Source: Cristy Ho 2012)

The bilingual interpretive panel provides site plan and location plan for easy understanding. (Source: Yu Ka Sing 2012)

The uncovered floor drain made of marble is preserved *in-situ* and exposed for viewing. (Source: Yu Ka Sing 2012)

The magnificent marble floor that is entirely exposed is repaired to prevent further deterioration. Access by public is prohibited. The ruins are well protected during structural reinforcement works. (Source: Yu Ka Sing 2012)

Elevated walkway is provided to allow access yet protecting the vulnerable floor. Attention should be paid to the details of the design of the walkway and the barriers. (Source: Yu Ka Sing 2012)

Public's safety must come first. Provision of protective barriers is necessary where there are level differences. Their design should be simple, elegant and not to overwhelm the site. (Source: Yu Ka Sing 2012)

The excavated heating system is excavated and preserved *in-situ.* (Source: Yu Ka Sing 2012)

Isometric drawing is a useful tool to illustrate building construction and systems. (Source: Yu Ka Sing 2012)

A simple footbridge of very simple design provides access to the viewing platform. (Source: Yu Ka Sing 2012)

Panorama is used to point out the Villa and the other heritage sites in the neighbourhood. It can also be a useful tool to identify buildings within an urban setting. (Source: Yu Ka Sing 2012)

Temporary public art was installed to demonstrate artist's interpretation of the heritage. (Photographer and copyright: Leosagnotti 2007. Website: http://www.flickriver.com/photos/tags/villadeiquintili/interesting/)

Lighting can highlight the ruins of dramatic forms. (Photographer and copyright: Leosagnotti 2007. Website: http://www.flickriver.com/photos/tags/villadeiquintili/interesting/)

6.6

Ruins of St. Paul's

(Portuguese: *Ruínas de São Paulo*, Chinese: 大三巴牌坊),
Rua de São Paulo, Macau

Walking up the steps of the ruins of St. Paul's is like paying pilgrimage to the Cathedral. The steps also function as seating. (Source: Inaciso Chan 2012)

Cultural Heritage Site		**Ruins of St. Paul's** (Portuguese: *Ruínas de São Paulo*, Chinese: *大三巴牌坊*)
Location		Rua de São Paulo, Macau
Archaeological Remains		Main (south) façade, foundations, division of aisle, tombs, original paving, a crypt, religious artefacts etc.
Use	**Original/ Past**	Church
	Current	Tourist spot, venue for cultural activities, museum
Year of First Construction		1580
Earliest Year of Excavation		1990
Setting		Situated on a small hill accessed by a long flight of steps
Admission Fee as in 2012		Admission free
Pedestrian Flow		Very high
Level of the Remains		The enclosed remains are located at various levels. Some tally with major floor level, while some are at a depth of approximately 1m measured from major floor level.
Viewing Distance		Less than 0.5m (W)
Conservation Approach		Preservation *in-situ*
Enclosure		Features are enclosed under glass with ventilation gaps between the ground and the glass, or kept inside air-conditioned room with glass for viewing
Electrical and Mechanical Systems		Artificial lighting installed at the new viewing platform and at the covered museum
Protective Barrier		Metal railing of approximately1m (H) with minimum numbers of vertical supports
Interpretation Tools		Photos, plans, maps, text, religious artworks within a museum
Interpreter/ Guided Tour		Available on Saturdays, Sundays and Public Holidays in Cantonese and Mandarin, free of charge.

The Site

The Ruins of St. Paul's refers to the remains of the greatest of Macau's churches, the Cathedral of St. Paul. First constructed in 1580, the Cathedral caught fires in 1595 and 1601 respectively. Reconstruction began in 1602 and was completed in 1637. The cathedral caught fire for the third time in 1835 and was almost wholly damaged, leaving the intricately carved southern stone façade sitting on a small hill, the mosaic floor pavement and the stone steps approaching the building.

From 1990 to 1995 the ruins were excavated under the *Instituto Cultural de Macau*. The crypt and the foundations were uncovered and the architectural plan of the building was revealed. Many religious artefacts were also found. The Ruins of St. Paul's were officially enlisted as part of the UNESCO World Heritage Site Historic Centre of Macau in 2005.

The site is the symbol of Macau. The façade has become the backdrop for photo-taking and many cultural activities uphill while the 66 stone steps are tuned into an amphitheatre providing seating for performances downhill.

Conservation

The ruins were preserved *in-situ* by the Macanese government. The residual façade in danger of collapse was structurally reinforced in a modern way by buttressing of concrete and grey-painted steel. A grey steel stairway and platform was also constructed to the rear of the façade to allow tourists to climb up to the window openings of the façade and grasp a panoramic view of the site.

The open space to the rear of the façade was converted into the outdoor Saint Paul's Museum where visitors can view the tombs and division of the aisles under glass enclosures equipped with ventilation gaps. Visitors can also step on the remains of original stone paving that is exposed. New floor paving of different materials from the remains yet echoing the original pattern and colours are laid. At the level below the open space, visitors can see the foundation of the Chapel of St. Francis Xavier (1692) and visit the Crypt where the relics of the martyrs of Japan and Vietnam are kept inside the air-conditioned room with glass for viewing. Nearby is the Museum of Sacred Art exhibiting religious paintings, sculptures and liturgical objects collected from churches and monasteries in Macau. The new works at the site are minimal in scale and humble in gesture. The use of colours are sensitive and in harmony with the ruins. All metal elements of the new works including the strengthening structures of the façade, canopy above the access to the underground exhibition space and metal railing are painted in grey.

Interpretation

The interpretation facilities include:

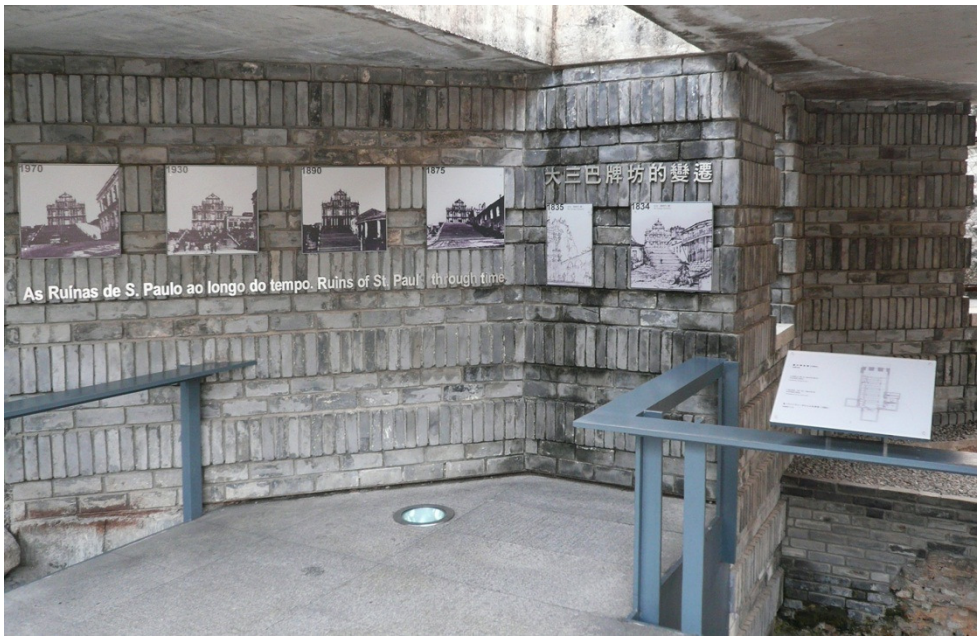
1. The Saint Paul's Museum with outdoor and covered sections
2. Glass covers with gaps for natural ventilation covering the tombs and division of the aisles
3. Air-conditioned room with glass displaying relics of the Crypt
4. Text and description in four languages, namely Chinese, Portuguese, English, and Japanese
5. Historical photos showing the development of the Cathedral
6. Plans showing the original footprint of the Cathedral and the location of the archaeological features
7. Location maps showing the historical sites of the Historical Centre of Macao
8. Metal railing creating a viewing distance and providing safety measures

What Can We Learn From It?

- New use can relate to the lost function
- The use of a theme can help structure the display
- Coexistence of vibrant and tranquil experiences can be possible
- An archaeological site programmed cautiously by site manager and sub-cautiously by visitors can create a lively ambience
- The use of existing levels of the finds can help to create a journey of different experiences
- New interpretation structure should be humble in scale and gesture. The materials being used has to be carefully selected in order not to overwhelm the heritage place and interpretation materials
- Metal railing of different solidity ratio can be provided to areas with different level of danger
- Ventilation has to be provided to the features covered by glass to prevent condensation and moss. The space and recurrent energy cost are concerns
- Providing information of other historical sites can strengthen the bond among the sites

The new reinforcement structure and viewing platform are humble and simple in design, respecting the heritage site. (Source: Inaciso Chan 2012)

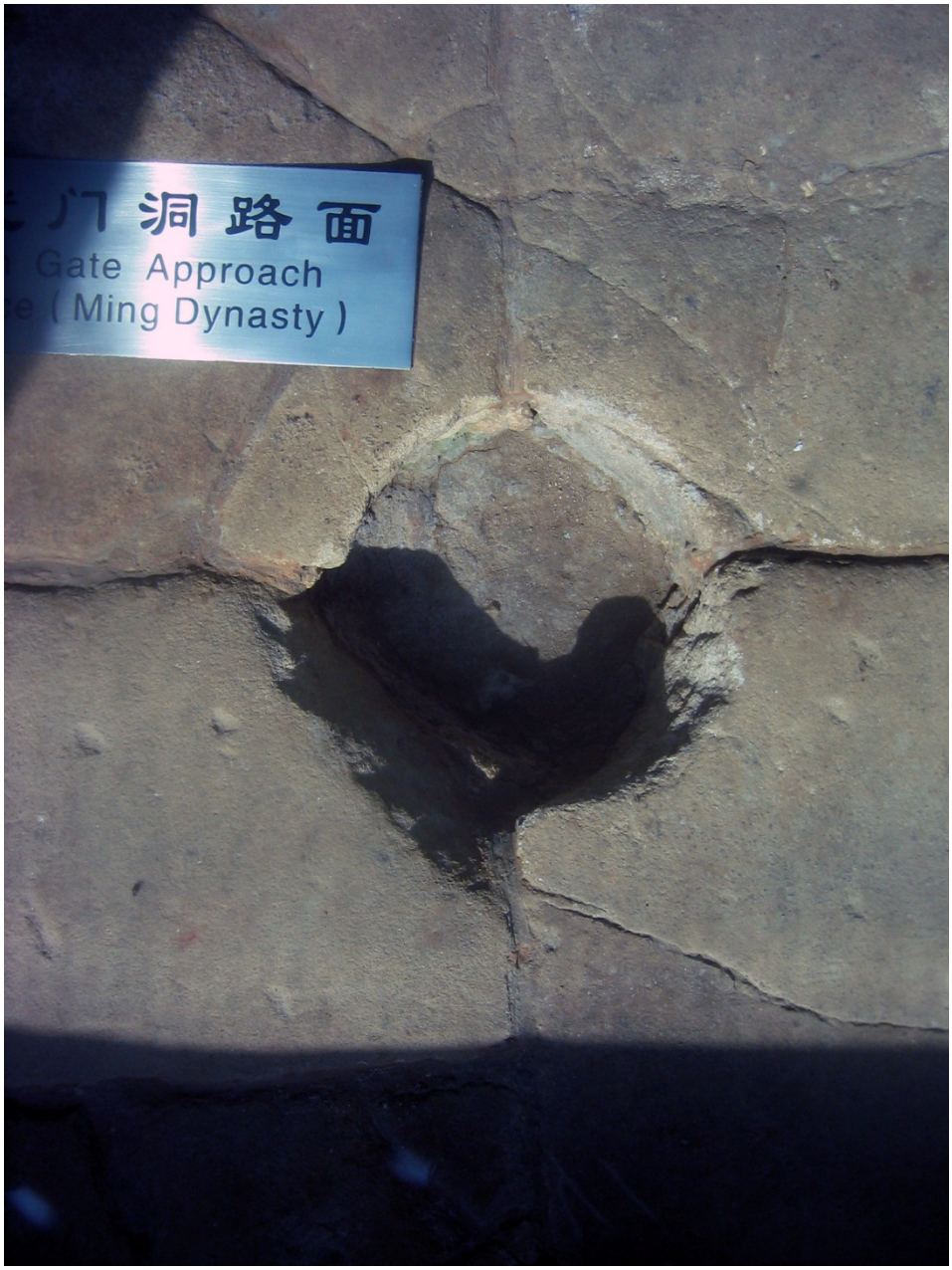
New steel shelter covering the access to the museum at the level below is simple in form and painted with the same colour as other metal elements. (Source: Inaciso Chan 2012)



The elegant railing thoughtfully incorporates the fixing of plan. The brick wall on which historical photos are hung may be a bit too busy. The use of concrete has to be handled carefully to prevent efflorescence. (Source: Inaciso Chan 2012)

Interpretive panel with description in four languages reflects Macao's cultural background. (Source: Inaciso Chan 2012)

6.7
Qian Nian Gu Dao and *Qian Nian Gu Lou*
(Chinese: *千年古道 千年古樓*)
Beijing Road, *Guangzhou*



The gate approach during *Ming* Dynasty covered behind glass on Beijing Road, Guangzhou.
(Source: Yu Ka Sing 2003)

Cultural Heritage Site		***Qian Nian Gu Dao* and *Qian Nian Gu Lou*** (Chinese: *千年古道及千年古樓*)
Location		*Beijing* Road Pedestrian Street (北京路商業步行街), *Yuexiu* District(越秀區), *Guangzhou* (廣州市)
Archaeological Remains		Ruins of stratified layers of pavement dated from *Tang* (唐) Dynasty to Republic of China and foundation of *Gong Bei Lou* (拱北樓)
Use	**Original/ Past**	Road, city gate
	Current	Exhibition
Year of First Construction		*Tang* Dynasty (618-907)
Earliest Year of Excavation		2002
Setting		A shopping street in urban area
Admission Fee as in 2012		Admission free
Pedestrian Flow		Extremely high
Level of the Remains		Approx. 1m (D) from current street level
Viewing Distance*		Less than 0.2m (W)
Conservation Approach		Preservation *in-situ*
Enclosure		Features are completely covered behind glass
Mechanical Systems		Mechanical ventilation, artificial lighting
Protective Barrier		Planter of less than 0.3m (H)
Interpretation Tools		Models, maps, text, statues, landscape features
Interpreter/ Guided Tour		Nil

The Site

Beijing Road 北京路 at *Guangzhou* is the centre of *Guangzhou* City. It was where the City was first built in *Qin* dynasty 秦 and since then it has always been the most prosperous commercial area in *Guangzhou*. The pedestrianized Beijing Road Pedestrian Street 北京路商業步行街 has a conglomerate of shops and it is the most popular shopping street in *Guangzhou*.

Following the acknowledgement of *Beijing* Road as the National Demonstration Point of Civilized Commercial Street (全國文明商業街示範點) and National Demonstration Point of Spiritual Civilization (全國精神文明創建活動示範點) in 1997 and 1999 respectively, large scale road improvement works were carried out. In 2002, a large amount of sandstone strips and bricks of ancient city wall were discovered during the road works that led to the 2-month rescue excavations. At the northern portion of Beijing Road, eleven strata of road pavements from *Tang* (唐) Dynasty to Republic of China were found. At the southern portion, the excavated features were the five layers of foundation of *Gong Bei Lou* 拱北樓 from *Sung* (宋) to *Ming* (明) and *Qing* (清) Dynasty.

Recent Development

More than ten other cultural heritage sites have been established or identified at *Beijing* Road and the neighbouring *Jiaoyu* Road(教育路) and *Xihu* Road (西湖路) such as ruins of *Qin Panyu* City, *Qin* and *Han* shipbuilding site etc. In recent years the three roads, together with their adjacent tourist spots and commercial networks have been strategically zoned as the *Guangzhou* Commercial Tourist Area(羊城商業旅遊區)that utilize the unique historical background and distinct economic and commercial advantages to boost economic activities.

Conservation

To protect and display the excavated features for public viewing without jeopardizing the existing use of the pedestrian shopping street with high traffic flow, only some of the archaeological features are exhibited. For *Qian Nian Gu Dao*, the pavements of *Ming* (明) and *Sung* (宋) Dynasties are displayed. For *Qian Nian Gu Lou,* the selected features include the doorway stone pavement, threshold stone, column pedestal stone from *Sung* (宋) Dynasty etc. All of these features are enclosed behind tempered glass that is at a similar level as existing streets. Anti-condensation and water-proofing measures are provided to the protected space to prevent the growth of vegetation. Drum stones 抱鼓石 that were excavated at the southern portion are displayed at the location where they were found.

Interpretation

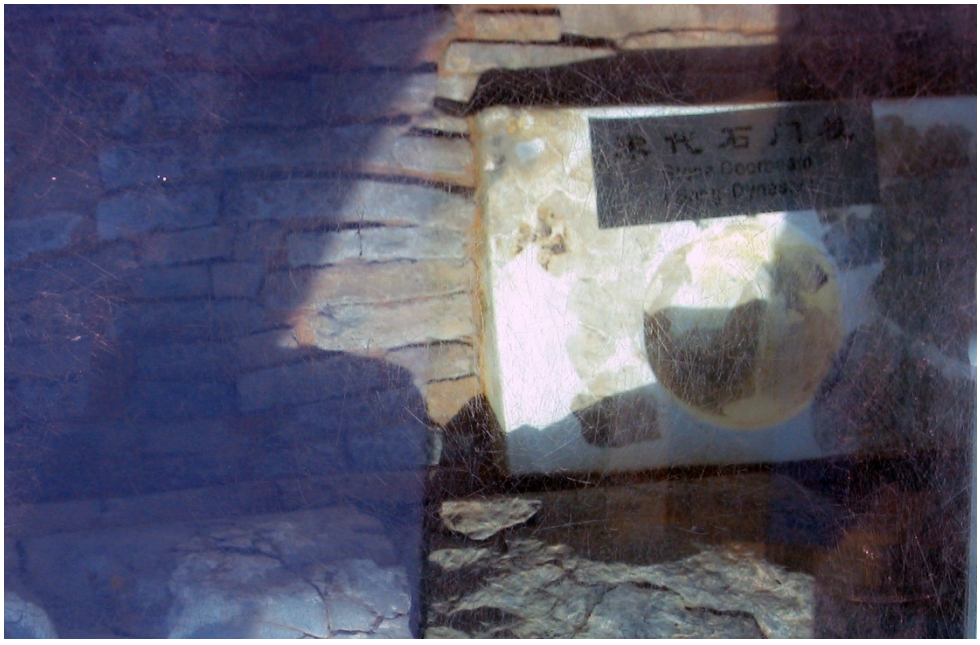
The interpretation facilities include:

1. Name tags of the features
2. Stones engraved with explanation of the sites
3. Stones engraved with historical maps of *Guangzhou*
4. Model showing the development of *Guangzhou* city with demarcation of historical sites
5. Bronze statue with the theme of *Zhao Tuo Gui Han* (趙佗歸漢) at the northern portion
6. Drum stones found on site

What Can We Learn From It?

- The exhibition of archaeological features on-site can be selective and does not necessarily have to encompass the entire resources, provided that sufficient ground marking is provided to demarcate the location of the reburied features
- A well-planned decision can balance the interests among different needs
- The design of the enclosure to the features has to consider the dominating pedestrian flow
- Glass enclosure with mechanical ventilation can help to maintain the condition of the archaeological finds
- Glass when scratched can affect the viewing experience. It also creates glare under the sun

Beijing Road, *Guangzhou* is a busy pedestrian shopping street always full of people. (Source: Yu Ka Sing 2003)



Originally the glass cover allowed people to walk on. The tempered glass was scratched and became less visually appealing. Now planters are placed around the glass enclosure to prevent people from stepping over the glass. (Source: Yu Ka Sing 2003)

The heritage stone pavement enclosed behind glass is mechanically ventilated. (Source: Yu Ka Sing 2003)

The glass was sponsored by a beverage company thus the presence of their logo. (Source: Yu Ka Sing 2003)

6.8
Sydney Conservatorium of Music
Macquarie Street, Sydney

This photo shows the West and South elevation of the Conservatorium of Music. The discovery of archaeological features during the construction of the extension turned most of the new facilities below ground. The peaceful setting is preserved. (Source: Donald Ellsmore, year of photo unknown)

Cultural Heritage Site		**Sydney Conservatorium of Music**
Location		Macquarie Street, Sydney
Archaeological Remains		Remains of the road and drainage system of southern forecourt, internal configuration of stables, a well, a cistern, artefacts etc.
Use	**Original/ Past**	Stables
	Current	Music school
Year of First Construction		1821
Earliest Year of Excavation		1997
Setting		Situated on a small hill next to the Royal Botanic Gardens
Admission Fee as in 2012		Admission free
Pedestrian Flow		Low
Level of the Remains		Same as or approximately 1m below the adjacent viewing level
Viewing Distance		Less than 0.5m (W)
Conservation Approach		Preservation in-*situ*
Enclosure		Features are kept indoor either enclosed behind glass, stored within glass cabinet or displayed without cover
Electrical/ Mechanical Systems		Mechanical ventilation, artificial lighting
Protective Barrier		Glass balustrade of approximately 1.2m (H)
Interpretation Tools		Photos, text, floor finishes
Interpreter/ Expert Guide		Monday to Friday at a cost of AUS$10 per person

The Site

Sydney Conservatorium of Music is housed within the Government House Stables built in 1821. It was designed in a castellated Gothic style around a courtyard to house horses. Since 1911, the Stables have been adaptive reused as the Sydney Conservatorium of Music (at that time known as the New South Wales State Conservatorium of Music) to provide "music tuition of a standard at least equal to that of the leading European Conservatoriums". A large recital hall was inserted into the courtyard space and former stables and tack rooms were converted into classrooms, officers and rehearsal spaces.

The Conservatorium amalgamated with The University of Sydney in 1990. In 1997, it had a major upgrade of the present site with the goal of creating a comprehensive music education facility. When the alteration works commenced, historical fabrics dating from circa 1800 into the twentieth century were revealed in an archaeological investigation. The findings include the southern forecourt with its road and drainage system, surviving remains of the Stables internal configuration, a well, a cistern, artefacts from a large rubbish dump etc. The design of the new development was thus amended to protect the old stables. The excavation on the southern side allowed for three levels of new accommodation below ground. It is topped with a skylight to introduce natural lighting to the underground space. A large part of the new development was moved below ground to preserve the peaceful setting and tranquil ambience. The works were completed in 2003.

Conservation

The conservation and interpretation of the archaeological features has provided constraints as well as direction to the planning of the new development. The features are preserved *in-situ* and incorporated into the new structure such as the entrance foyer. Some of them are protected behind glass and ventilated mechanically to prevent condensation. Access to the remains is provided by means of safe viewing structures. The convict-built well is kept intact and is displayed conventionally without cover. A win-win situation is achieved as the features and the functional spaces are mutually enhancing the other.

The interior space of the Conservatorium of Music is air-conditioned. Tanner Architects Pty Ltd, the conservation architects for the project worked the design around the archaeological finds so that the plants providing extra mechanical ventilation to the enclosed features would not occupy an excessive area. Casey & Lowe Pty Ltd were the archaeologists. Margaret Betteridge, Musecape Pty Ltd guided the design of the interpretation display graphics. International Conservation Services guided the conservation of the *in-situ* artefacts.

Interpretation

The interpretation facilities include:

1. Display of archaeological finds behind glass in the interior juxtaposed with ground marking and finishes to demarcate original alignment in the exterior
2. Display of archaeological finds behind glass with mechanical ventilation
3. Display of relics (small sized ones) enclosed by conventional glass cabinets
4. Display of relics (big sized ones) without cover
5. Interpretive panels with text and sketches about the place and its history
6. Well planned access equipped with protective barriers for the appreciation of the features

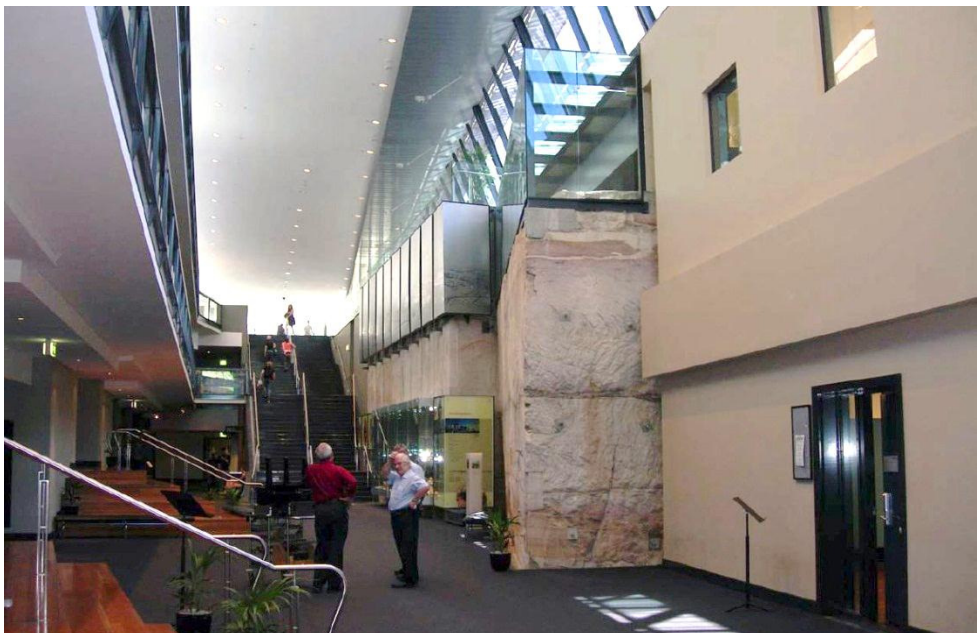
What Can We Learn From It?

- Maintaining the ambience of the setting of the heritage place is equally important as preserving the features
- Preservation of archaeological features and new development can be spatially compatible. They can enhance each other through careful planning
- A newer use or programme totally different from original use can enrich the cultural significance of a heritage site
- Excavated features when preserved *in-situ* can be internalized and displayed in a diversified means depending on their nature, location, size etc.
- Features when kept behind glass have to be ventilated to prevent condensation and moss. It will be more energy efficient and occupy less area if it has a hosting venue that has to be air-conditioned
- Spaces for exhibition of relics can serve as multi-function spaces, given that the relics are well protected

The archaeological remains are preserved *in-situ* and incorporated into the new foyer behind glass. They are also interpreted in the new ground making finishes. (Source: Donald Ellsmore, year of photo unknown)

Archaeological remains are kept intact and enclosed behind glass that is mechanically ventilated, accessed by means of safe viewing structures. (Source: Donald Ellsmore, year of photo unknown)

This large scale internal sandstone wall is exposed after the excavation for the underground space, topped by the glass enclosure protecting the archaeological finds preserved *in-situ*. Behind the skylight is the Gothic Government House Stables. (Source: Tanner Architects Pty Ltd, year of photo unknown)



The skylight on ground level brings light to the underground space. Artefacts from the archaeological dig are displayed conventionally within glass cabinets accompanied by yellow interpretive panels. (Source: Donald Ellsmore, year of photo unknown)

Metallic interpretive panels with the early 19th century sketch of the site. (Source: Donald Ellsmore, year of photo unknown)

The heritage brick wall is partially restored and repainted. The patina of the wall tells its age. (Source: Tanner Architects Pty Ltd, year of photo unknown)

7

RECOMMENDATIONS FOR INTERPRETATION

To conclude, this section will provide recommendations for the interpretation of LTSB based on the objectives, principles, guidelines, and overseas references described in previous sections.

A. Mission

1. Help audiences understand LTSB – its "Spirit of Place" and its relationship to the history of Hong Kong
2. Share information and provoke thought
3. Encourage public involvement in the design process
4. Create a living space for the enjoyment of everyone

The Memorial to Diana, Princess of Wales in Kensington Gardens, London is a contemporary fountain. It appears in a ring shape with wide stone edges for seating. The supervised area encourages visitors to feel free to sit on the edge and refresh their feet with water drawn from London's underground water. (Source: Cristy Ho 2012)

High Line, originally an elevated freight rail line began operation in 1934 on Manhattan's West Side has been partially transformed into a linear public park of one mile long. It attracts more than 4 million visitors in a year and is New York's most visited public parks per acre. (Source: Yu Ka Foon, 2013)

B. Significance of LTSB

LTSB is a unique place with multiple layers of significance. It reflects multiple uses over time that are linked to various different events associated with the development of Hong Kong.

1. Respect these different layers of significance
2. Keep all layers and reveal them appropriately

Steel reinforcement of the demolished passenger terminal building, Kai Tak Airport can be found at LTSB. (Source: Yu Ka Sing 2012)

C. Setting

The surrounding areas of LTSB are to be completely redeveloped. This is an opportunity to create an appropriate setting for the preservation and interpretation of the place.

1. Analyse thoroughly the site and situation of LTSB in order to treat appropriately the interface between the old and new
2. Create a setting that respects and is supportive to LTSB
3. Create an environment that is beneficial to the heritage fabric and new works
4. Create a contemporary setting that allows actual and visual dialogue between past and present
5. Avoid overdesigning the place; provide adequate viewing distances (1) for appreciating the features of LTSB and (2) for locating interpretative panels
6. Consider signifying arrival at LTSB by an open space such as an entrance piazza at the southern part of LTSB near the Station Square
7. Create synergy with other heritage resources by providing heritage linkage of consistent and coherent design to connect LTSB and Kowloon Walled City Park such as by subway across Prince Edward Road East, and walkway through Shek Ku Lung Road Playground

The old Serpentine Gallery and its new 2012 pavilion co-exist in the tranquil setting of Kensington Gardens, London. (Source: Yu Ka Sing 2012)

D. Conservation Approach

1. ***Preserve*** all the archaeological features of LTSB *in-situ*
2. Maintain the ***authenticity*** of LTSB
3. Protect physically LTSB from loss and damage
4. Clean, repair, reinforce, consolidate and/or stabilize the exposed archaeological features to prevent further deterioration
5. Provide appropriate (and precise) interpretation of the conservation approach(es)
6. Avoid impairing the conditions of the features when proposing new works
7. Obtain necessary information prior to the execution of conservation works related to excavation, reburial, reinforcement, etc.
8. Avoid replication of features, such as the Pavilion of Greeting Officials (and especially without sufficient information)
9. Allow for on-going research

Stone pillars at the Roman Forum, Rome were repaired with easily distinguishable bricks. (Source: Yu Ka Sing 2012)

The eliptical Arena (fighting stage) of the Colosseum, Rome is virtually reconstructed to indicate its original level and provide an up-close view of the maze of passages and cells below. (Source: Yu Ka Sing 2012)

At High Line, original railtracks are repaired and partially featured in the park's design. The intrusion by self-seeded plants that grew on the out-of-use tracks during the 25 years after trains stopped running has inspired the current planting design, now taken care of by gardeners. (Source: Yu Ka Foon 2013)

In Royal Conservatory TELUS Centre for Performance and Learning, Toronto, location of structural members of the new skylight between the heritage building and the extension was carefully selected to minimize impact to the façade, a character defining element. (Source: Cheung Man Ching, Anthony 2012)

E. Display of Archaeological Features

1. Choose the most appropriate display method for the archaeological features of LTSB based on their individual level of significance and condition, site constraints, future use of the place, future connections, usability, volume of pedestrian flow, etc.
2. Expose, shelter, enclose and/ or rebury the features partially or completely or combine these options as desired or as necessary
3. Avoid enclosing features with glass covers unless sufficient mechanical ventilation is provided. Consider the required space, maintenance and recurrent costs. Provide adequate protective and reinforcement measures to features that are to be exposed
4. Employ ground marking to demarcate the location of features that are not physically visible and/or difficult to expose, such as the Pavilion of Greeting Officials, Bridge, Kowloon City Pier, embankment, original coast line etc. (Ground markers can take different forms, such as line marking a boundary, placement of boundary stones at key boundary points and/or colour coding the footprints of overlapping structures. The purpose is to indicate original locations)
5. If deemed appropriate/necessary for education and tourism, replicate stone pillars and slabs in full scale with careful attention to details. If this option is followed, then the replica must be (1) clearly distinguishable from all exposed/authentic archaeological features and (2) must be interpreted as such

The sinking of metro ventilation shafts unexcavated the Archaeological Site of Roman Bath, Athens dated to the 3rd century. The archaeological finds are preserved *in-situ* and displayed under shelter (Source: Cristy Ho 2013)

The archaeological finds of the Roman Bath, Athens are exposed but sheltered. (Source: Cristy Ho 2013)

Marked by paving materials of different colours, textures and types, one can appreciate the super-imposed footprints of the above-ground Maria Magdalena Chapel and the underground crypt Vergilius Chapel at the square of St. Stephen's Cathedral, Vienna. The two chapels were connected by a vertical shaft. The former burnt down in 1781 and the latter was rediscovered in 1973 during the construcion of a subway. (Source: Yu Ka Sing 2012)

The site of the Museum of Sydney is where Sydney's first Government House was constructed. The positions of the footings for Government House are marked on the outdoor pavement of the forecourt. The public art installation Edge of the Trees (1995) designed by Janet Laurence and Fiona Foley is placed right nex to the entrance. It is composed of twenty-nice pillars of sandstone, wood and steel to represent the twenty-nine Aboriginal clans from around Sydney. Dr Peter Emmett was the Senior Curator of the project. (Source: Donald Ellsmore, year of photo unknown)

A partial replica of Government House, built in brick and stone, can be found in the foyer of the Museum of Sydney. It is coupled with ground marking of the footings. (Source: Donald Ellsmore, year of photo unknown)

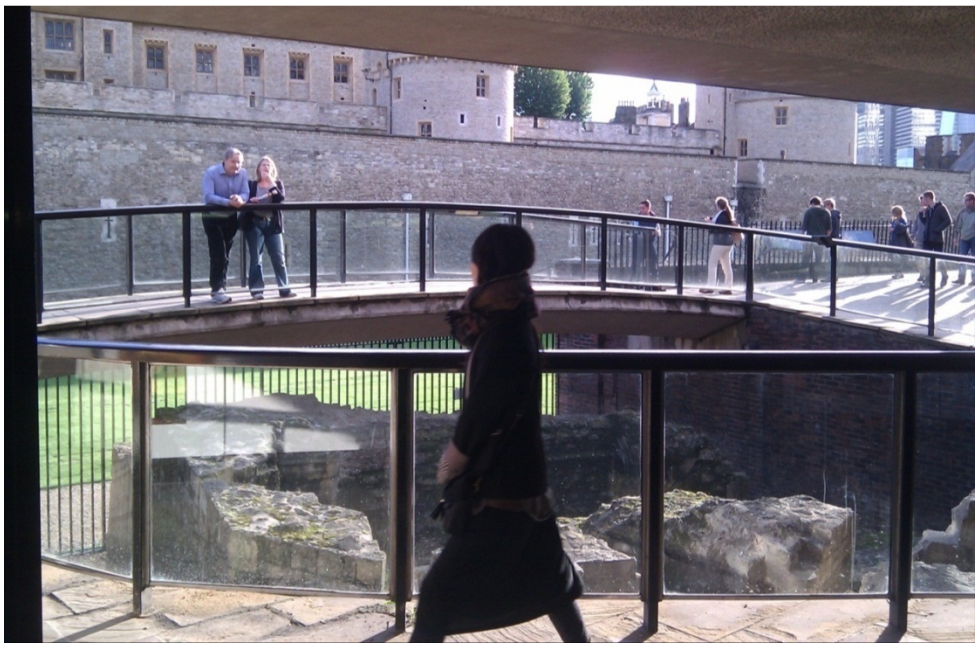
The National September 11Memorial & Museum takes the form of two sqaure pools demarcating the original location of the Twin Towers destroyed during the attack on 11 Sep 2001, World Trade Centre, New York. (Source: Yu Ka Sing, 2013)

F. Access to Archaeological Features

1. Estimate the volume of pedestrian flow and plan for the route
2. Set-back the road abutting the landward end of LTSB and where the Pavilion of Greeting Officials was located for 15m for (1) visual appreciation of LTSB and (2) appropriate drop-off point
3. Utilize the open space at the southern part of LTSB near the Station Square as an entrance piazza to signify arrival at the LTSB Preservation Corridor
4. Provide accessible viewing platform along or over LTSB to facilitate appreciation of exposed features and associated interpretative panels
5. Encourage physical and visual contact with selected stone pillars and slabs of LSTB provided that these exposed features are reinforced or stabilized, and are rendered safe for public use
6. Provide barrier free access facilities for people with disabilities

An access for wheelchair users is under construction at Palatine Hill, Rome. (Source: Yu Ka Sing 2012)

These remain were part of the Great Hall, Winchester Palace, London. It is one of the largest and most important buildings in medieval London. Visitors can appreciate the remains from different perspectives: (1) by standing on the street level (left), and (2) by viewing through the windows of the gable wall that is made accessible by a viewing platform housed within a new glass structure (right). (Source: Cristy Ho 2013)



The remains of the medieval postern giving access to the City of London from the east was found during the construction of a subway. Due to its level and the contemporary road network, it is now under a flyover and a footbrige. The Tower of London can be seen in the background. (Source: Yu Ka Sing 2012)

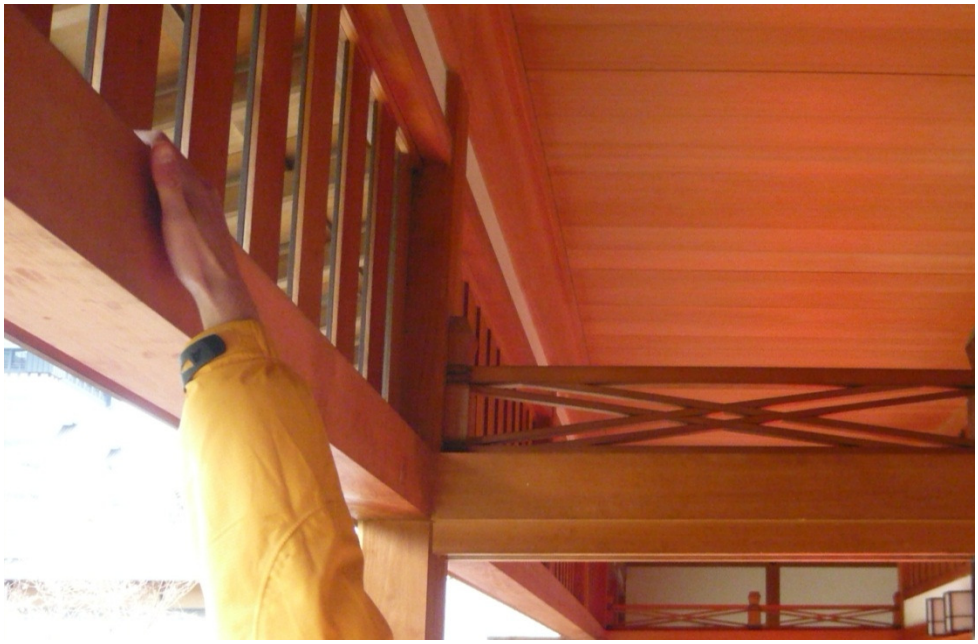
This is a plan indicating the location of access points to the elevated High Line. It also indicates the location where elevators for wheelchair users are provided. (Source: Yu Ka Sing 2013)

Signage with high legibility informing the nearest location of elevators is also provided at access points of High Line. (Source: Yu Ka Sing 2013)

A protruding platform has been constructed for the viewing of a ruin in Palatine Hill that is being excavated. (Source: Yu Ka Sing 2012)

Viewing platforms are strategically positioned at Amanohashidate to encourage visitors to bend over at the waist to appreciate “bridge in the heaven”, the legendary sandbar grown with pine trees. (Source: Yu Ka Ling 2012)

Visitors are encouraged to touch a cheetah specimen at the Oxford University Museum of Natural History. (Source: Yu Ka Sing 2012)



The Kokura Castle Japanese Garden, Kitakyushu, Japan was reconstructed in detail. Visitors can understand the design of the traditional timber shutter by operating it themselves. (Source: Yu Ka Sing 2011)

G. Interpretation Content

1. Structure the interpretation materials around themes. (Consider the excavation and conservation of LTSB as possible themes.)
2. Use interesting stories (folklore, myth etc.) to illustrate themes
3. Promote heritage protection as a collective public responsibility
4. Be inspiring and insightful; be clear, concise and well organized
5. Facilitate visitor understanding by catering to different interests and learning styles. Emphasis should be on the quality of the information, not the quantity.
6. Provide for on-going review

Bookmarks of Alice and Dodo from *Alice's Adventures in the Wonderland* are sold at the Oxford University Museum of Natural History. The author of the book, Charles Lutwidge Dodgson, matriculated at Oxford and lived there until his death. A dodo is also the mascot of the museum and used in the logo of the museum. (Source: Yu Ka Sing 2012)

There is a rumour that major sculptures at the Ashmolean Museum, Oxford are all oriented in the direction of the coloured cast of Caesar Augustus, the work placed in front of the black background. (Source: Cristy Ho 2012)

Visitors are encouraged to look for the heart-shaped stone in the pavement of Glover Garden, Nagasaki City, Japan. (It may have been intentionally laid to indicate the site's romantic context.) The Garden was the residence of Thomas Blake Glover, a key figure in the industrialisation of Japan. (Source: Yu Ka Sing 2011)

H. Interpretation Facilities/Methods and Materials

1. During detailed design stage, go through the following steps:

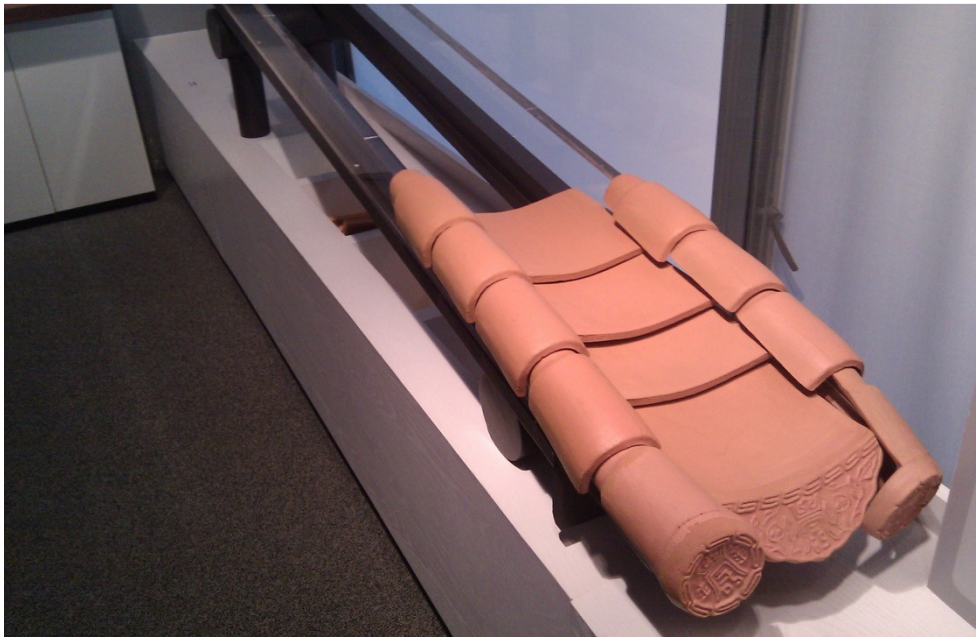
   Step 1 - Understand the cultural significance of LTSB
   Step 2 - Consult the public or stakeholders on the interpretation materials and design
   Step 3 - Set out the objectives
   Step 3 - Identify the themes
   Step 4 - Prioritize the significant features for route planning and resource allocation
   Step 5 - Prepare a preliminary proposal and collect essential records prior to establishing the conservation approach
   Step 6 - Underpin the interpretation proposal with (1) a detailed study of the heritage resource and (2) an understanding of the interpretation guidelines
   Step 7 - Modify the design, if necessary, through (1) further understanding of opportunities and constraints associated with LTSB and (2) resolving any safety, statutory and technical issues
   Step 8 - Finalize the design by considering maintenance and the need for future content and presentation review. Be innovative and inspiring

2. Create a fun and enjoyable design
3. Diversify interpretation methods. (Provide signage indicating features of interest, model, interpretation panels, visitors or education centre, which could include a souvenir shop, etc. Interpretation facilities/methods must not impact negatively LTSB
4. Facilities/methods (1) should harmonize with LTSB and not compete with its features, (2) should be at an appropriate scale and not affect viewing, including photo-taking, and (3) should be humble (understated) in gesture and readily distinguishable from LTSB
5. Locate facilities and materials sensibly in order to facilitate cross-referencing between LTSB and related information
6. Consider using the facades of new buildings fronting LTSB for story telling
7. Consider the use of public art representing the artists' interpretation of LTSB
8. Consider integrating with other resources in the district, such as the Kai Tak cruise terminal, KWC Park, Sung Wong Toi Park, and setting up of a heritage trail with historical features in Kowloon City and To Kwa Wan
9. Provide interpretation materials, such as physical models, maps, leaflets, books, teaching kit(s), website, audio-guide, smart phone apps, animation, projection, filmstrips etc.
10. Explore the possibility of using multi-sensory and interactive installations
11. Consider daily management and long term maintenance

The zen garden of Ryoan-ji, Kyoto is famous for the arrangement of the fifteen stones that could not be seen at once from the verandah . (Source: Yu Ka Sing 2012)

A model of the zen garden of Ryoan-ji is built to help visitors to understand the art in the placement of the fifteen stones. (Source: Yu Ka Foon 2012)

A full-scale model of traditional Chinese tiled roof at Heritage Discovery Centre demonstrate the composition and construction . (Source: Yu Ka Sing 2013)



Next to the full-scale model is a puzzle for visitors to build the roof. The parts are made of foam suitable for children to play with. (Source: Yu Ka Sing 2013)

The display of “Amazing Bourgongne” Exhibition employs enlarged laboratory flasks to introduce the different fragrances of Burgundy wine. (Source: Yu Ka Sing 2013)

Besides viewing the display within the flask, by pushing the button at the base of the flask, visitors can also smell it. The entire process symbolizes the wine-tasting experience. (Source: Yu Ka Sing 2013)

The ArtBox project allows artists to re-make or decorate a legendary London icon – the telephone booth. (Source: Yu Ka Foon 2012)

The interpretation panel of each art piece shows the details of the artwork, with additional internet resources accessed through the QR code. (Source: Yu Ka Foon 2012)

The project allows artists to express their interpretation of the city. The booths are placed near major tourist spots and provide ideal photo-shooting opportunities. (Source: Yu Ka Foon 2012)

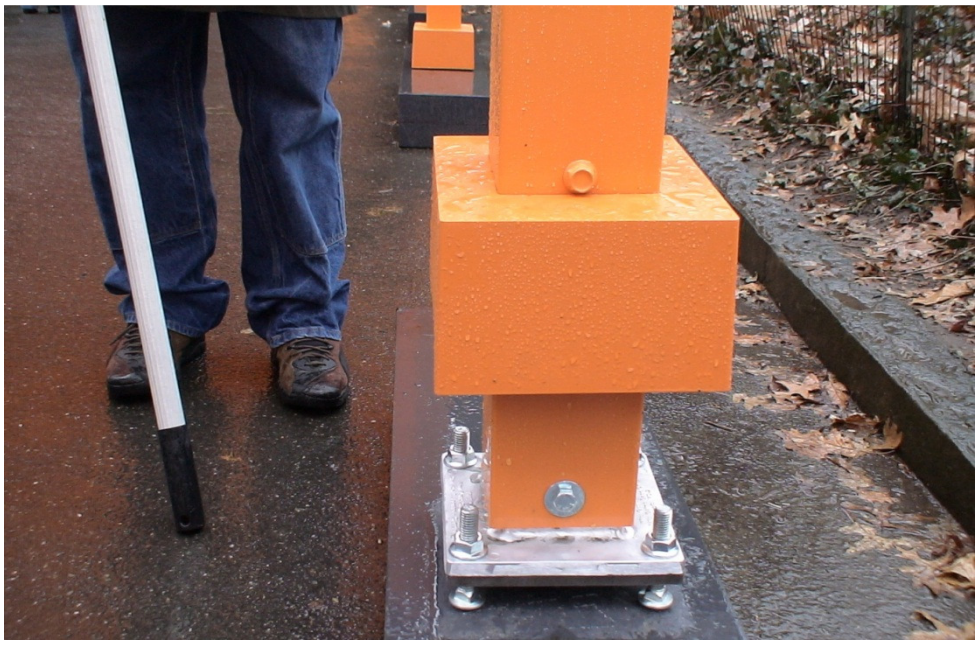
The campaign is further interpreted by a performing artist dressed up as a telephone booth. (Source: Yu Ka Foon 2012)

Skirts were animated in the “Waist Down” exhibition at the Prada Transformer project in Seoul in 2009. (Source: Yu Ka Sing 2009)

I. Interpretation Programme

1. Provide interpretation programmes, such as design competitions, guided tours, workshops etc. to facilitate understanding of LTSB and the interpretation facilities / materials
2. Invite local communities, past users and artists to contribute to / participate in programmes

The Gates, the site-specific work of art by Christo and Jeanne-Claude, involved the installation of 7,503 gates hung with deep saffron-coloured nylon fabric in Central Park, New York City in 2005. In this photograph, an interpreter holding a pointer introduces design details to visitors. (Source: Yu Ka Foon 2005)



The cover of the footing is lifted up to reveal a design that does not involve invasive action at the pavement level. (Source: Yu Ka Foon 2005)

Information about the art project was cast in the steel footing. (Source: Yu Ka Foon 2005)

J. Interpretation Panels

1. (1) Scale appropriately and (2) place logically
2. Avoid graphic density (surfaces crowded with information)
3. Avoid the use of different fonts
4. Use legible font size
5. Consider the use of drawings, especially isometric drawings and sections
6. Consider the use of diagrams
7. Consider multi-language texts
8. Employ colour coding when necessary for clarity

The simple and elegant interpretation panel at St. Paul's Cathedral, London. (Source: Yu Ka Sing 2012)

One of the unearthed chariots *Yi Chi Liu Ma* (一車六馬) displayed at Eastern *Zhou Du Cheng Wen Hui Yi Zhi* (東周都城文化遺址) in *Luoyan* (洛陽). (Tsang Wing Keung, Johnny 2012)

A diagram at the Eastern *Zhou Du Cheng Wen Hui Yi Zhi* uses graphics of *Ding* and *Gui* (Chinese containers for food and beverage in ancient time) to indicate the hierarchy of officials that reflects the etiquette of *Zhou* Dynasty. (Tsang Wing Keung, Johnny 2012)

K. Safety and Protective Barriers

1. To ensure safety, provide adequate protective barriers for areas accessible by the public
2. Strike a balance between the provision of barriers and the unencumbered viewing of archaeological features
3. Avoid over-designing protective barriers; design(s) should be simple but elegant (yet providing adequate protection)
4. Pay attention to the construction details of protective barriers

Barriers of different designs, reflecting different requirements, are found for an elevated walkway at the Villa of the Quintilii, Rome. (Source: Yu Ka Sing 2012)

Design of a barrier that reflects the landscape at Palatine Hill, Rome. (Source: Yu Ka Sing 2012)

Barrier at High Line is composed of string, furniture, tapered concrete kerb. (Source: Yu Ka Foon 2013)

The use of local materials for a barrier at Kyoto. (Source: Yu Ka Sing 2012)

L. Associated Street Furniture and Amenities

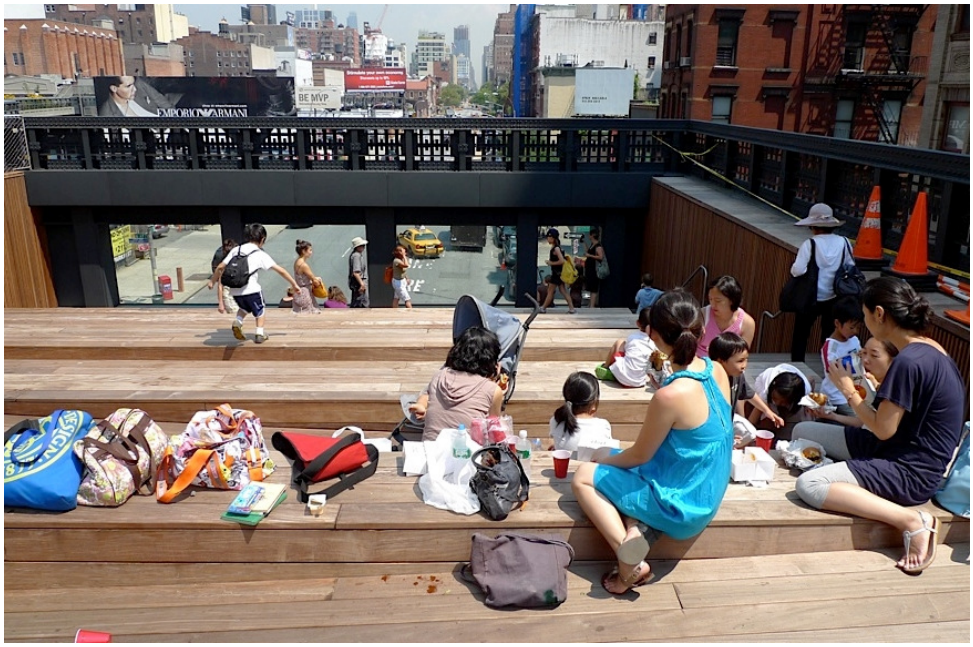
1. Provide street furniture, lighting, disabled facilities, water drinking fountains, refreshment kiosks, portable market stalls, underground car parks etc.
2. Incorporate elements of "public creativity" and set out design theme(s) and guidelines for street furniture to reinforce the visual identity of KTD
3. Consider portable seating
4. Consider tier seating
5. Consider lawn
6. Provide shade protection that does not affect the viewing of LTSB, but takes into account the hot - and sometimes humid - weather of Hong Kong
7. Artificial lighting should avoid design which produces glare

The juxtaposition of fixed and portable seating allows the creation of space on-demand at Luxumbourg Gardens, Paris. (Source: Yu Ka Sing 2003)

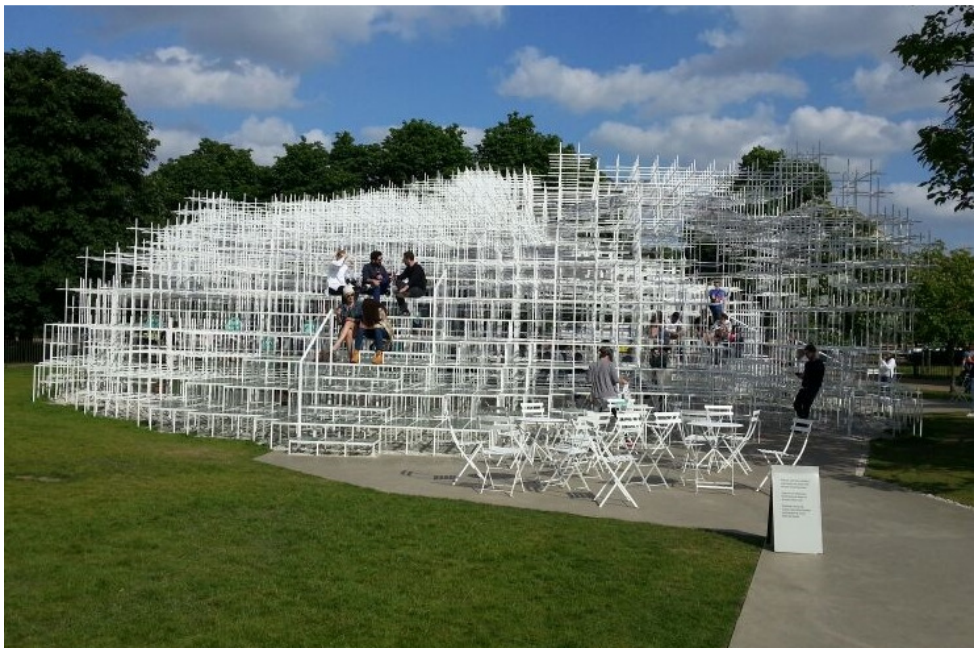
A movable seating at High Line has cleverly utilized existing rail for forming of different seating combination. (Source: Cynthia Hon Yee Lee 2009)

By adopting the same material of the pavement and following the design of the landscape features, the furniture of High Line has merged into the park seamlessly. (Source: Yu Ka Sing 2013)

Artificial lighting is integrated into the design of furniture at High Line. It does not produce glare and helps to create the ambience for evening stroll. Water drinking maching is also provided. (Source: Yu Ka Sing 2013)



Tier seating at High Line above traffic provides an interesting urban experience. It also creates an ideal location for rest, meal, and gathering. (Source: Cynthia Hon Yee Lee, 2009)



The 2013 Serpentine Gallery Pavilion by Sou Fujimoto guides visitors to explore the site with rich greenery by a matrix of types of seating. (Source: Yu Ka Foon, 2013)

A series of terraces create tier seating that allows visitors to create their own social space. (Source: Cristy Ho, 2013)

M. Colour and Materials

1. Select colours and materials for interpretation facilities and materials that harmonize (fit in) with LTSB
2. Avoid the use of materials that may wear easily or require regular replacement (in other words, use heavy duty materials)
3. Floor paving materials should be non-slip and non-reflective

The deep safforn coloured fabric of The Gates warms up the cold winter environment of Central Park, New York. (Source: Yu Ka Foon 2005)

Mirrors can be used in certain situations. Here, mirrors were placed on the floor to reveal the mysterious insides of Prada skirts. (Source: Yu Ka Foon 2009)

N. Maintenance

1. Propose design solutions for long term use, i.e. consider long term maintenance and avoid design solutions with heavy recurrent costs
2. Consider daily management when designing
3. Provide access for conservation and maintenance works

Artefacts found at the Villa of the Quintilii are displayed conventionally within a controlled environment. (Source: Yu Ka Sing 2012)

In Amanohashidate, Japan, visitors throw *Kawarake* pottery feesbee to the ring to make wishes. It is less of a maintenance issue than throwing coins into the Trevi Fountain. (Source: Yu Ka Sing 2012)

O. Ambience

1. Create an atmosphere that can help convey the original setting(s)
2. Create “rooms” for different kinds of activities at different scales
3. Work with the future land-use of the surrounding areas to provide both vibrant and tranquil experiences; be sensitive of the surrounding environment
4. Landscape the LTSB Preservation Corridor as a public open space in order to attract users other than tourists and students
5. Use a real or simulated aqua-scape to echo the original coastal location and bring dynamism to the place Select the texture and colour of pavement materials carefully to create the appropriate ambience for the appreciation of LTSB
6. Provide visual screening and acoustic barriers when necessary, such as through the judicious planting of treesControl future economic activities at the ground and first floors of buildings fronting the LTSB Preservation Corridor, while at the same time allowing for on-going vitality, especially at the ground level

The pavement at High Line is designed in such a way to frame the railway, yet providing space for vegetation to grow. (Source: Yu Ka Foon 2013)

Cheonggyecheon, Seoul was revitalized in 2005 after the removal of a post-war elevated highway. (Source: Yu Ka Sing 2009)

The use of aqua-scape can bring life to a site. The photograph shows the moving water of the Diana Memorial Fountain. (Source: Yu Ka Sing 2012)

P. Greening

1. Plant trees for shade, colour and air quality
2. Consider planting trees for visual and acoustic screening
3. Use native trees that require minimal care
4. Restrict trees from growing over archaeological features (shade and foliage can negatively impact stone)
5. Locate trees in areas that do not obstruct major views of LTSB
6. Avoid foresting (this was not the original setting of LTSB)
7. Provide variety in vegetation - different colours, sizes, textures and types, such as shrubs, lawn, etc.
8. Provide adequate soil depth for trees to grow
9. Install root barriers around tree balls to prevent tree roots from damaging features

Trees are planted as visual barrier at *Cheonggyecheon*, Seoul. (Source: Yu Ka Sing 2009)

A gently sloped lawn is incorporated on the elevated park of High Line. (Source: Yu Ka Sing 2013)

A justapostion of the peaceful lawn against the bustling cityscape of New York at High Line. (Source: Yu Ka Sing 2013)

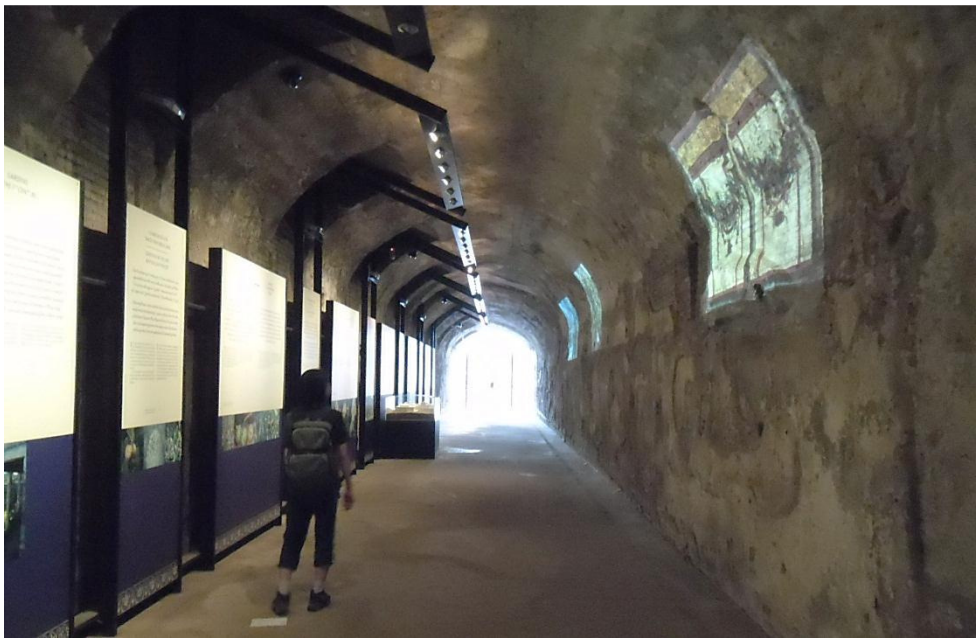
Lawns can take different forms as seen in Kumamoto. (Source: Yu Ka Sing 2011)

Q. Connections and Integration

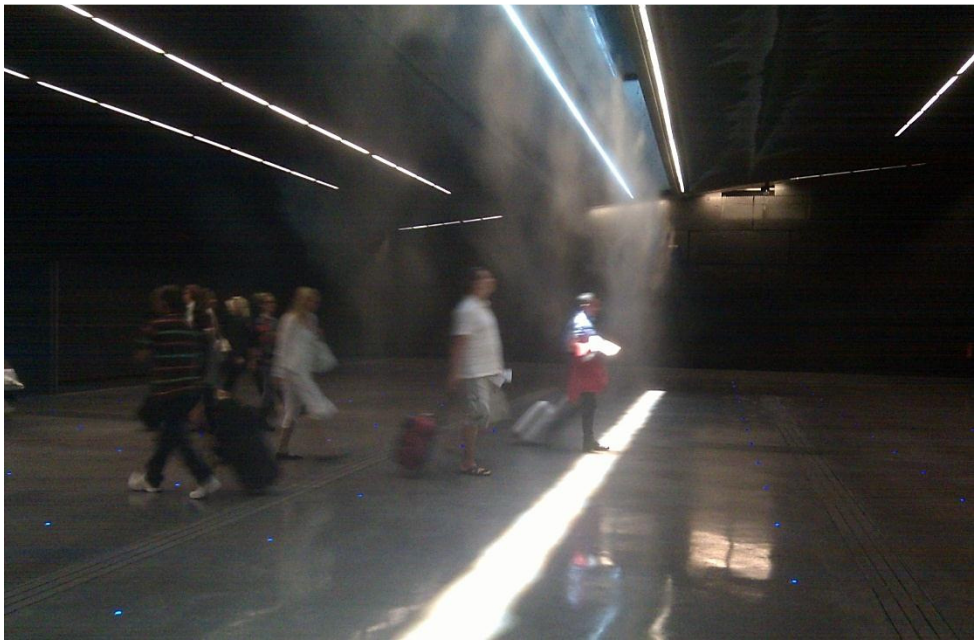
The LTSB Preservation Corridor will be connected to the historical Kowloon Walled City Park via Shek Ku Lung Road Playground by pedestrian subway under PERE. As well, the LTSB Preservation Corridor will be connected to the Underground Shopping Street.

1. Integrate the LTSB Preservation Corridor with future development in the vicinity and the entire Kai Tak Development by diversified and subtle means, such as information points, sculptures, signs, etc.
2. Provide effective linkages between LTSB and its surrounding areas (in tribute to its past role as a transport node and activity hub)
3. Provide holistic design for the LTSB Preservation Corridor and future connections
4. Handle the level differences among LTSB and future connections diligently to create pleasant and interesting viewing experiences yet providing BFA
5. In regard to the pedestrian linkage to Kowloon City, use the subway under PERE and walkway through Shek Ku Lung Road Playground to create a smooth transition and prepare visitors for the appreciation of both KWC and LTSB
6. In regard to the Underground Shopping Street, locate the point of connection carefully to avoid affecting the display of archaeological features; strike a balance between shopping vibrancy and historic place tranquillity

Louvre-Rivoli, once the subway station connected to the Louvre Museum, continues to keep art replicas on its platform. It quite literally paved the way of visitors to the museum experience underground. (Source: Yu Ka Sing 2003)



A mundane tunnel can be an ideal projection place as seen at Palatine Hill, Rome. (Source: Yu Ka Sing 2012)



While walking through an underground passage, an art installation, The Magic Threshold by Alberto Garutti, greets visitors arriving at Malpensa Airport, Milan. The installation creates a temporal scene by spraying water mist periodically from a skylight that is coupled with fluorescent lighting from the ceiling and blue LED on the floor. (Source: Yu Ka Sing 2012)

R. New Buildings

At the two longitudinal sides of the 30m-wide LTSB Preservation Corridor are parcels of land zoned as CDA with building height capped at 13mPD, 70mPD and 130mPD. The set-back for new buildings is 3m from their boundary abutting the LTSB Preservation Corridor. Building bulk abutting on the view corridor to the Lion Rock will be capped at 13mPD. Retail development at podium level will not be more than two storeys (excluding basement) and capped at 13mPD.

1. Design of buildings along the two longitudinal sides of the LTSB Preservation Corridor should respect LTSB
2. Although the archaeological features of LTSB will have no direct contact with the surrounding new development, there is a need to control the layout and design of new buildings in order to create the necessary ambience, connection and access for the appreciation of the place
3. Design of new buildings should be welcoming
4. Sustainable building designs should be implemented
5. Encourage visual corridors between new buildings and LTSB at multiple levels
6. Encourage transparency and visibility at the ground and first floor, both physical and visual, through the use of glass, provision of access to LTSB, building recess, etc.
7. Encourage crossing to and through LTSB at ground floor level
8. Restrict elevated walkways connecting new buildings on both sides of LTSB
9. Provide public passage at ground floor, both within and without new buildings, such as covered walkways on both sides facing LTSB
10. Provide public viewing platforms on the podia of new buildings
11. Provide public open spaces within new buildings
12. Encourage horizontal greenery at different levels, such as at the ground floor, podium and roof
13. Encourage vertical greenery at podia, in particular
14. Encourage the use of the facades of new buildings for displays relating to LTSB

The provision of a covered walkway creates a sheltered buffer zone between the heritage Cathedral Square and bustling retail activities in Milan. (Source: Yu Ka Sing 2012)

The building next to High Line has opened up its façade to create a dialogue between a restaurant and users of the park, optimizing the economic potential generated by increased pedestrian flow. (Source: Yu Ka Sing 2013)

Bas-reliefs at the column capitals of the arcade at Kunstmuseum Basel perform story-telling function. The building is a heirtage site of national significance erected in 1936 built to house the Public Art Collection. (Source: Andrea DiStefano 2013)

A bas-relief featuring the story of the city is installed at the fascia level of a metro exit in Seoul. (Source: Yu Ka Foon 2009)

Measured drawing of the rose window of the gable wall of Great Hall, Winchester Palace, London is displayed on the façade of a new building right next to it. It allows visitors to comprehend the size and scale of the architectural feature. (Source: Yu Ka Sing 2012)

The roof of Kyushu Train Station is used as a viewing platform, an outdoor market, a place for collecting solar energy, etc. (Source: Yu Ka Sing 2011)

S. Commercial Activities

1. Create the bustling atmosphere of the original market at Kowloon Street by having retail shops along both sides of LTSB
2. Diversify the mix of shops, i.e. different retail shops and food & beverage in order to attract different clientele at different times of the day and night
3. Set-back retail frontage on the ground floor for 3m from the building footprint in order to facilitate movement of retail patronage
4. Restrict retail development to a maximum of 2 storeys (excluding basement) at 13mPD
5. Avoid imitating the historical appearance of shops on Kowloon Street
6. Avoid creating a theme park as in an “Old Hong Kong” streetscape
7. Restrict horizontal and vertical cantilevered signboards from protruding more than 1.5m from the external surface of building
8. Standardize the location of signboards mounted on the external wall of new buildings and the inside wall of the ground floor covered walkway, if any
9. Restrict the use of animated illumination in signboards
10. Control the use of lighting for signboards
11. Encourage the use of roller blinds on the inside of external walls of covered walkways as advertising means
12. Control the use of spot lights and floodlights and other lighting fixtures alike that produce glare
13. Encourage the use of reflective lighting for setting the ambience
14. Allow commercial activities to flow from new buildings onto the open space without obstructing the 3m wide retail corridor. Control by managerial means in lieu of physical barriers
15. Encourage temporary markets for arts and crafts, fresh food, performing artists etc. with stalls and refreshment kiosks etc.

Despite the cold winter weather, the annual Christmas Markets at Old Town Square and Wenceslas Square, Prague can always attract crowds. (Source: Yu Ka Sing, 2012)

Trdelnik, a hollow pastry coated with cinnamon and sugar is freshly cooked over hot charcoal to keep you from cold and hunger in Prague Christmas Markets. (Source: Yu Ka Sing, 2012)

High quality handcrafts sold at a stall at Charles Bridge. (Source: Yu Ka Sing, 2012)

T. Public Safety and Health

1. Be cautious with the design of interpretation facilities, landscape features, etc. that may put the public at risk
2. Be cautious with the use of an aqua-scape that could encourage breeding of mosquitoes and the resulting risk of Dengue Fever
3. Provide appropriate illumination especially during night time
4. Stabilize new trees to prevent falling

Public safety information and desciption of the design of the Memorial Fountain is printed on the interpretation panel located at the entrance to the Dianna Memorial Playground. (Source: Yu Ka Sing 2012)

Park rules of High Line is displayed at every entry to protect the site, and prevent users from risking their lives at the elevated railway. (Source: Yu Ka Sing 2013)

8
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