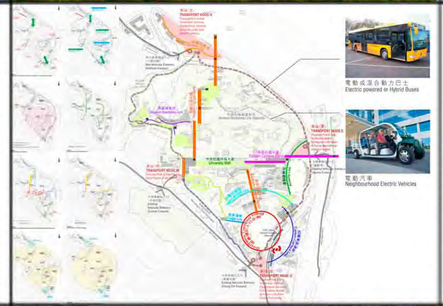
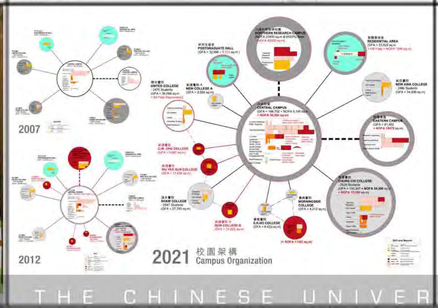
校園傳統及自然環境保育
Preservation of Campus Heritage and Environment

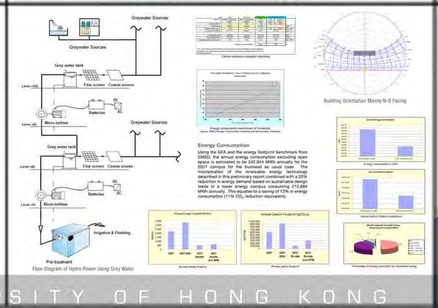
無車校園
Vehicles-Free Campus



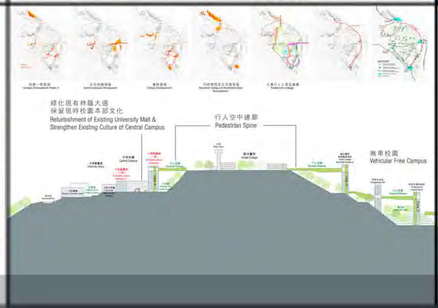
學院體制之持續發展
Continuous Development of College System



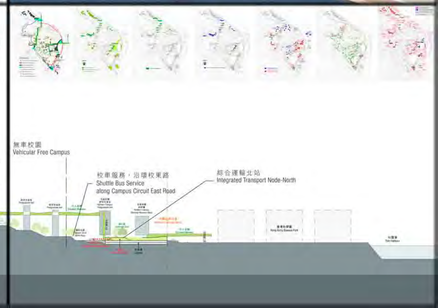
再生能源運用
Utilization of Renewable Energy



國際級研究大學
Comprehensive Research University



海天一色的校園景緻
A Verdant Campus



CAMPUS MASTER PLAN

THE CHINESE UNIVERSITY OF HONG KONG

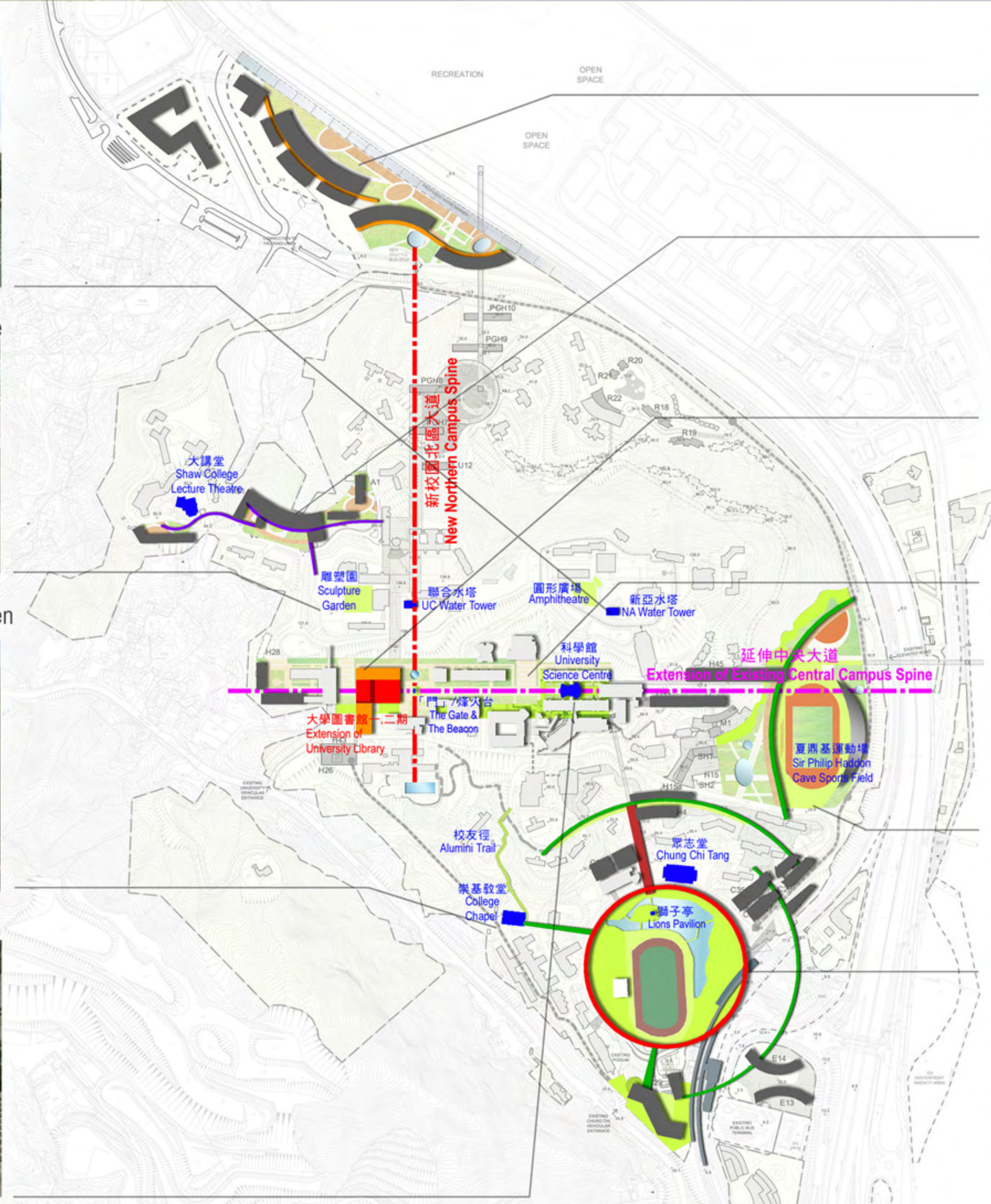
校園傳統及自然環境保育
Preservation of Campus Heritage and Environment

新亞水塔和圓形廣場
New Asia Water Tower & Amphitheatre

雕塑園和聯合水塔
United Water Tower & Sculpture Garden

崇基教堂 College Chapel

科學館 University Science Centre



Northern Research Campus

Majority of the teaching facilities expansion are fulfilled by the northern campus expansion.

Colleges

To preserve the collective memory of the alumni and valuable tradition, no major modification works are proposed to the 4 main Colleges. Future hostel need is mainly fullfill by new Colleges proposed.

Central Library and the Beacon

Traditionally to be the Heart of the Campus, its importance is further reinforced with the introduced Northern Campus Spine intersecting with the existing Central Campus Spine.

The Mall

With the sacred position of this area in the history of the Chinese University, the buildings within the Mall are proposed to preserve as existing. Nevertheless, the environment can be significantly improved with the removal of on-street-parking and vehicular traffic, major upgrading work on the landscape design of the Mall and teaching facilities at the eastern side of the Mall are proposed.

Recreational Centre

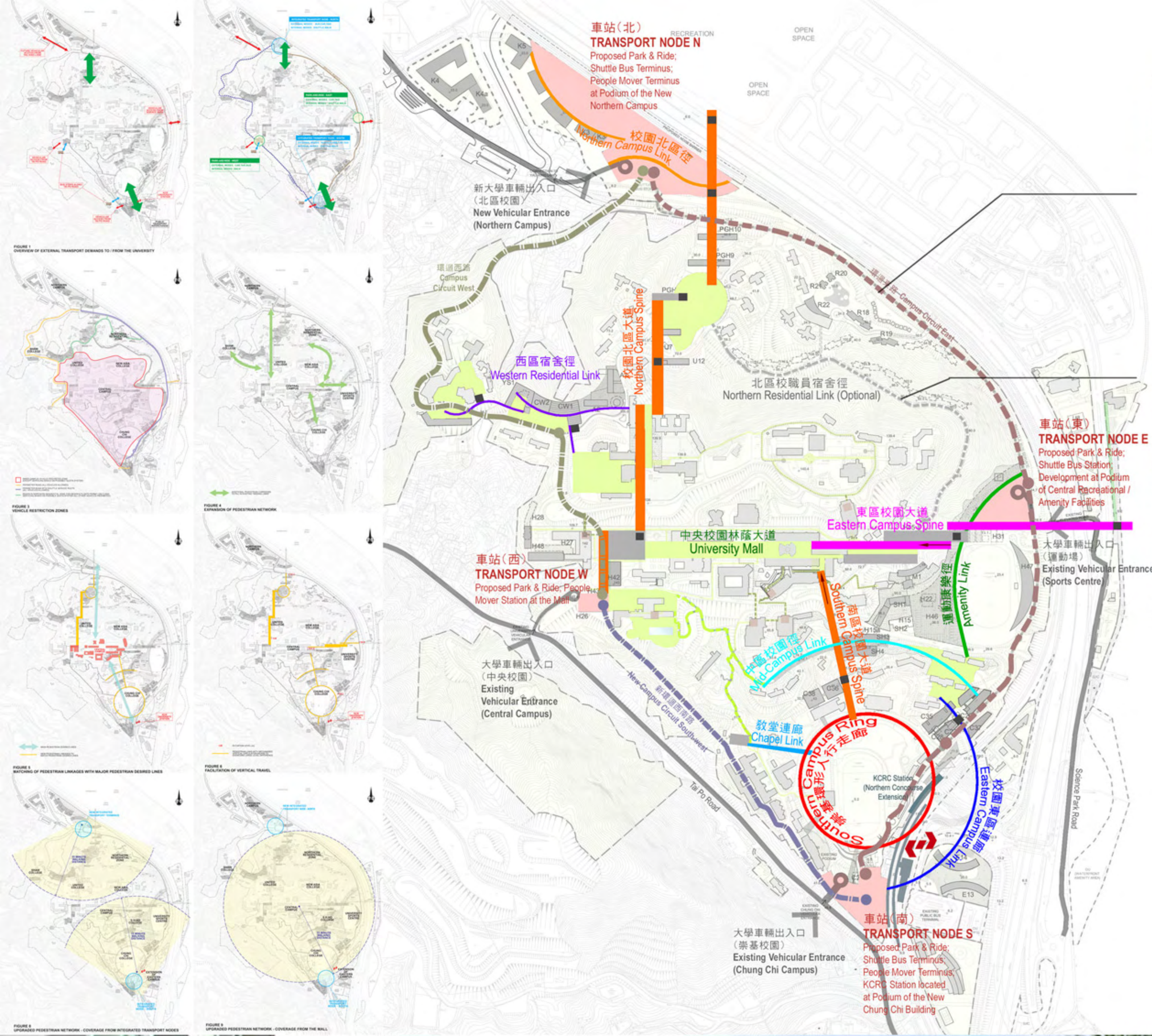
The traditional location of Recreational facilities is maintained and further reinforced by new and better facilities and connection.

Origin of the Chinese University

Chinese University traces back its origin at the present location of Chung Chi College. Wei Yuan Lake and the Sportsground provide visual focus and openness to the Southern Campus. A covered pedestrian route is proposed to link up various building in Chung Chi College and no building is proposed within this pedestrian ring route in order to preserve the historical character of this part of the Campus.

傳統與校園發展的和諧融合
Harmony between Old and New
雙層快速有蓋行人通道
Double Storey Coverd Walkway
池旁路環湖行人專用區
Pond Crescent Pedestrian Zone
CAMPUS M

無車校園
Vehicles-Free Campus

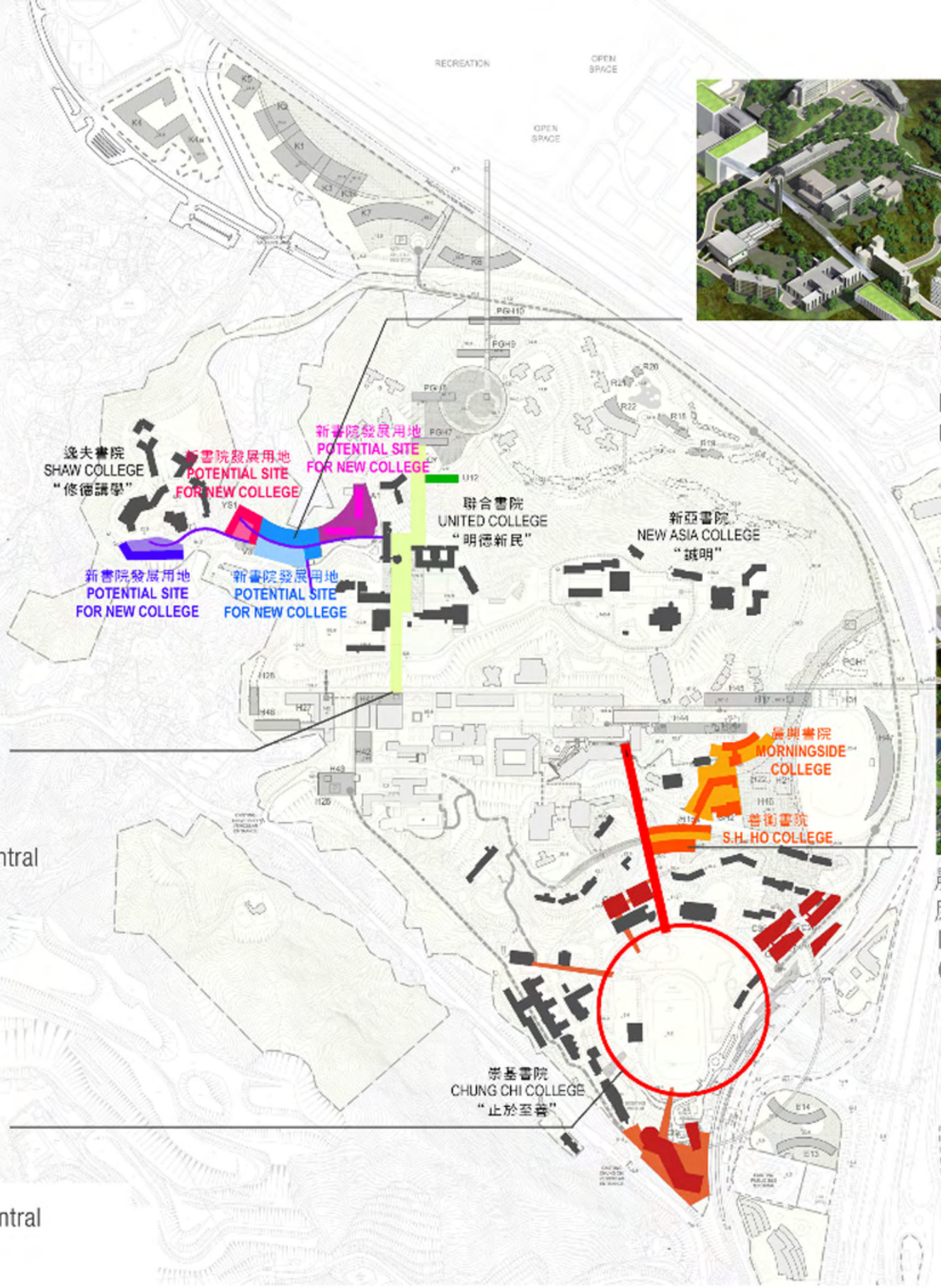


電動或混合動力巴士
Electric powered or Hybrid Buses

電動汽車
Neighbourhood Electric Vehicles

擬建行人上蓋
New Canopy
暢通無障礙通道
Barrier Free Access
無車綠化中央道
Vehicular Free Central Avenue
ASTER PLAN

學院體制之持續發展
Continuous Development of College System

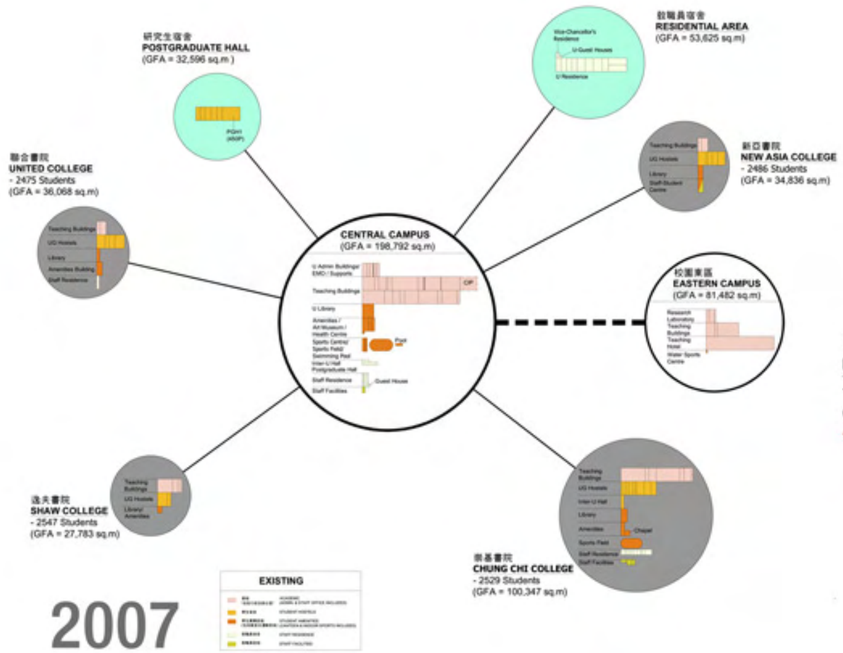


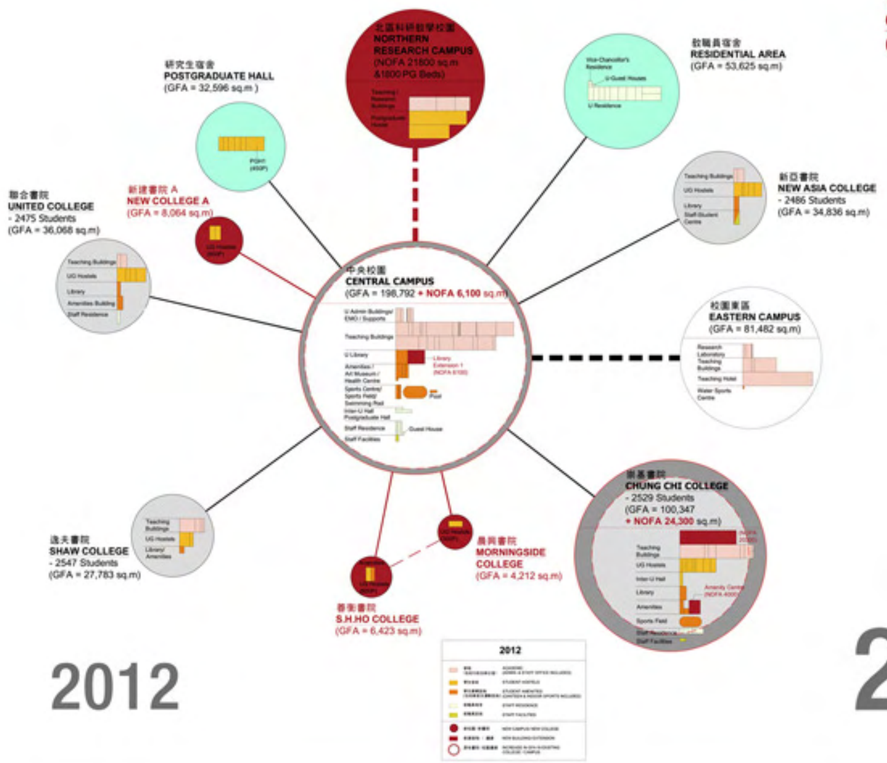
新建書院連接逸夫書院
及聯合書院
New College Linking Shaw College &
United College

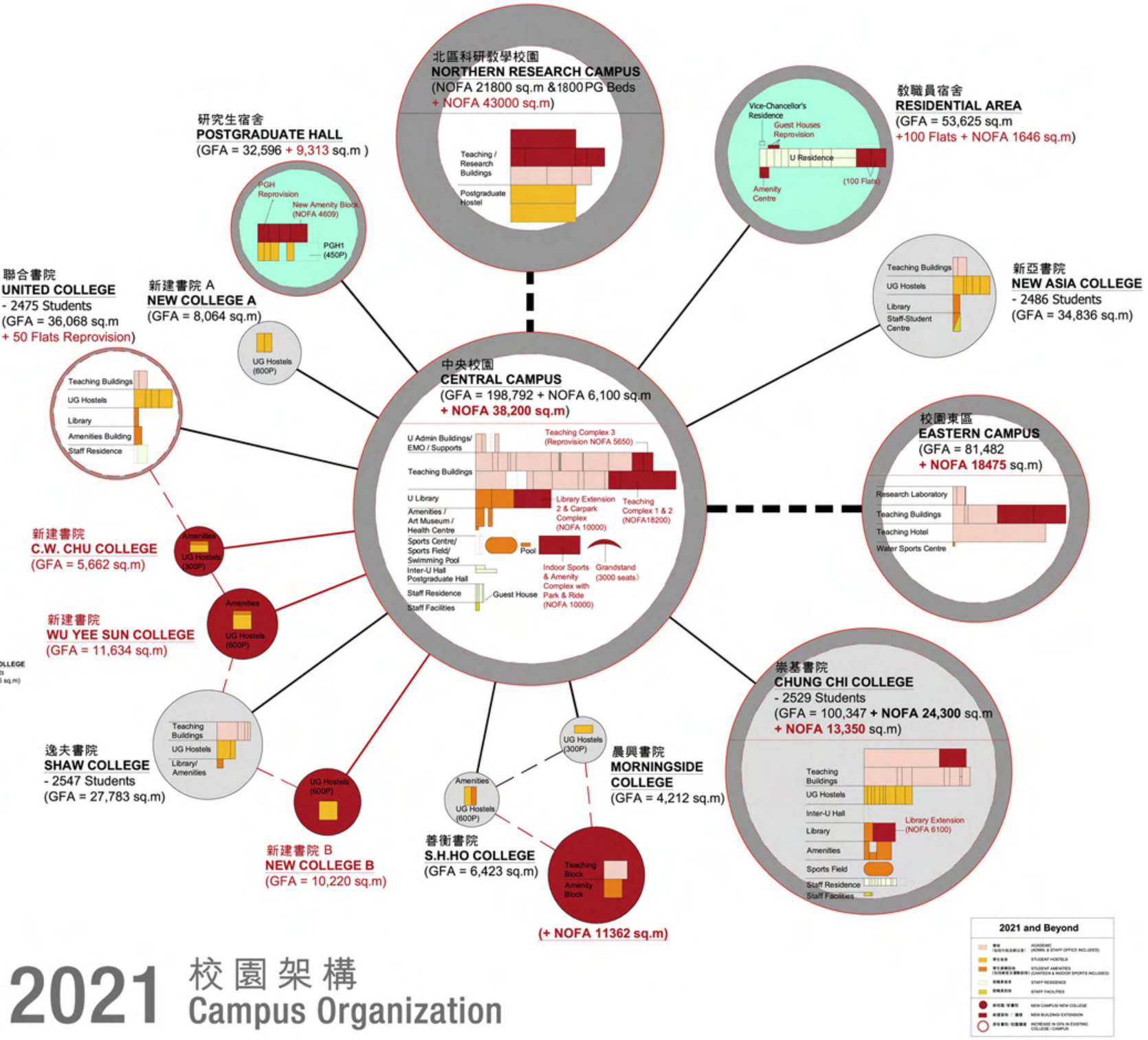
校園北區大道連接中央校園及
聯合、新亞書院
Northern Campus Spine Connecting Central
Campus and United, New Asia College

晨興書院及善衡書院綜合
康樂中心
Integrated Amentiy Centre for Morningside
College and S.H. Ho College

南區校園大道連接崇基人行
走廊及中央校園
Southern Campus Spine Connecting Central
Campus & Chung Chi College







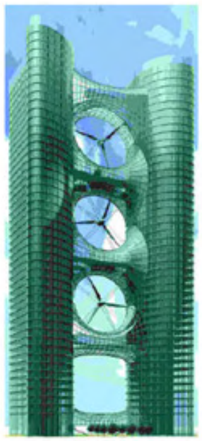
2021 校園架構 Campus Organization

THE CHINESE UNIVER

再生能源運用
Utilization of Renewable Energy

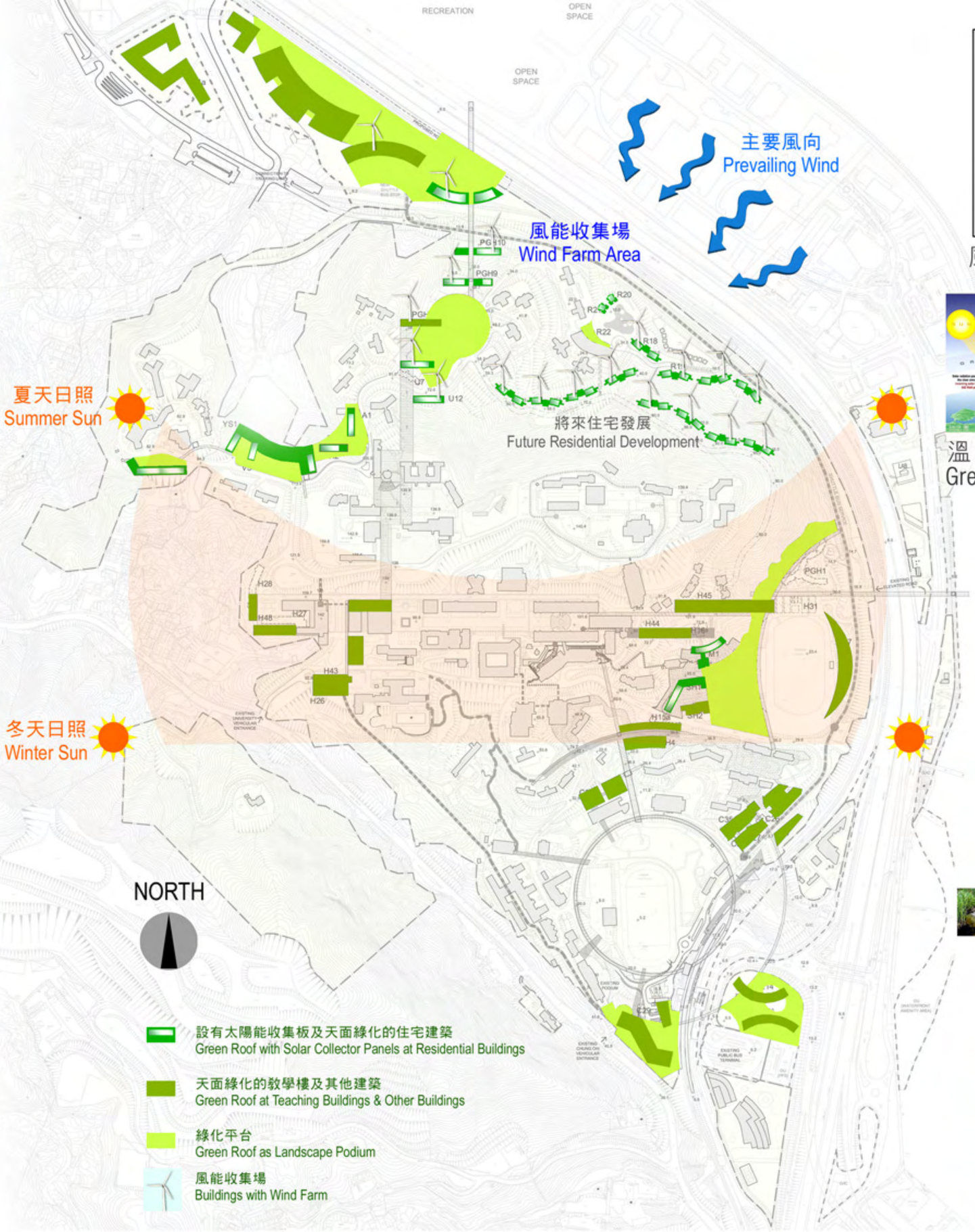
大學北面校園風能，太陽能及水力發電建築群
Wind Power, Solar Power & Stream Water Hydro Power Building System at Northern Campus

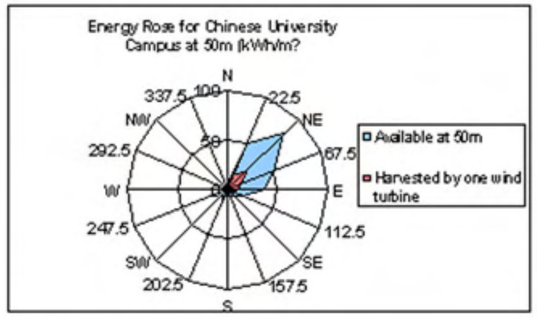
太陽能發電
Solar Power Strategy



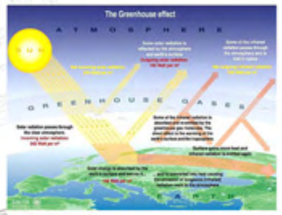
風力發電
Wind Power Strategy

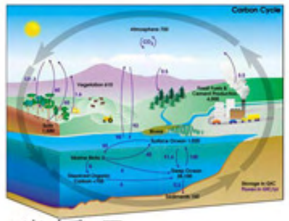
河流動能再用
Stream Water Hydro Power System





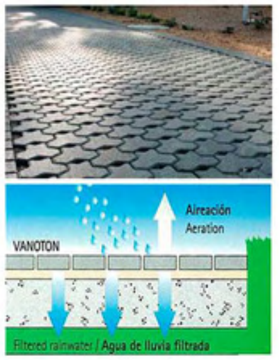
風向 Wind Direction



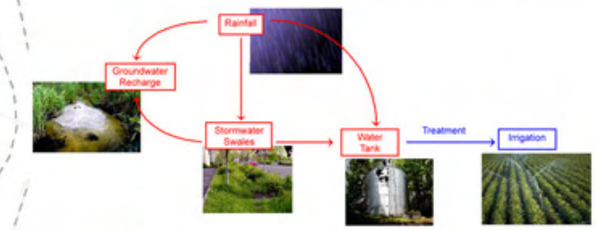


溫室效應
Green House Effect

碳循環
Carbon Cycle

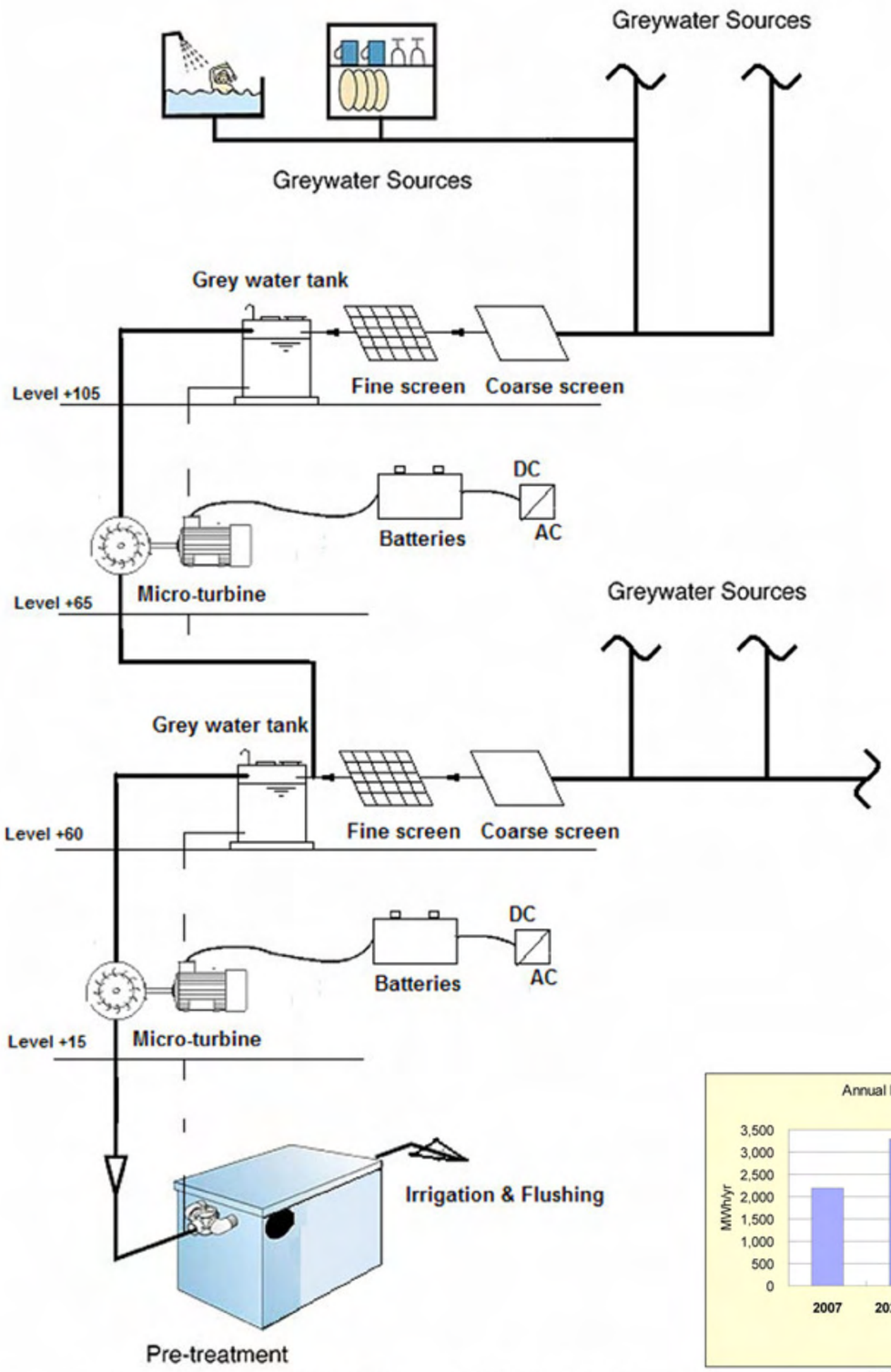


可滲透地磚 Ecological Paving



雨水循環再用 Rain Water Recycle

環保用料 Recycled Material

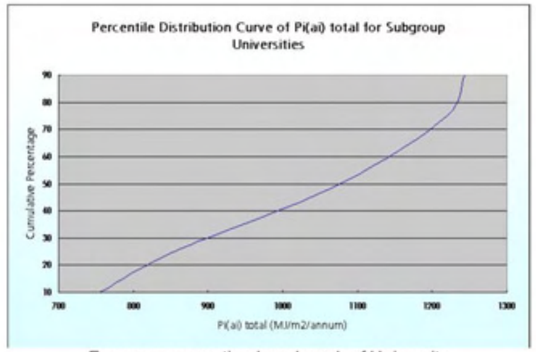


Flow Diagram of Hydro Power Using Grey Water

Year	2007	2021 BAU	2021 Shuttle	2021 Shuttle and APM		
Use of Fuel	Diesel Oil (automotive)	Diesel Oil (automotive)	LPG	LPG	Electricity	
	MJ/litre	MJ/litre	MJ/litre	MJ/litre	MJ/km	
Energy density of	38.6	38.6	25.3	25.3	15.3	
Total fuel used	204,367	306,550	66,456			litre/yr
[1,2] Carbon emission per fuel	3.00	3.00	1.80	1.80	0.62	kgCO $_2$/litre
Annual carbon footprint	613,100	919,651	119,621	305,129		kgCO $_2$/yr
Energy footprint (MJ)	7,888,558	11,832,837	1,681,333	2,276,681		MJ/yr
Energy footprint (kWh)	2,191,266	3,286,899	467,037	632,411		kWh/yr
Equivalent carbon emission factor	0.28	0.28	0.26	0.48		kgCO $_2$/kWh
Reduction compare with BAU			86.99	66.82		%

[1] Part 1 Government procurement of motor vehicles, a review of environmental safety and cost considerations
[2] Equivalent Carbon Dioxide Emissions, Hong Kong Building Environmental Assessment Method, HK-BEAM
BAU=business as useful

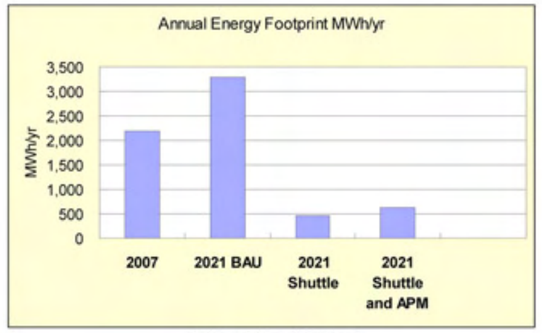
Carbon emission reduction summary



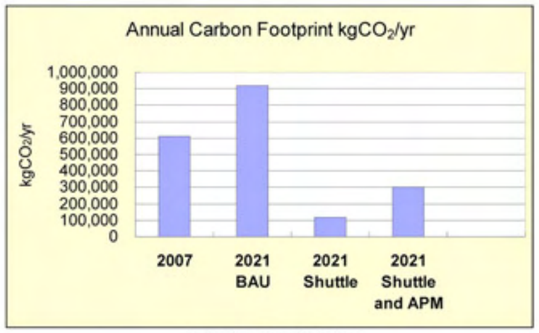
Energy consumption benchmark of University
Source: EMSD Energy Consumption Indicators and Benchmarks: Indicators

Energy Consumption

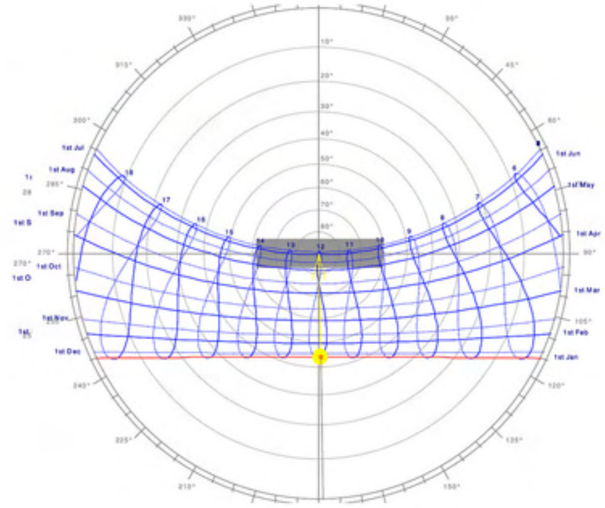
Using the GFA and the energy footprint benchmark from EMSD, the annual energy consumption excluding open space is estimated to be 242,944 MWh annually for the 2021 campus for the business as usual case. The incorporation of the renewable energy technology described in this preliminary report combined with a 20% reduction in energy demand based on sustainable design leads to a lower energy campus consuming 212,684 MWh annually. This equates to a saving of 12% in energy consumption (11% CO_2 reduction equivalent).



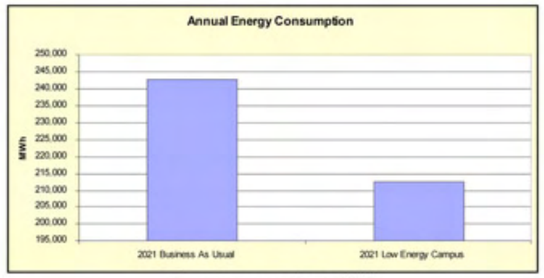
Annual energy footprint



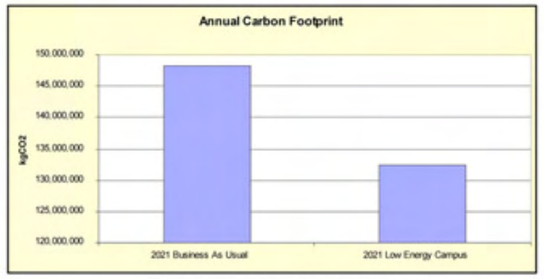
Annual carbon footprint



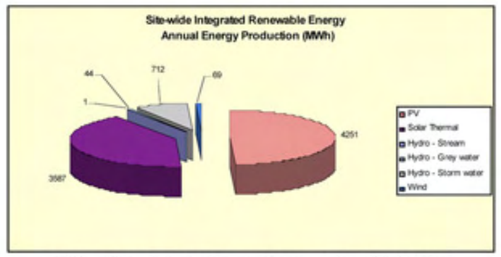
Building Orientation Mainly N-S Facing



Energy consumption in 2021



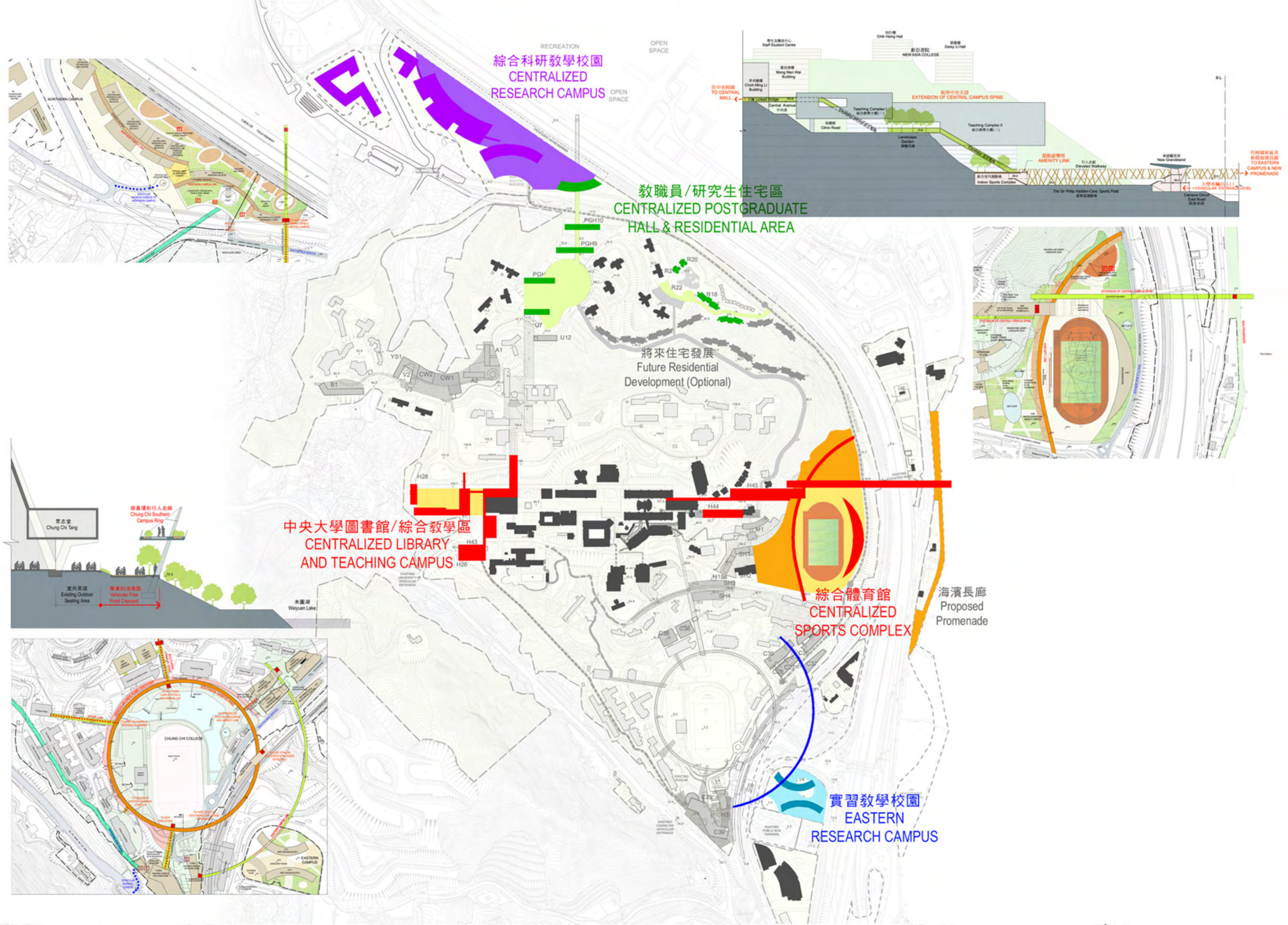
Annual carbon footprint reductions



Percentage of energy production by renewable energy

SITY OF HONG KONG

國際級研究大學
Comprehensive Research University


RECREATION
綜合科研教學校園
CENTRALIZED
RESEARCH CAMPUS
OPEN SPACE
OPEN SPACE
教職員/研究生住宅區
CENTRALIZED POSTGRADUATE
HALL & RESIDENTIAL AREA
將來住宅發展
Future Residential
Development (Optional)
中央大學圖書館/綜合教學區
CENTRALIZED LIBRARY
AND TEACHING CAMPUS
綜合體育館
CENTRALIZED
SPORTS COMPLEX
海濱長廊
Proposed
Promenade
實習教學校園
EASTERN
RESEARCH CAMPUS
NORTHERN CAMPUS
NEW ASIA COLLEGE
EXTENSION OF CENTRAL CAMPUS SPINE
AMENITY LINK
TO CENTRAL MALL
TO EASTERN CAMPUS & NEW PROMENADE
Chung Chi Tang
Existing Outdoor Seating Area
Vehicular Free Pond Crescent
Weiyuan Lake
CHUNG CHI COLLEGE
EASTERN CAMPUS

校園一期發展
Campus Development Phase 1

中央校園發展
Central Campus Develpment

書院發展
College Development

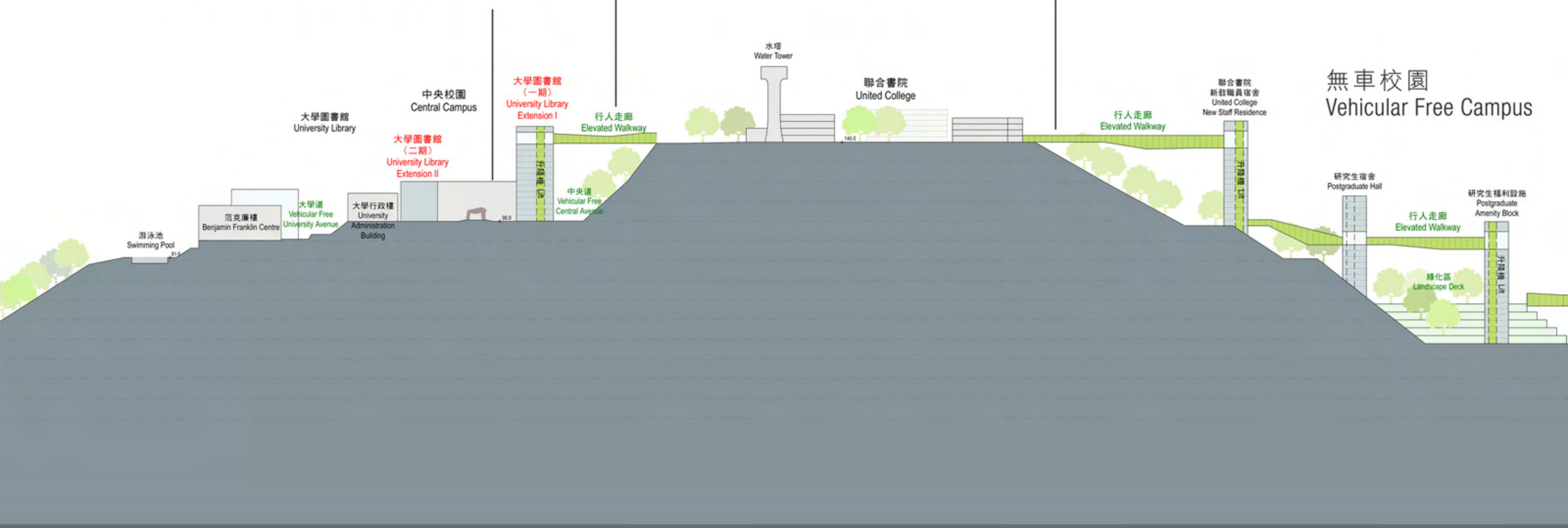
科研學院及住宅區發展
Research Campus & Residential Area Development

主要行人大道及連廊
Pedestrian Linkage

綠化現有林蔭大道
保留現時校園本部文化
Refurbishment of Existing University Mall &
Strengthen Existing Culture of Central Campus

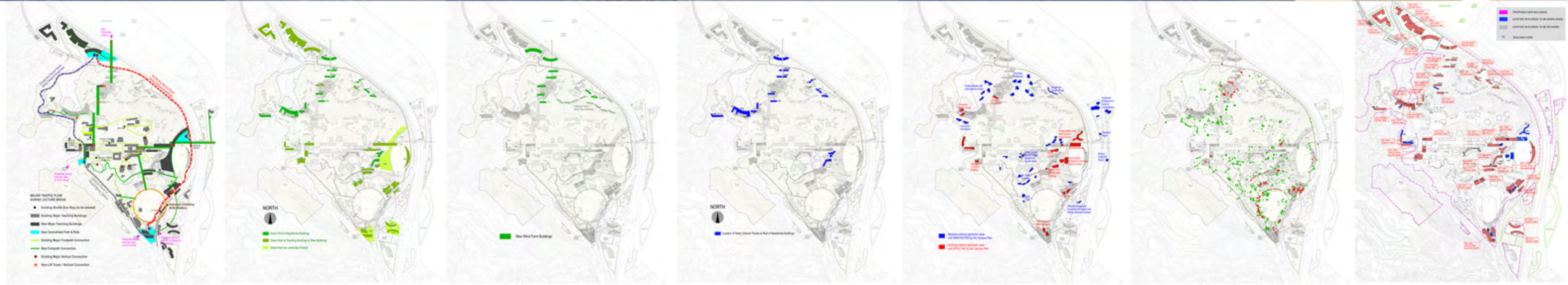
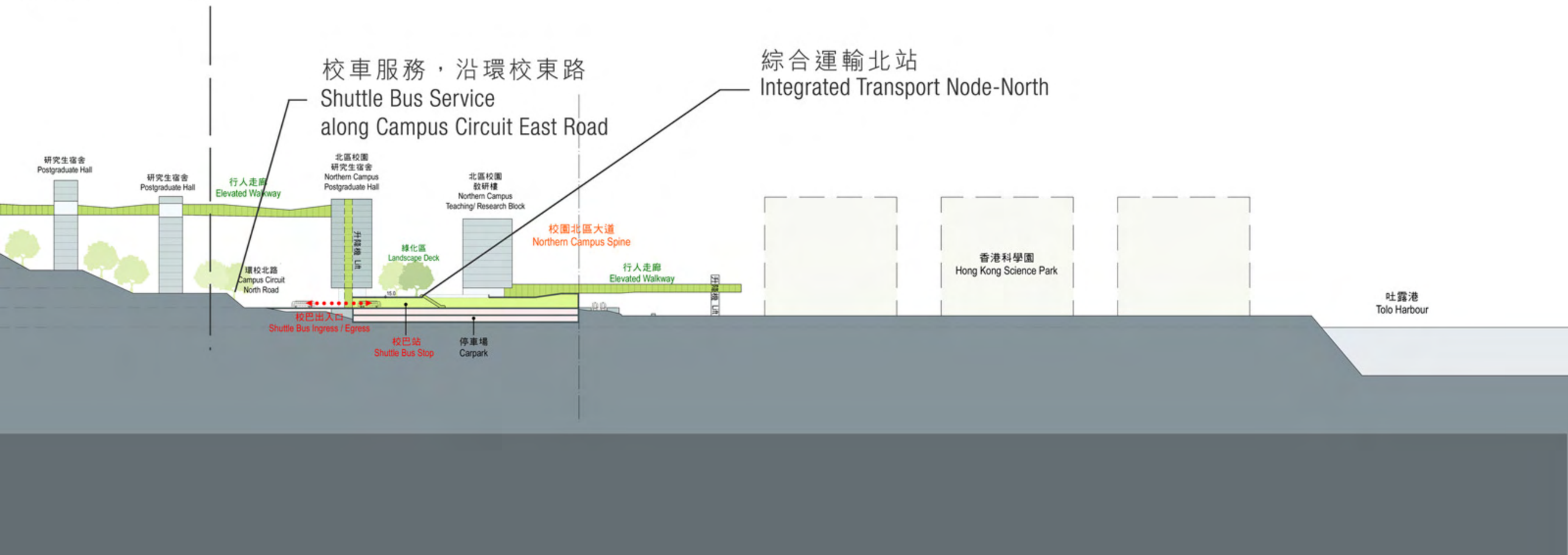
行人空中連廊
Pedestrian Spine

無車校園
Vehicular Free Campus



海天一色的校園景緻
A Verdant Campus

崇基建築群
Chung Chi College Cluster
新學生活動中心
及競賽級體育設施
Student Centre and
International Standard
Recreational Facilities
下層泊車及轉乘設施
Park & Ride Underneath
海濱走廊及水上活動中心
Promenade and Water Sport Centre



無車校園
Vehicular Free Campus