

New Design in Old Building:

Innovative Design for the Revitalisation of Heritage Architecture

舊建加新：

創新建築設計，活化建築文物

DR. LEE HO YIN

DIRECTOR, ARCHITECTURAL CONSERVATION PROGRAMMES (ACP)

FACULTY OF ARCHITECTURE, THE UNIVERSITY OF HONG KONG

李浩然 博士

香港大學 建築學院

建築文物保護課程 主任

CONSERVATION APPROACHES

Preservation 完全保護

Conserve everything, change nothing, same appearance as found

Application: archaeological sites

Restoration 保育復修

Conserve existing, add missing parts, return to an earlier appearance

Application: national monuments, such as the Forbidden City

Adaptive Reuse 改做再利用 / **Revitalization** 活化再用

Conserve selectively, allow changes for new use, appearance updated with new addition

Application: heritage buildings that no longer serve the original use

Reconstruction 保育重建

Partially or completely replicate the old

Application: Murray House in Stanley, many places in Mainland China!

Should heritage buildings be revitalized as museums?

博物館是歷史建築的最佳的活化用途嗎？

TECHNICAL REQUIREMENT: Display and Storage Space 展覽與存儲空間

Does the place have sufficient space not only for the display, but also for the storage of collections, in accordance with the requirements of the accreditation organization?

Space required: 40% of the building for public collection space (display)
 20-30% for non-public collection space (storage and conservation)

Exhibition-storage ratio: 1 : 1 for large or national museums
 2.7 : 1 for medium or general museums
 4 : 1 for small or local museums

Source: Barry Lord, Gail Dexter Lord and Lindsay Martin (eds.) *Manual of Museum Planning*, 3rd ed. (Lanham, Maryland: AltaMira Press, 2012), section 7.1.)




Image source: www.bruynzeel.co.uk; www.constructor-storage.com

TECHNICAL REQUIREMENT: Professional Standards & Guidelines 專業準則與指引

To achieve accreditation, does the operation meet professional standards and guidelines for museums, such as those laid down by ICOM?

ICOM's standards and guidelines supply models to museum professionals in order to facilitate the implementation of their good practices in terms of objects acquisition, personnel, conservation of art objects and museum specialism.

- Running a Museum: a practical handbook (2004)
- The CIDOC Conceptual Reference Model (CRM, 2001)
- Interpreting Musical Instruments in Museum Collections: Guidelines (1998)
- Guidelines for Costume (1998)
- Handbook of Standards Documenting African Collections (1996)
- International Core Data Standards for Ethnology/Ethnography (1996)
- International Guidelines for Museum Object Information: the CIDOC Information Categories (1995) 
- Recommendations for the Application of Accession Numbers (1995)
- Registration Step by Step: When an Object Enters the Museum (CIDOC Fact Sheet 1, 1993) 
- Labelling and Marking Objects (CIDOC Fact Sheet 2, 1993) 
- Guidelines for Disaster Preparedness in Museums (1993) 
- CIMENT: Uniform Procedures for Data Element Description in CIMCIM Database Systems (1991)
- Recommendations for Regulating the Access to Musical Instruments in Public Collections (1985)
- ICOM Guidelines for Loans (1974) 

MANAGEMENT REQUIREMENT: Collection and Resources 藏品與資源

Is it a museum with its own collection, or an exhibition venue displaying on-loan items?

A museum has to have its own **collection** (otherwise, it's an exhibition venue 展覽場地) as well as the **resources** to hire professional staff to carry out research and publication, as well curatorial, conservation and protection of the collection.



Image source: archaeologicalmuseum.jhu.edu

MANAGEMENT REQUIREMENT: Environmental Control & Security 濕溫控制與保安系統

Is the place able to meet the international museum standards for relative humidity and temperature control as well as security?

Collection Type: General museums, art galleries, libraries, and archives (all reading and retrieval rooms, rooms for storage of chemically stable collections, especially if mechanically medium to high vulnerability)

RH and temperature set points: historical annual average for permanent collections or 50% RH with the temperature between 15 and 25°C.

Source: David Grattan and Stefan Michalski, "Environmental Guidelines for Museum," article on the website of the Canadian Conservation Institute (2 March 2012) at: www.cci-icc.gc.ca/caringfor-prendresoindes/articles/enviro/index-eng.aspx#ft1aa

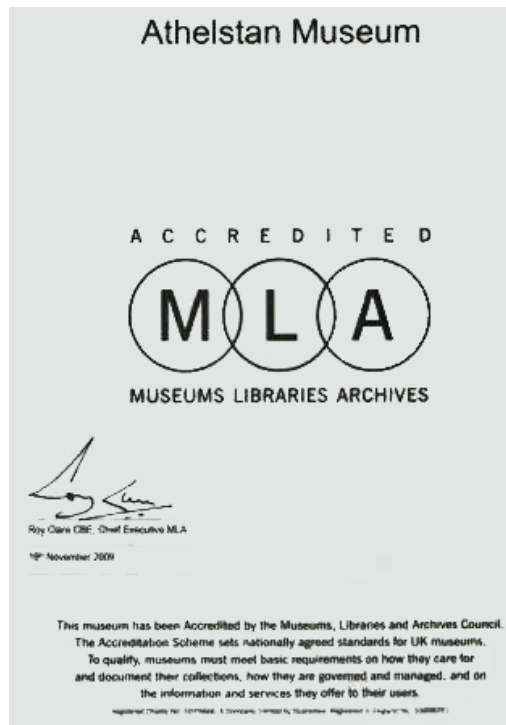


Image source: www.genetec.com; www.cci-icc.gc.ca

MANAGEMENT REQUIREMENT: Accreditation 認證

Will the place remain a self-styled "museum" or be able to become a accredited museum?

A museum, as an institute, has to meet the accreditation requirements of a national or an international museum accreditation organization, such as, Arts Council England, American Alliance of Museum, and the International Council of Museums (ICOM) 國際博物館協會, among others.



FINANCIAL REQUIREMENT: Funding Sources 資金來源

Does the place have stable funding sources to sustain the museum operation and development?

Unlike the model found in most of the world, where museums are largely supported by the national government, American museums keep their operations going by cobbling together a mosaic of funding sources, from government sources, from the private sector and, increasingly, from earned income [(mostly through renting out event and shop spaces) and investments].

Source: Ford W. Bell, "How are Museums Supported in the U.S.?", article on the website of the U.S. Department of State, Bureau of International Information Programs (published March 2012) at: http://photos.state.gov/libraries/amgov/133183/english/P_You_Asked_How_Are_Museums_Supported_Financially.pdf

Average Mix of Funding Sources for U.S. Museums (2009)



Image source: photos.state.gov

"The quickest way to bankruptcy is to set up a museum!"

Dr. Joseph Ting, former Chief Curator of the Hong Kong Museum of History

「想快啲破產，最好就係搞博物館！」

前香港歷史博物館總館長丁新豹博士

The debate - conservation = preserve everything; change nothing?

爭議

- 保育 = 原汁原味；一個不少

suitable for national monuments and archeological sites 適用於國寶、考古遺址



Unknown Internet sources

sometimes, changing nothing = a useless ruin 一成不變，有時只有一堆廢墟



The **premise** - conservation \neq preservation

前提 - 保育並不等於一成不變

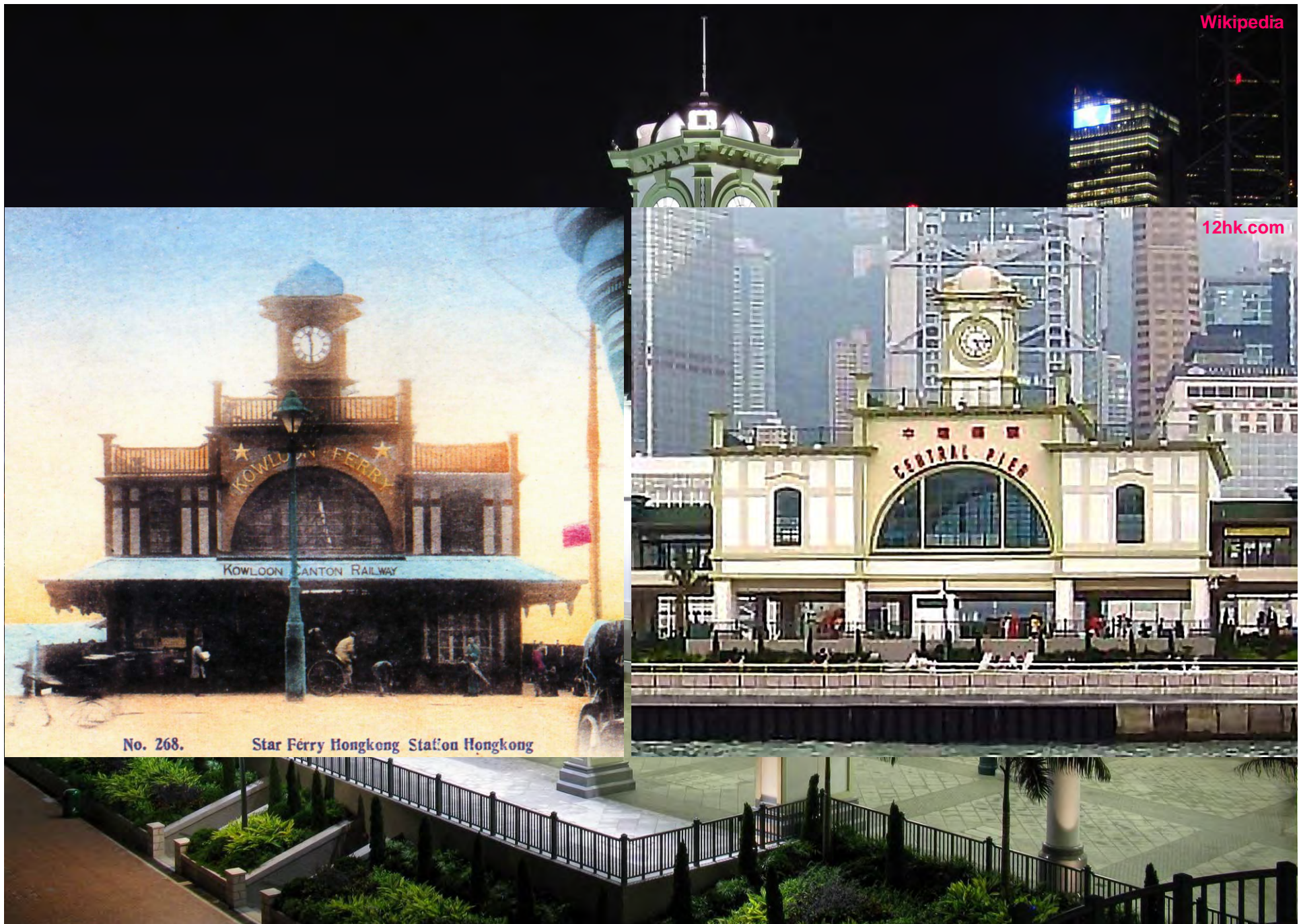
The **premise** - new design *is* necessary for reuse of old buildings

前提 - 再用舊建 必需有新

The **question** - how to integrate new design in old buildings?

問題 - 如何舊建加新?

re-create the past? 仿古?



Central Pier, Hong Kong, 2006 (Civil Engineering and Development Department, Government engineers)



Central Pier, Hong Kong, 2006 (Civil Engineering and Development Department, Government engineers)



Heritage 1881, Hong Kong, 2009 (Cheung Kong Holdings, Hong Kong developer)

re-create the past? 仿古?

innovate for the future! 創新造未來!

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

139 The recognition of the public interest in heritage values is not in conflict with innovation, which can help to create the heritage of the future.

英國文化遺產機構

在2008年發表的「文物保護準則，政策與指引」的第139段：

第 1 3 9 條 保護建築文物與創新建築設計，兩者並無矛盾；因為要有創新的建築設計，才會有未來的建築文物。



The Louvre Pyramid, Paris, 1989 (I M Pei, American architect)



The Louvre Pyramid, Paris, 1989 (I M Pei, American architect)



Foster + Partners

Reichstag, Berlin, 1999 (Norman Foster, British architect)



Reichstag, Berlin, 1999 (Norman Foster, British architect)

a provocation

International Examples of Super Innovative Adaptive Reuse Projects

超創意活化再用的國際例子

architecture must burn!



讓建築燃燒吧！

我們厭倦了建築仿古的面具，我們要更具創意的設計。
若要冷，就要如冰、若要熱，就要如火。讓建築燃燒吧！

一九八零年，奧地利「藍天組」建築事務所的兩位憤青建築師，
為針對後現代仿古建築所發表的宣言



Rooftop Falkenstrasse, Vienna, 1988 (Coop Himmelblau, Austrian architects)



Energy Roof (design), Perugia, 2010 (Coop Himmelblau, Austrian architects)



Energy Roof (design), Perugia, 2010 (Coop Himmelblau, Austrian architects)



Clark Quay, Singapore, 2006 (Will Alsop, British architect)



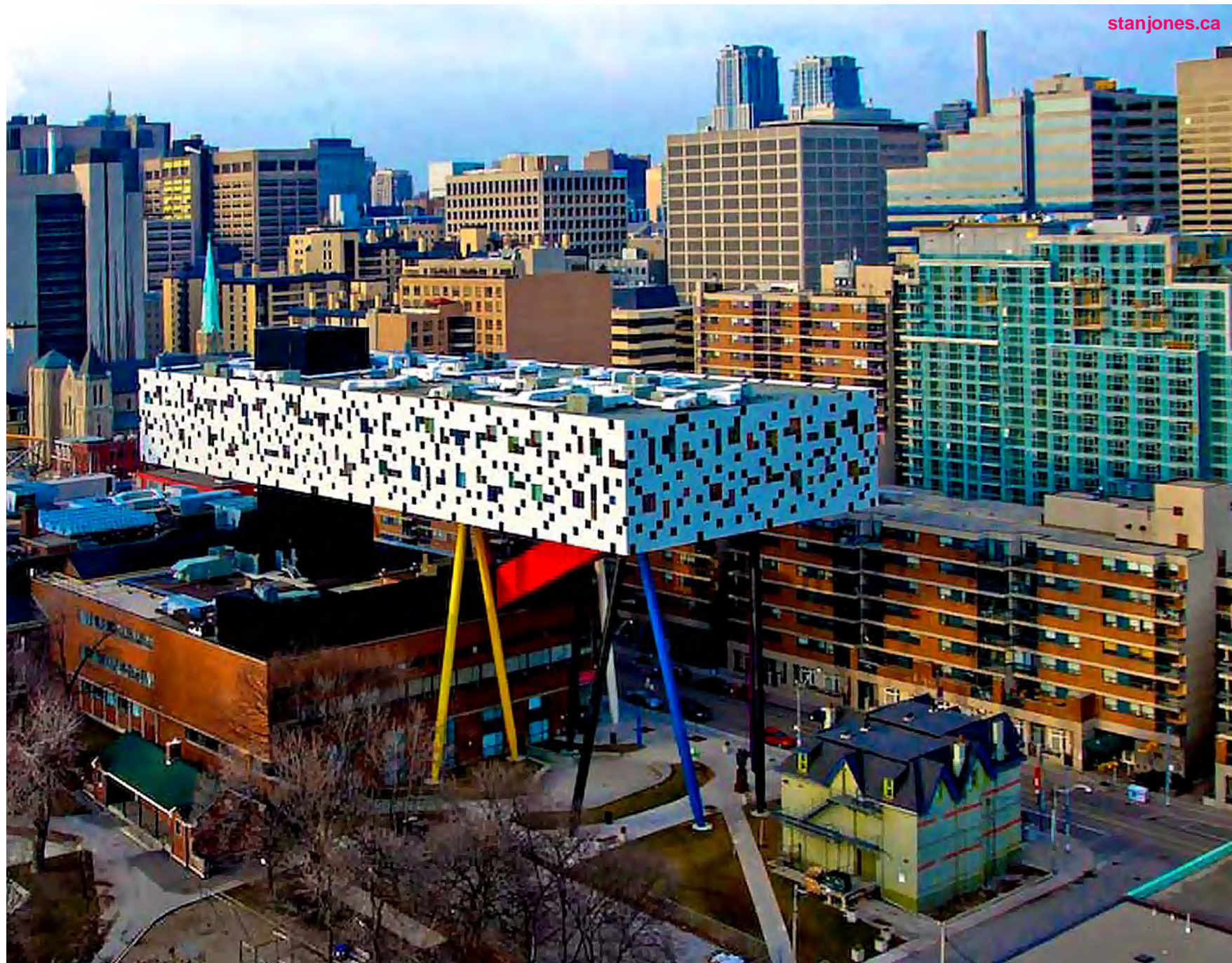
Clark Quay, Singapore, 2006 (Will Alsop, British architect)



Clark Quay, Singapore, 2006 (Will Alsop, British architect)



Clark Quay, Singapore, 2006 (Will Alsop, British architect)



Ontario College of Art & Design, Toronto, 2004 (Will Alsop, British architect)

Reversible and non-reversible changes

可還原 與 非可還原 的改建

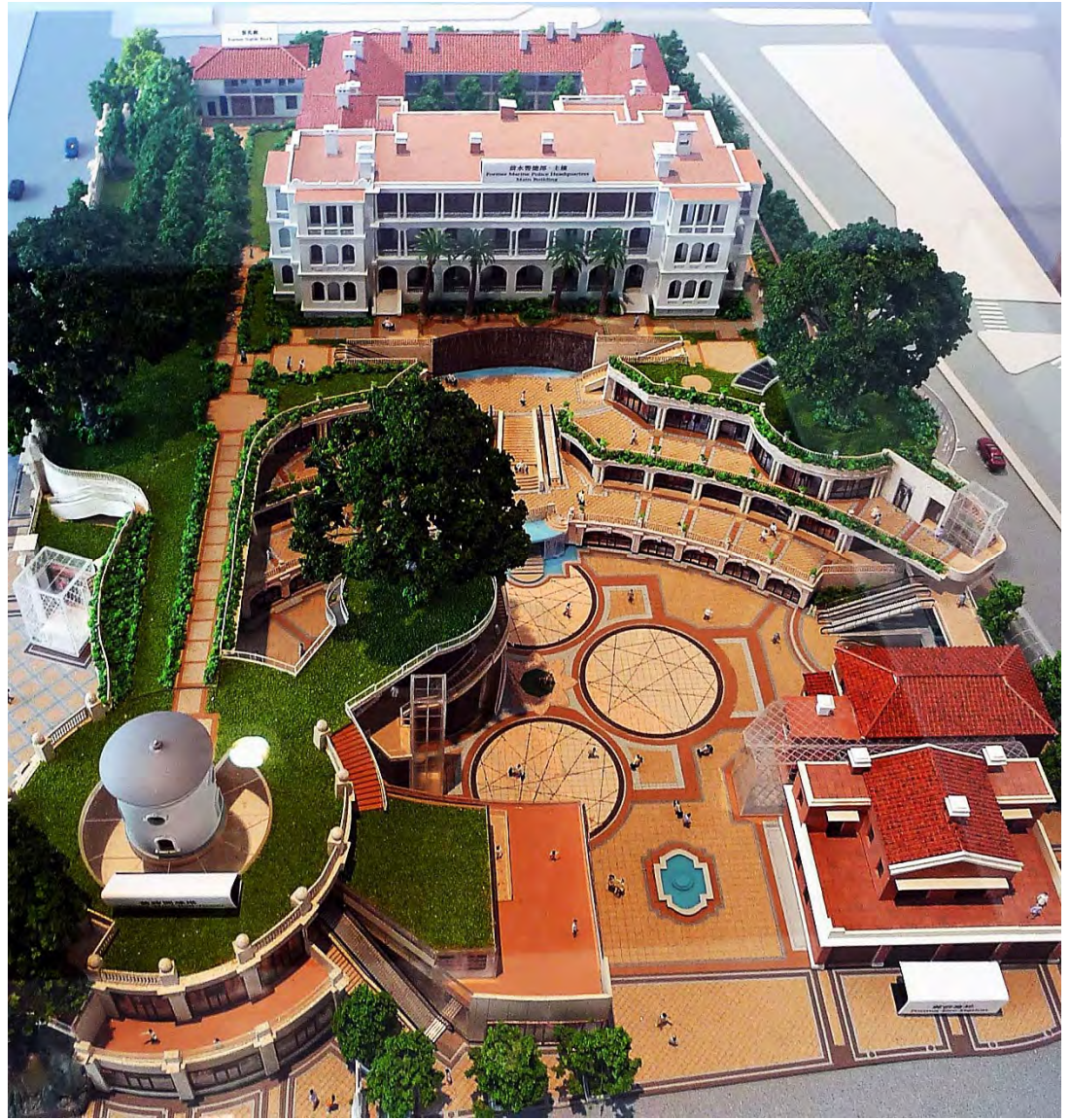
可還原 與 非可還原 的改建



Reversible changes: Ontario College of Art & Design, Toronto, 2004 (Will Alsop, British architect)



Reversible changes: Clark Quay, Singapore, 2006 (Will Alsop, British architect)



Non-reversible changes: Heritage 1881, Hong Kong, 2009 (Cheung Kong Holdings, Hong Kong developer)



The architectue of Daniel Libeskind (American architect)



Royal Ontario Museum Extension, Toronto, 2007 (Daniel Libeskind, American architect)



Royal Ontario Museum Extension, Toronto, 2007 (Daniel Libeskind, American architect)





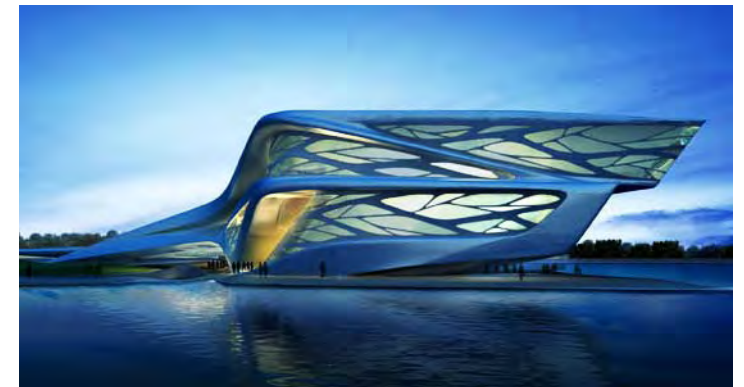
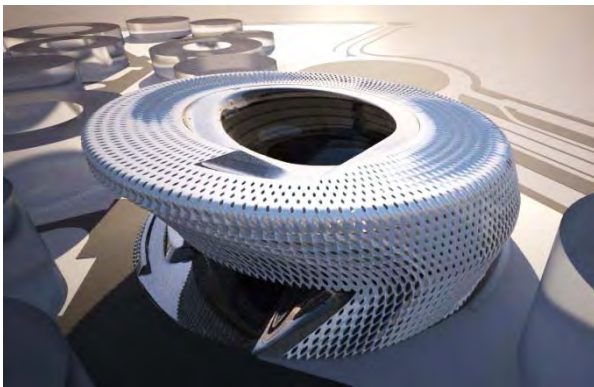
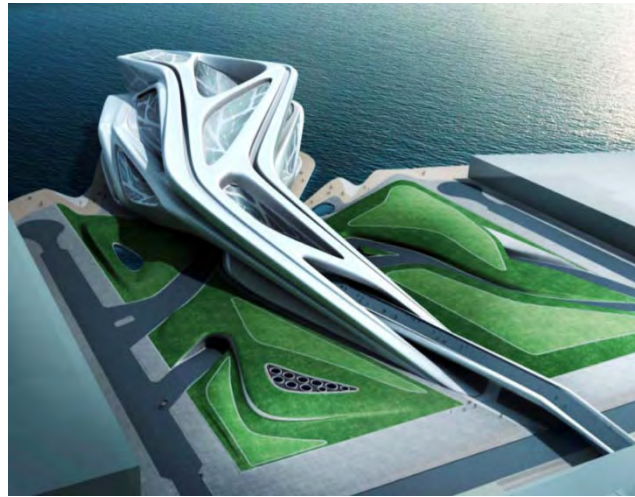
Reversible changes: Royal Ontario Museum Extension, Toronto, 2007 (Daniel Libeskind, American architect)



Military History Museum, Dresden, 2011 (Daniel Libeskind, American architect)



Reversible changes: Military History Museum, Dresden, 2011 (Daniel Libeskind, American architect)



The architecture of Zaha Hadid (British architect)

“The jury / board of directors finally opted for the proposal by Zaha Hadid Architects, because: the design preserves as much as possible of the dignity of the present building as a monument, adding a new [landmark] object to the site.”



2009 Winning Competition Entry for **Port House, the new headquarters of the Antwerp Port Authority (under construction; to be completed in 2015), Antwerp (Zaha Hadid, British architect)**



Reversible changes: 2009 Winning Competition Entry for **Port House**, the new headquarters of the Antwerp Port Authority, Antwerp (Zaha Hadid, British architect)



Docks de Paris, Paris, 2009 (Jakob + MacFarlane, French architects)



designbuild-network.com



[flickr.com](https://www.flickr.com/photos/14811147@N05/)



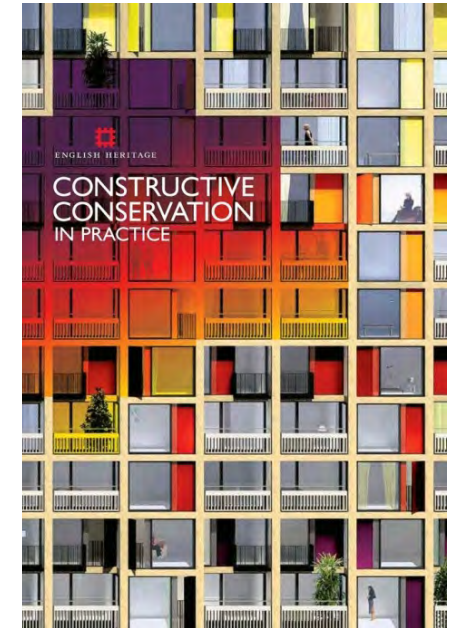
archifield.net

Reversible changes: Docks de Paris, Paris, 2009 (Jakob + MacFarlane, French architects)

UK English Heritage's Constructive Conservation (2008, 2013)

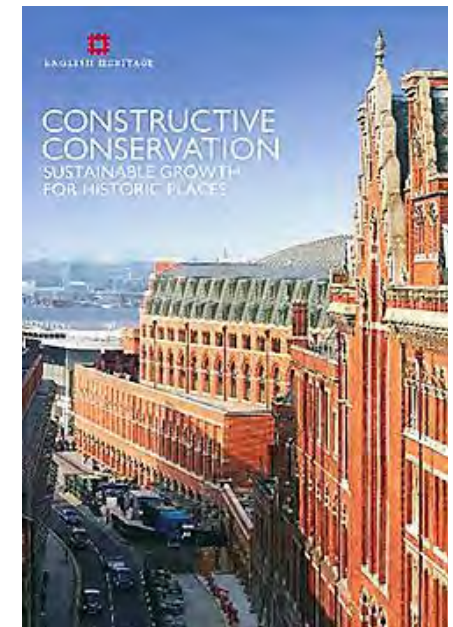
Constructive Conservation In Practice (2008)

"The aim is to recognize and reinforce the historic significance of places, while accommodating the changes necessary to ensure their **continued use** and **enjoyment**."



Constructive Conservation: Sustainable Growth for Historic Places (2013)

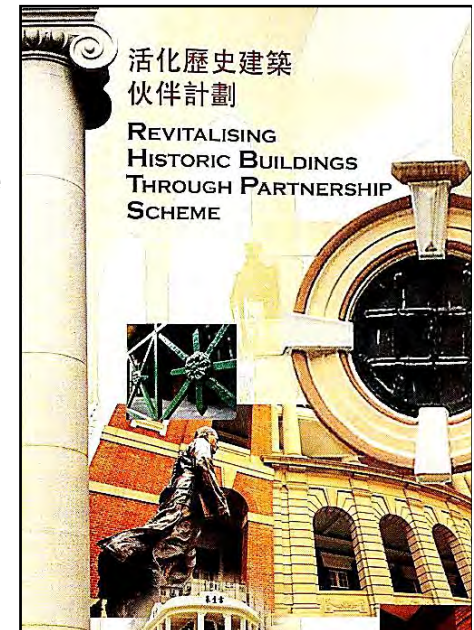
"... these case studies emphasise the **balance between understanding significance and accommodating necessary alterations** to ensure the continued use and enjoyment of historic buildings, monuments and landscapes."



HK Development Bureau's Revitalisation Scheme (2008)

Revitalising Historic Buildings through Partnership Scheme (2008)

"Through good **adaptive reuse** of our historic buildings, we aim to give these buildings a new lease of life for the **enjoyment** of the public."



"We will strike a **balance between sustainable development and heritage conservation**."

IMPORTANCE OF HERITAGE CONSERVATION

Over the past one and a half centuries, Hong Kong has transformed from a small fishing village to Asia's world city. Heritage bears witness to the development of our city and is a valuable and unique asset of our community.

BALANCING CONSERVATION AND DEVELOPMENT

Development and conservation are not opposing forces. We will strike a balance between sustainable development and heritage



conservation. We will implement a package of measures to enhance heritage conservation. This leaflet describes

the "Revitalising Historic Buildings Through Partnership" Scheme.

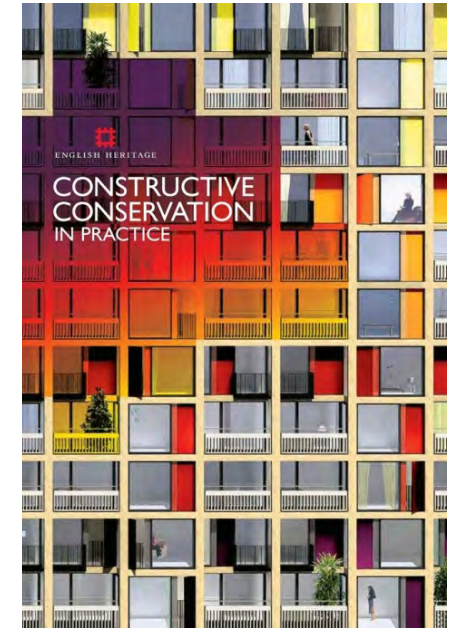
ADAPTIVE RE-USE OF GOVERNMENT-OWNED HISTORIC BUILDINGS

Through good adaptive re-use of our historic buildings, we aim to give these buildings a new lease of life for the enjoyment of the public.

UK English Heritage's Constructive Conservation (2008, 2013)

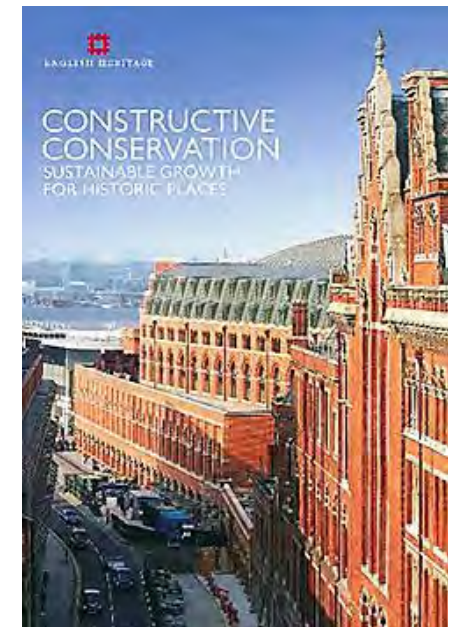
Constructive Conservation In Practice (2008)

"The aim is to recognize and reinforce the historic significance of places, while accommodating the changes necessary to ensure their **continued use** and **enjoyment**."



Constructive Conservation: Sustainable Growth for Historic Places (2013)

"The Constructive Conservation philosophy is underpinned by Conservation Principles: policies and guidance for the sustainable management of the historic environment published in 2008. **This codification of our best practice ensures consistency across our professional conservation advice and enables developers and architects to see the basis on which we make judgements.**"



Constructive Conservation / Revitalisation of heritage buildings

We **advocate**

- **CONSTRUCTIVE CONSERVATION:** integrating the old with innovative new design to make a building of the past relevant to the needs of the present, and thereby continue it to the future.

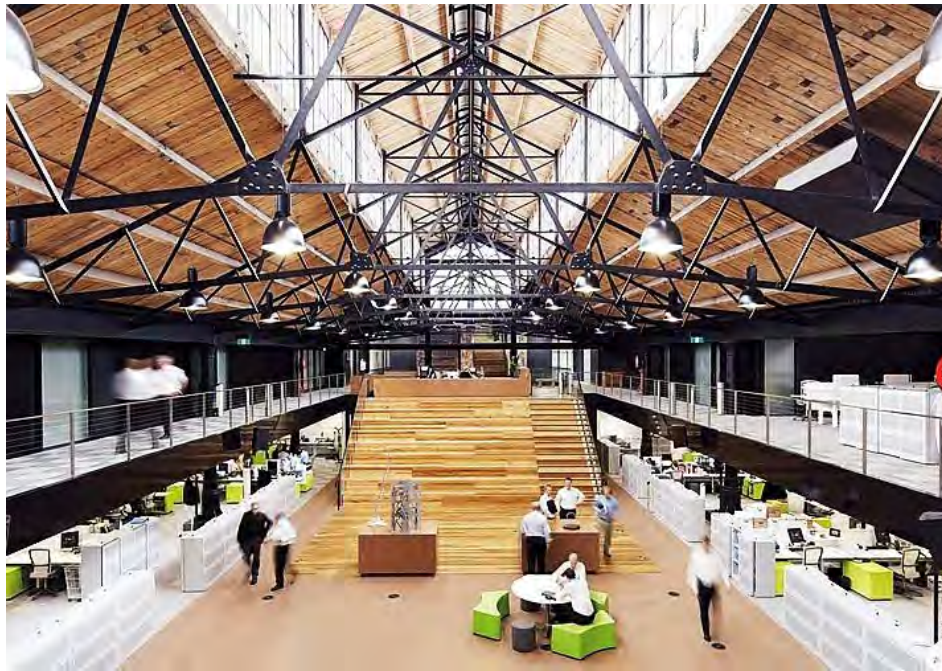
我們 **提倡**

- **建設性保育：**以新舊合一，使到過去的建築能迎合現今所需，從而延續到未來。

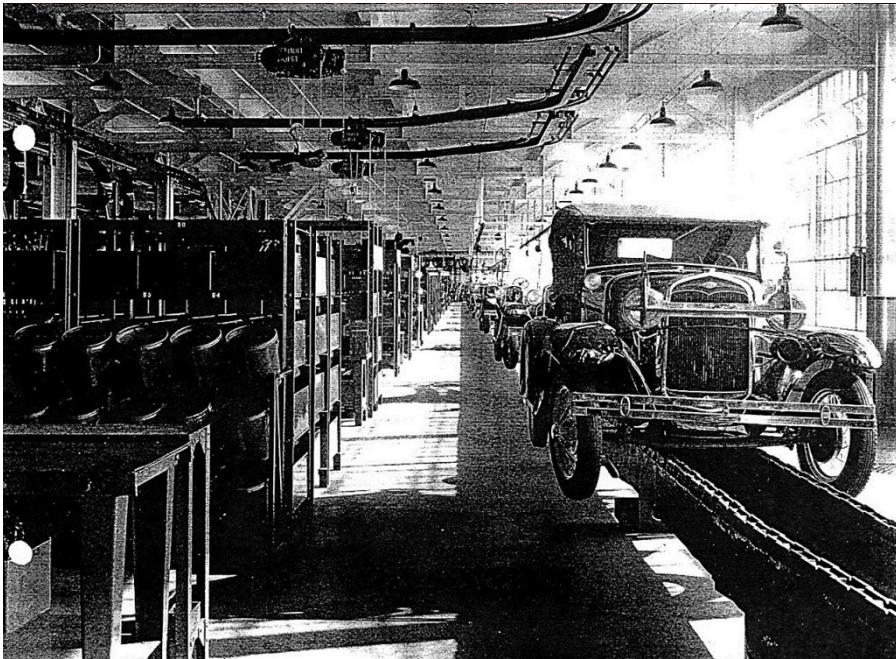
Overseas examples 外地例子



Adapting the old Gas Works as Offices and Amenity Spaces
30 The Bond, Sydney, 2004 (Tanner Architects, Australia)



Adapting the former No. 2 Railway Goods Shed as Offices and Amenity Spaces
Goods Shed North, Melbourne, 2009 (BVN Architecture, Australia)



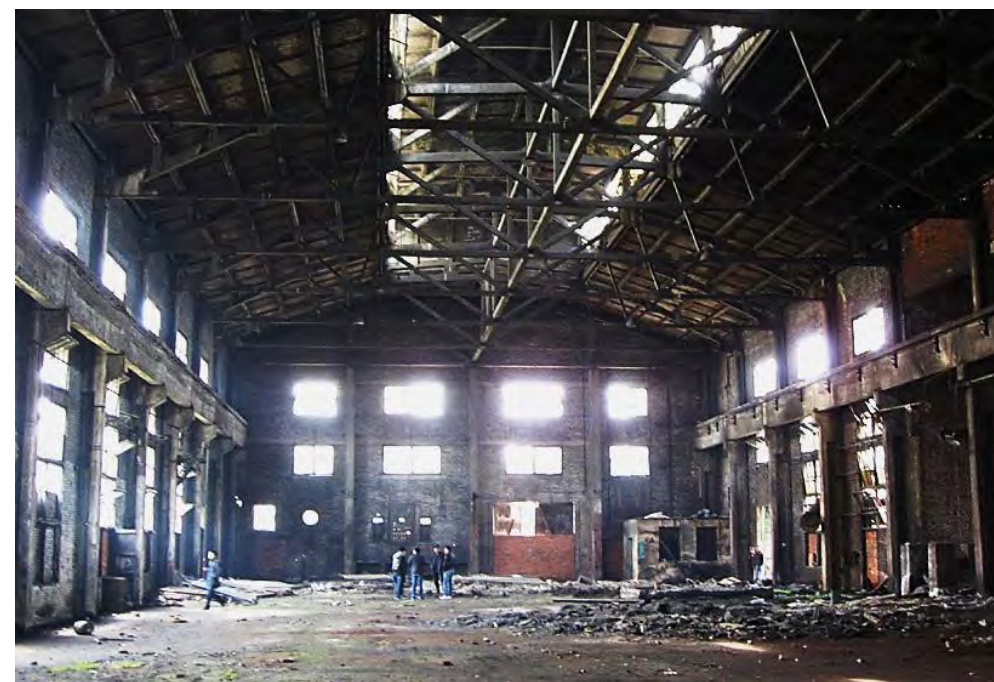
Adapting the historic Ford Motor Company Assembly Plant as an event venue
Craneway Pavilion, Richmond, CA, 2009 (Marcy Wong Donn Logan Architects, USA)



Adapting an old Japanese Army Headquarters as a boutique hotel
The Waterhouse at South Bund (水舍), Shanghai, 2010 (Neri & Hu Design and Research Office, USA)



Adapting an old Japanese Army Headquarters as a boutique hotel
The Waterhouse at South Bund (水舍), Shanghai, 2010 (Neri & Hu Design and Research Office, USA)



Adapting the former Hangzhou Machine Factory as offices and for commercial uses
Hangzhou XinTianDi Factory H, 杭州新天地工業遺存 H 地塊 (under construction) (Serie Architects, UK)

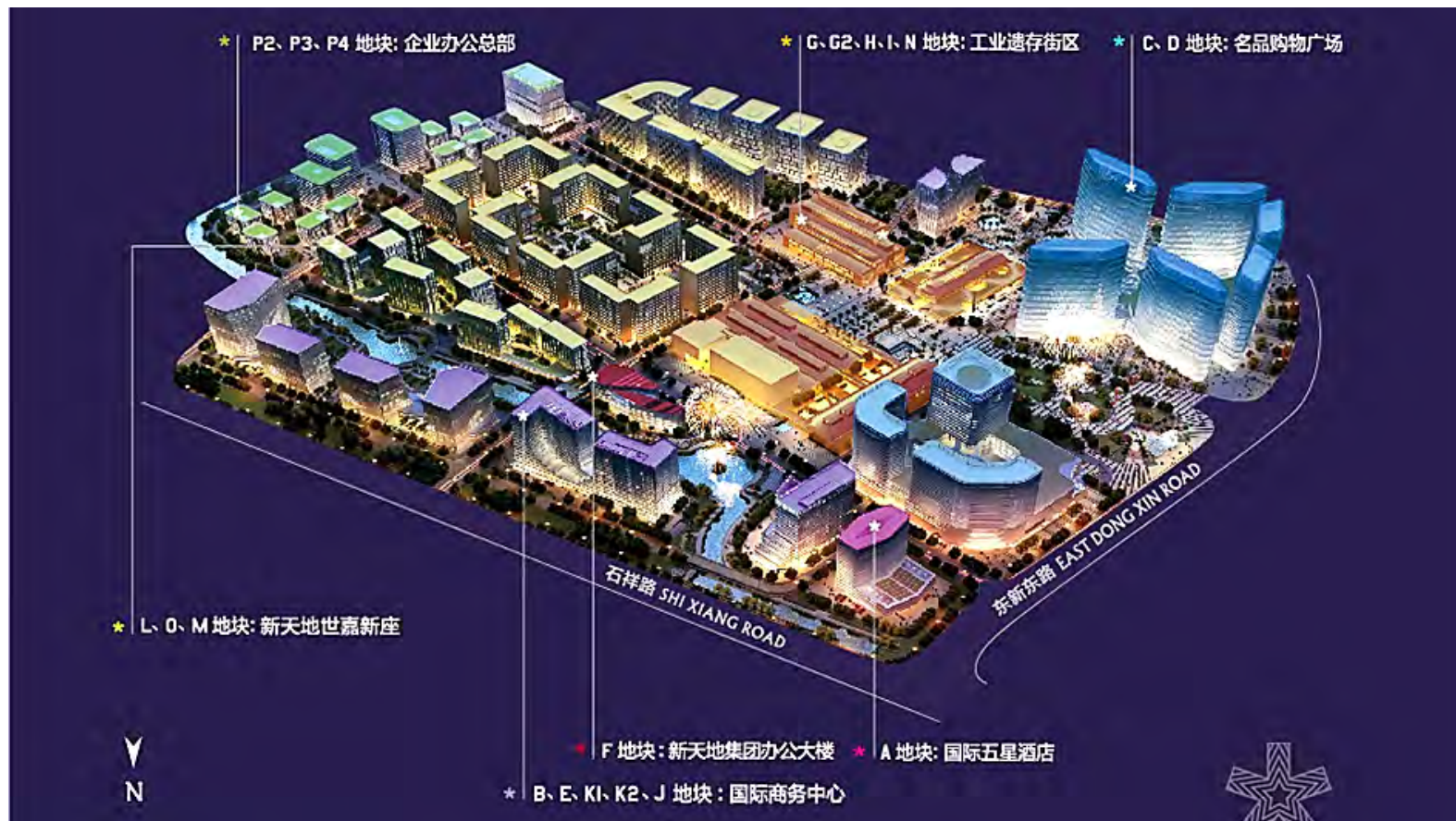
150万方·超级城市中心区

HANG ZHOU XINTIANDI

杭州新天地是新天地集团斥资百亿打造的中国第一个以工业遗存为核心的城市综合体，杭州市十大重点工程之一。

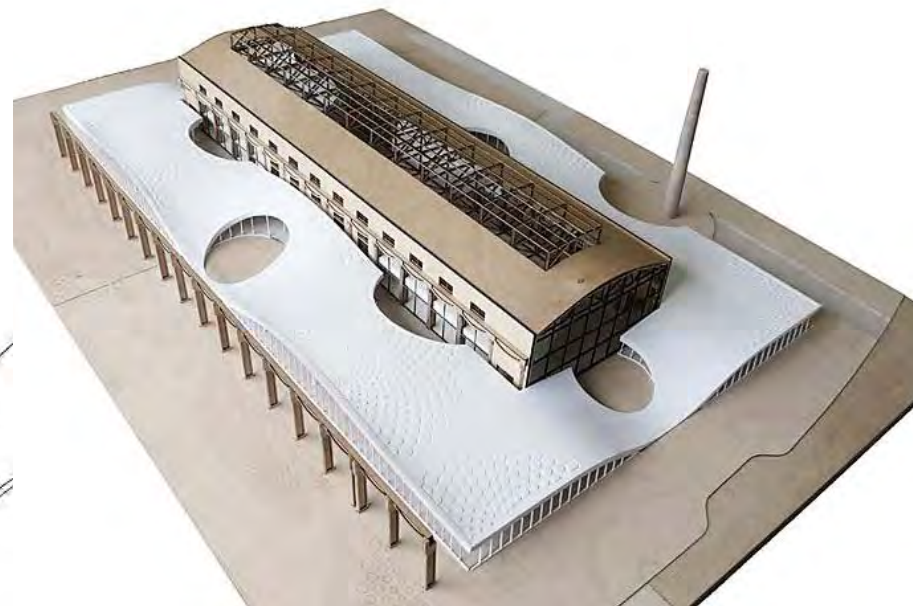
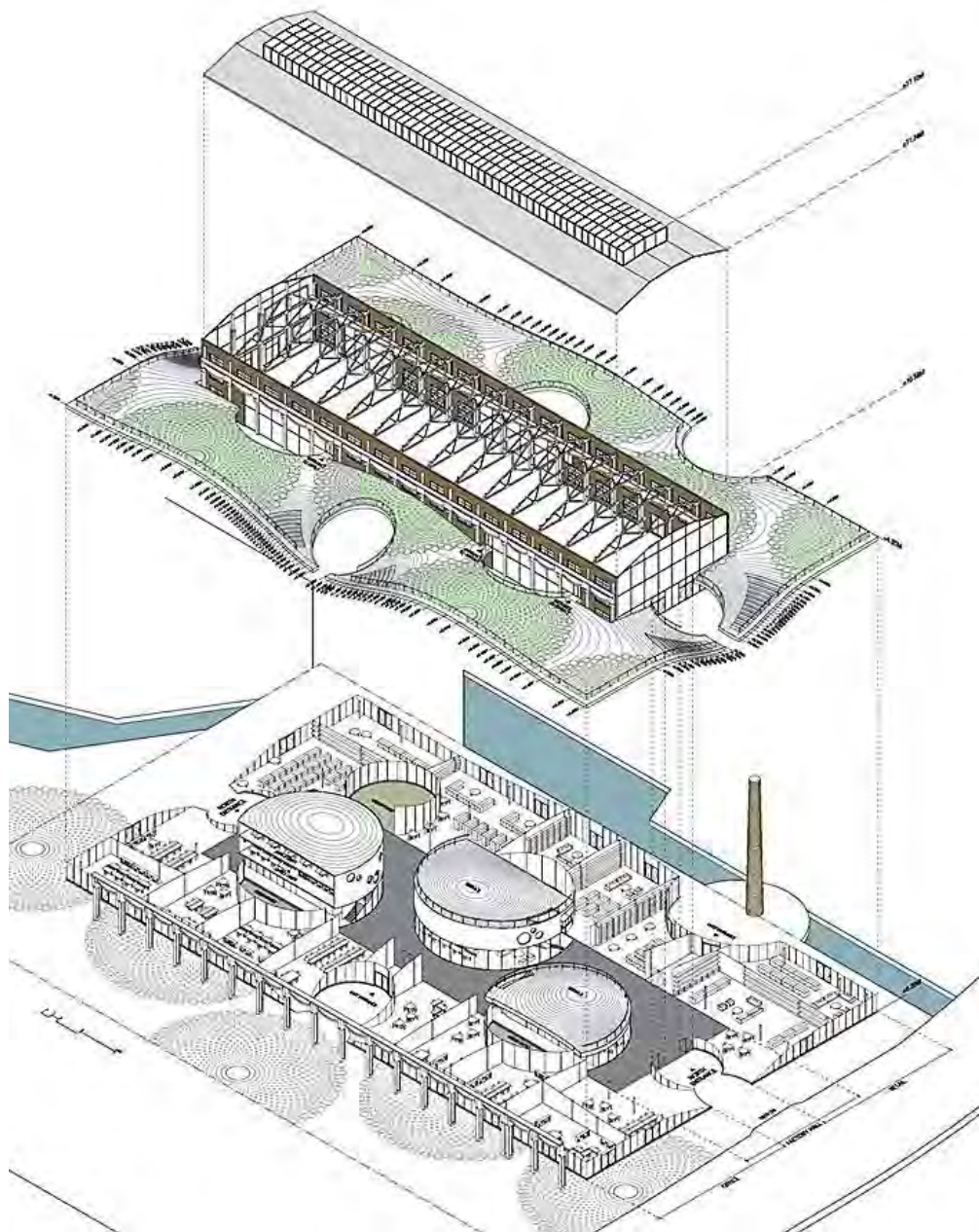
项目位于武林广场东北，距西湖仅为6公里，坐镇秋石快速路、德胜快速路、上塘中河高架、石祥路四大快速路构成的“井”字形交通核心，杭州地铁3、4号线交汇处，是杭州罕见的双地铁上盖物业。

新天地规划用地800余亩，总建筑面积150万方，力邀3位世界建筑大师、8大国际顶尖机构联袂规划设计，保留了原杭州重机厂风格独特的工业建筑，以前瞻性的规划设计，赋予旗舰级巨型商业中心、复合型国际资本群、工业遗存街区、亚洲第一大IMAX影院、新天地世嘉新座等丰富业态，为杭州开创新的活力中心。

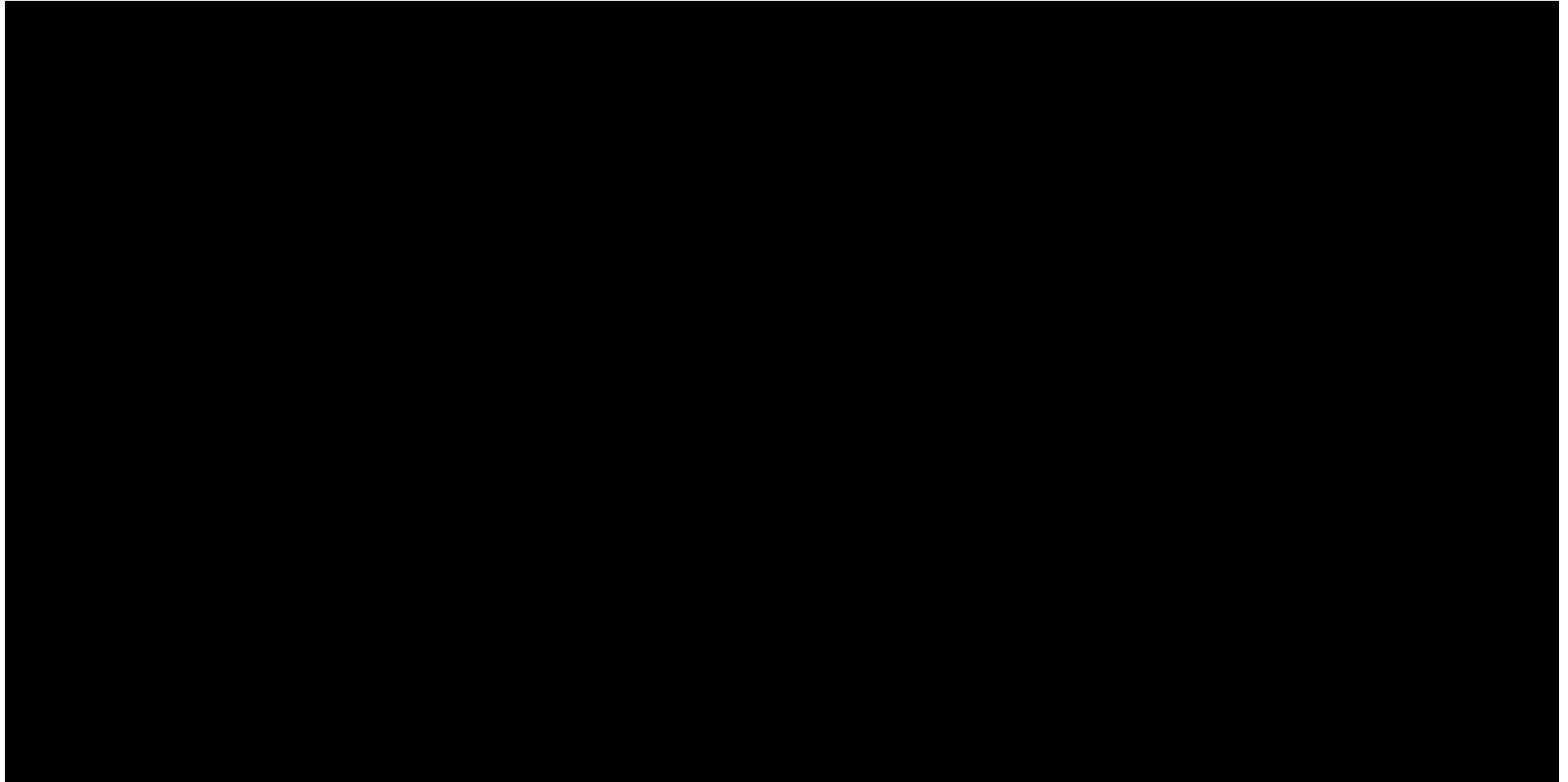


Adapting the former Hangzhou Machine Factory as offices and for commercial uses

Hangzhou XinTianDi Factory H, 杭州新天地工业遗存 H 地块 (under construction) (Serie Architects, UK)



Adapting the former Hangzhou Machine Factory as offices and for commercial uses
Hangzhou XinTianDi Factory H, 杭州新天地工業遺存 H 地塊 (under construction) (Serie Architects, UK)



Video at: <http://vimeo.com/15801909>

Adapting the former [Hangzhou Machine Factory](#) as offices and for commercial uses
Hangzhou XinTianDi Factory H, 杭州新天地工業遺存 H 地塊 (under construction) (Serie Architects, UK)

Local examples

本地例子

One of the first conservation projects that include innovative new design

The two Former Explosives Magazines of the Old Victoria Barracks (前域多利軍營炸藥庫 / 舊域多利軍營軍火庫) have been adapted as the new Asia Society Hong Kong Centre's art gallery (Magazine A) and multipurpose theatre (Magazine B), they were opened in 2012.



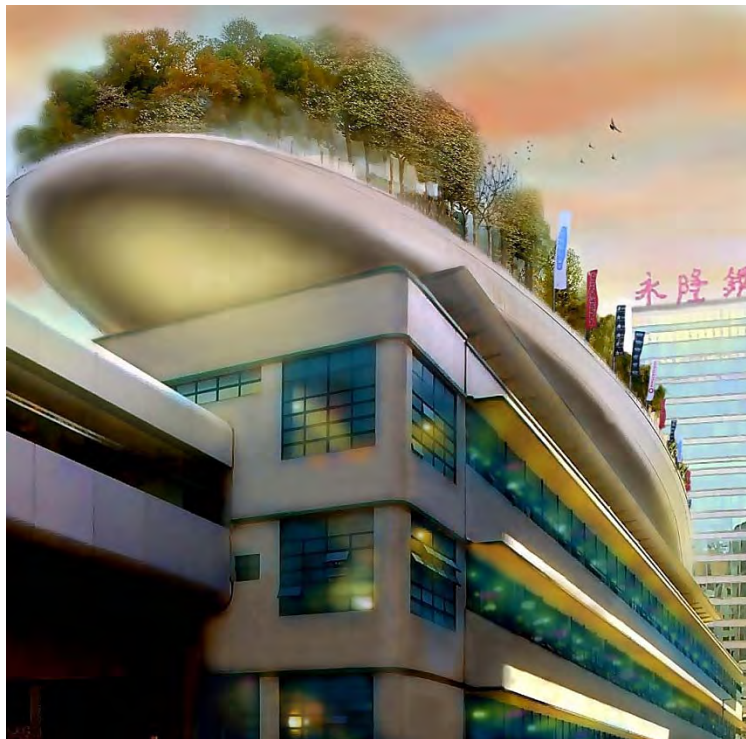


Adapting two rows of shophouses as offices, studios & exhibition venues for comic & animation artists
Comix Home Base, Wan Chai, Hong Kong, 2013 (Urban Renewal Authority, HK)

Innovative design in revitalization – HK is now at a critical juncture

有創意, 具創新的活化再用建築文物: 香港正處於關鍵時刻

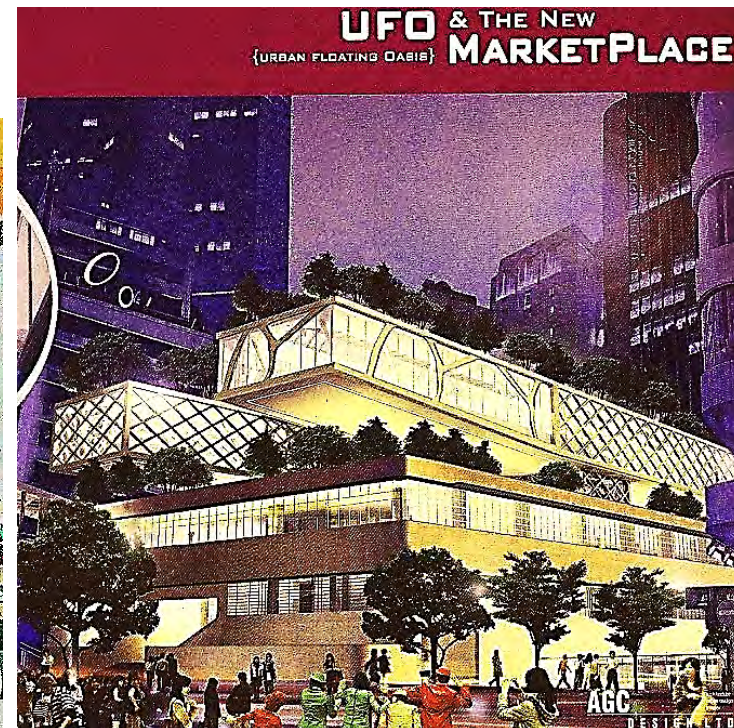
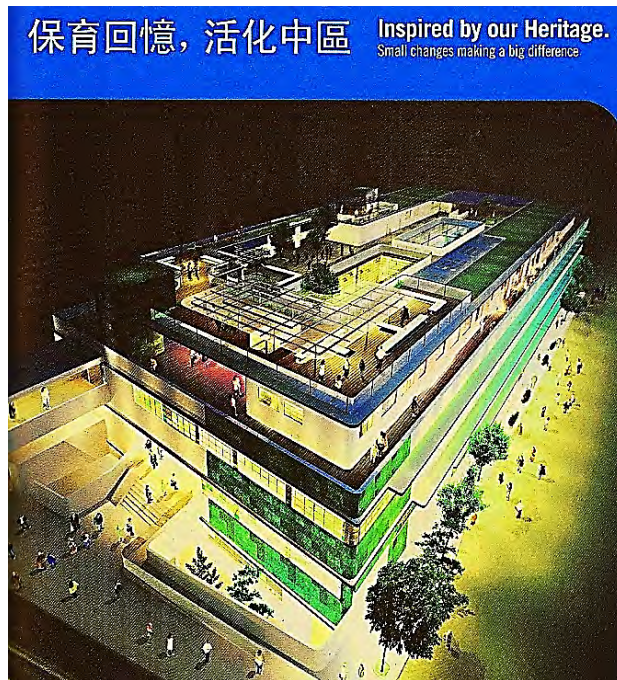




Provocative concept proposals for the URA's Revitalisation of Central Market, Hong Kong, 2009 (Lee Ho Yin of ACP, HKU)

Innovative design in revitalization – HK is now at a critical juncture

有創意, 具創新的活化再用建築文物: 香港正處於關鍵時刻



Innovative design in revitalization – **HK is now at a critical juncture** 有創意, 具創新的活化再用建築文物: **香港正處於關鍵時刻**

"Urban Floating Oasis (UFO)" by AGC Design Ltd. 由創智建築師有限公司設計的「漂浮綠洲」

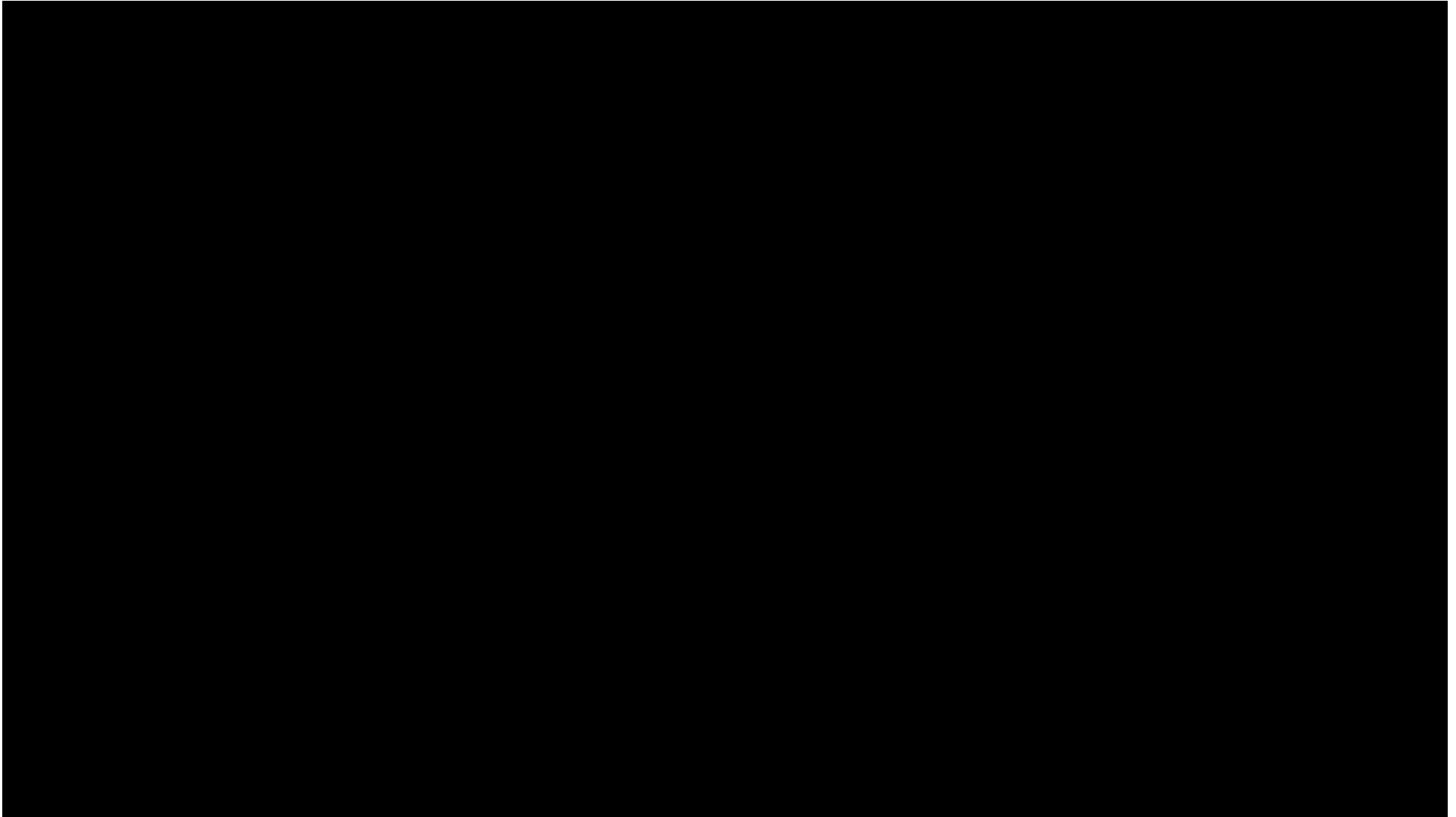


Innovative design in revitalization – **HK is now at a critical juncture**

有創意, 具創新的活化再用建築文物: **香港正處於關鍵時刻**

"Urban Floating Oasis (UFO)" by AGC Design Ltd. 由創智建築師有限公司設計的「漂浮綠洲」

YouTube at www.youtube.com/watch?v=sxVSw4K-es8



SUMMARY 總結

We advocate

- NO! to preserving old buildings as museum objects
- YES! to revitalizing old buildings with innovative design to serve the needs of communities

我們 提倡

- 說不：僵化舊建成為古董
- 說得：活化舊建，創新設計，實際用途，有利社區

Thank You

謝謝