Challenges
In Hong Kong Land Supply
by Reclamation

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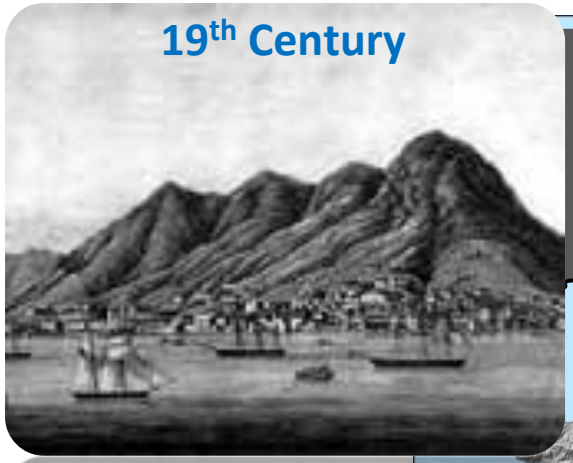
Content

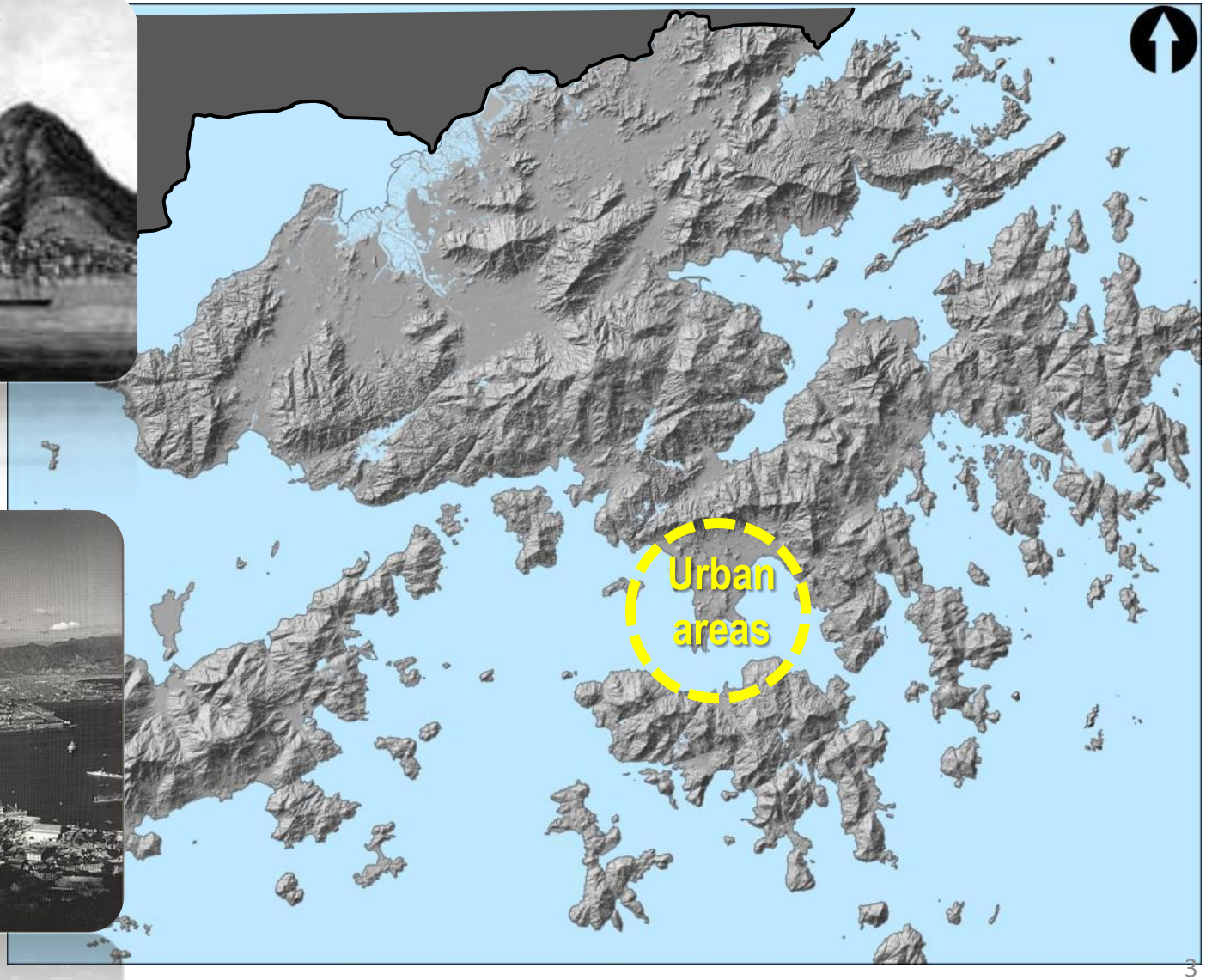
1. Brief History on reclamation in Hong Kong

2. Challenges of reclamation – in the past and present

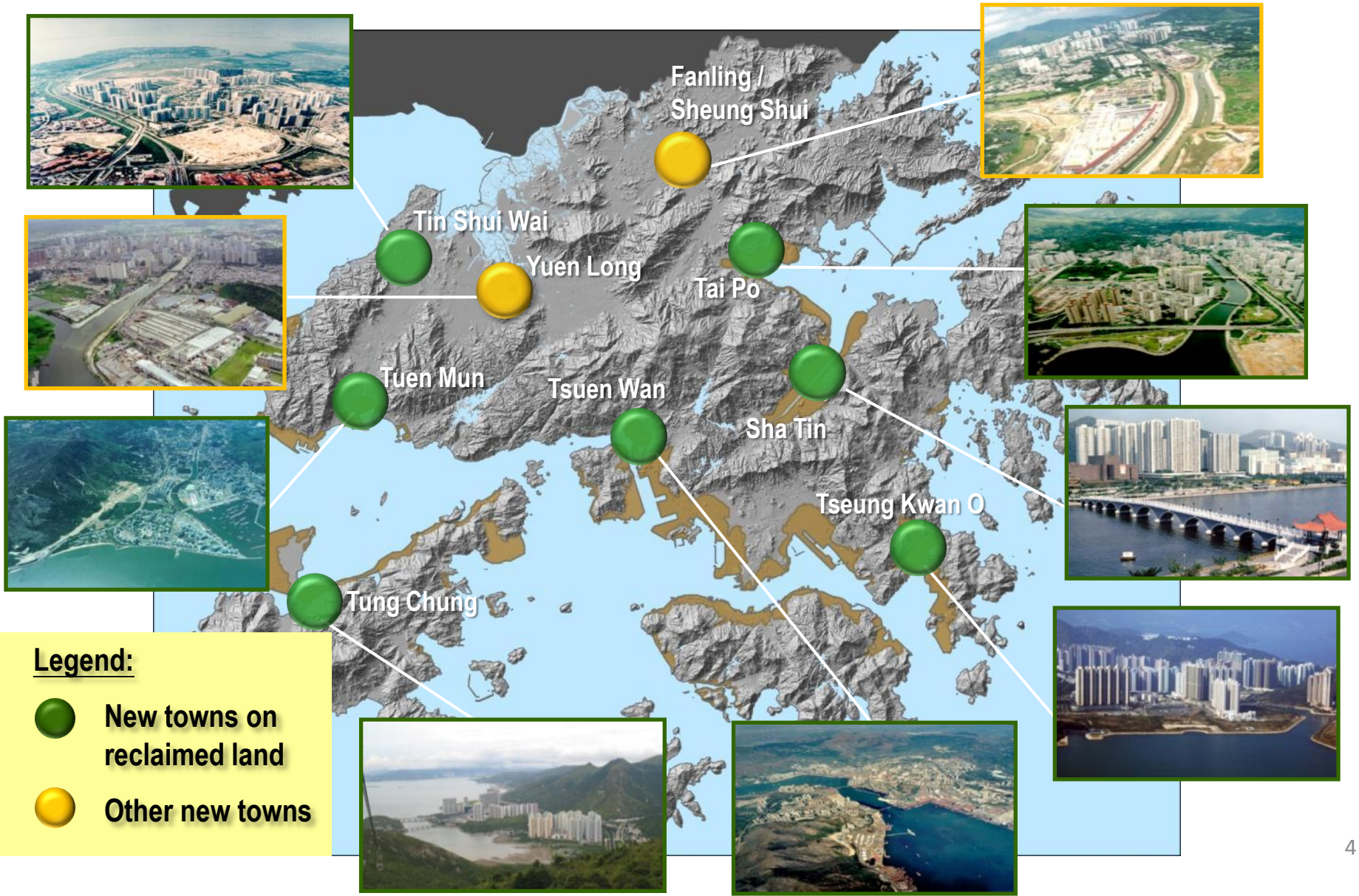
3. How we could meet the new challenges

History of Reclamation – Early Age





New Town Development



Reclamation for Airport Core Programme

Challenges in the Past:

Pressure for more land due to:

- **Rapid population growth**
- **Economic and social development –**

  central business district, industrial districts, container terminals, new airport, transportation infrastructures, R&D institute

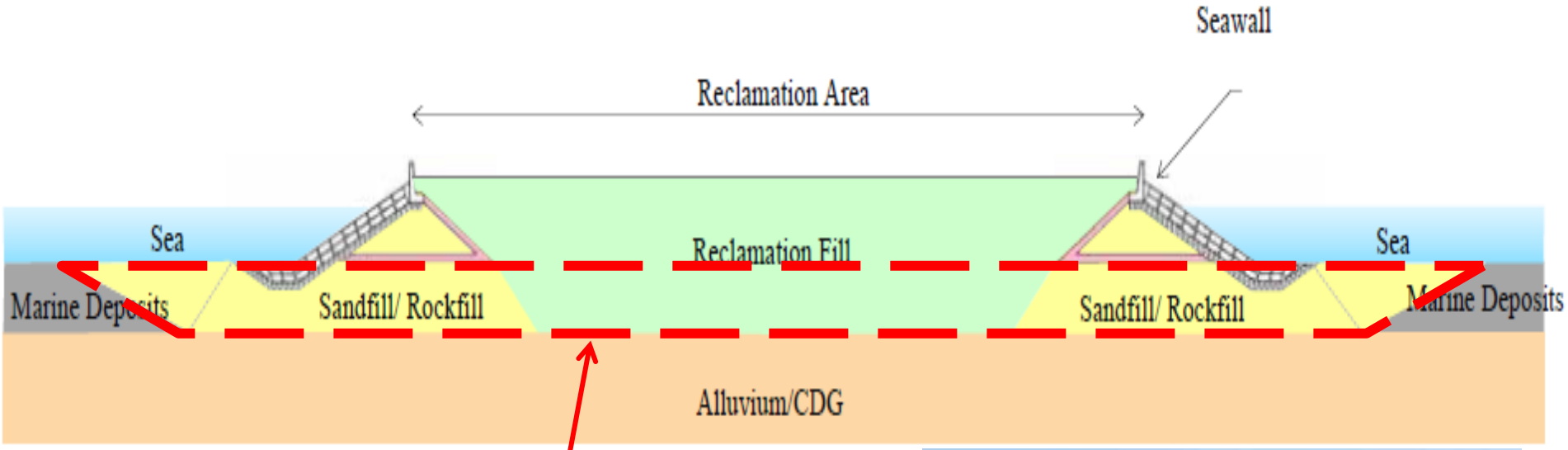
Kwun Tong industrial district (1962), reclamation & factory construction simultaneously (Source: Challenges for an Evolving City)

Main Challenges:

- Prolonged settlement in reclamation
- How quick the newly reclaimed land could be put to use?

Kwai Chung Container Terminal under construction (1972) (Source: Challenges for an Evolving City)

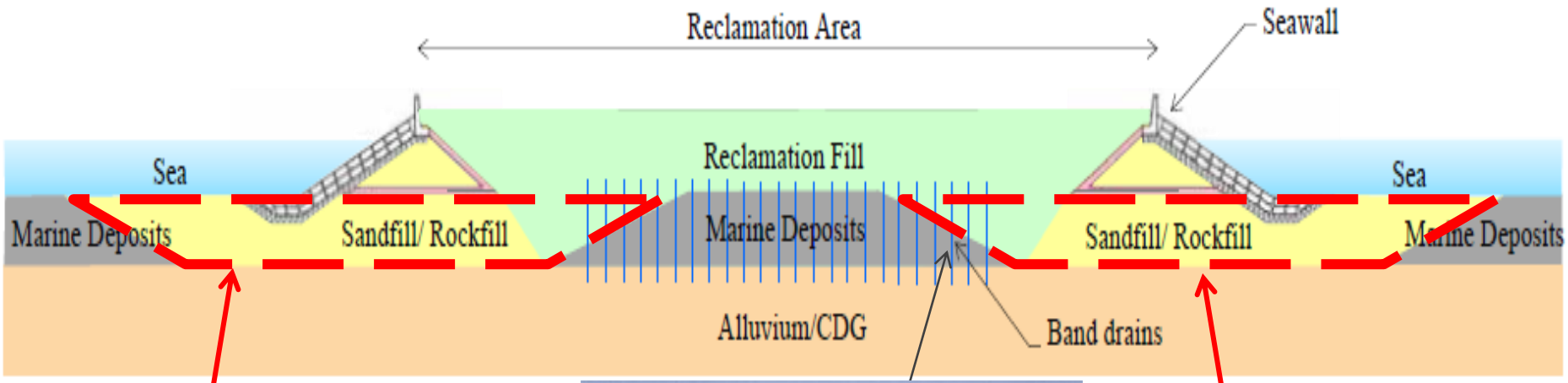
Fully dredged method to reduce settlement



Fully dredged seawall foundation and reclamation area

Sand filling

Partial dredging, band drains & surcharging to speed up settlement



Fully dredged seawall foundation

Fully dredged seawall foundation

Band drains & surcharging were used to speed up consolidation of the left-in-situ marine deposits at the main reclamation

Present Challenges

- Growing environmental consciousness
- Strong public sentiment against reclamation
- Acute shortage of land supply

Growing Environmental Consciousness

- Growing public concerns on environment, including effect of reclamation on water flow and quality, marine ecology, etc., particularly after the enactment of the Protection of the Harbour Ordinance (PHO) in 1997

- Strong public sentiment against reclamation

Common Land Supply Methods

Rezoning Land

Redevelopment

Land Resumption

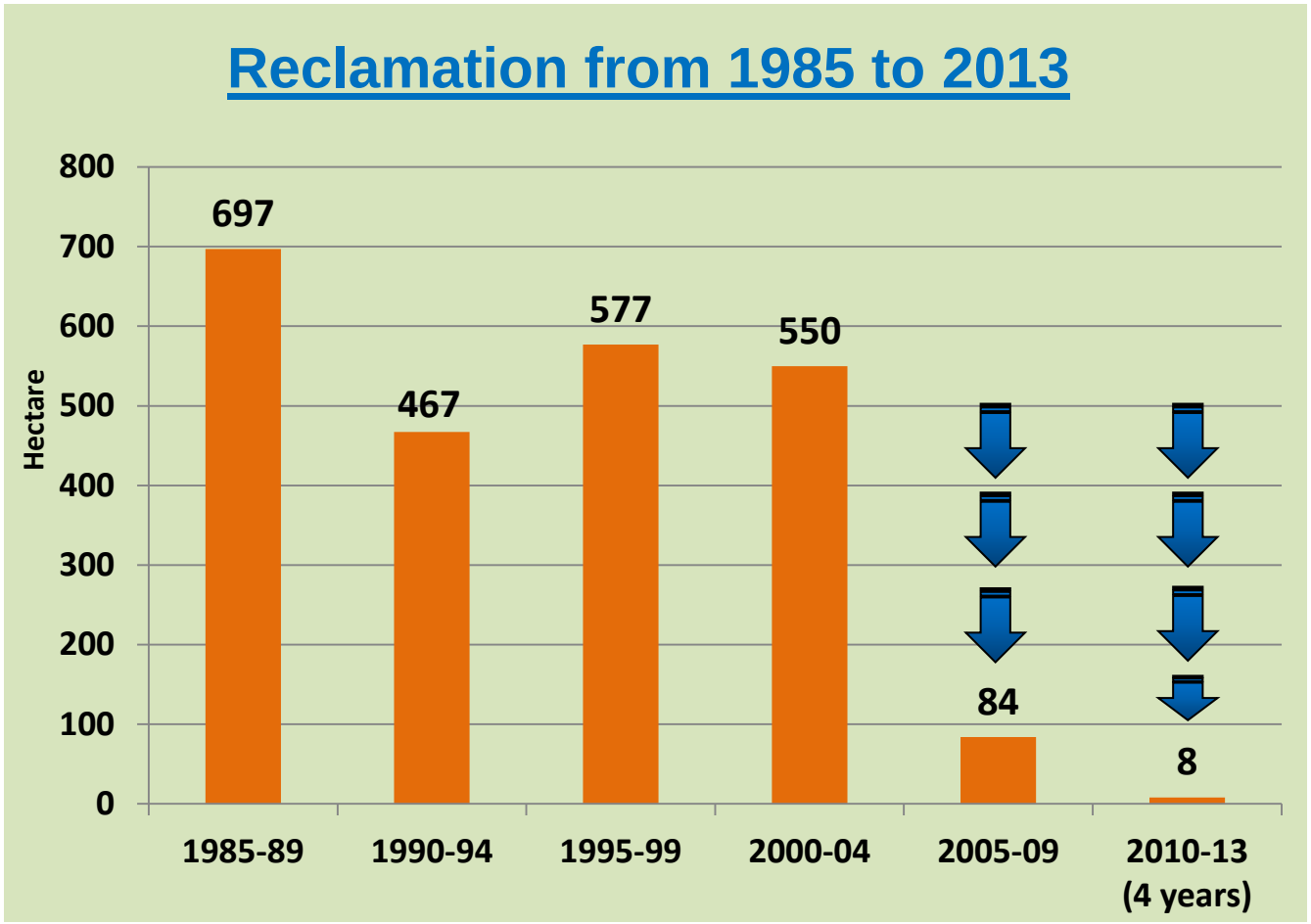
Reuse of Ex-quarry Sites

Rock Cavern Development

Reclamation

Each method has its own difficulties and challenges

Acute Shortage in Land Supply



Remarks: The reclamation of 467 ha in1990-94 excludes the reclamation of 1274 ha at Chek Lap Kok and West Kowloon

(Source: Hong Kong Geographic Data published yearly from 1986 to 2014 by Survey & Mapping Office, Lands Department)

Redevelopment – market driven

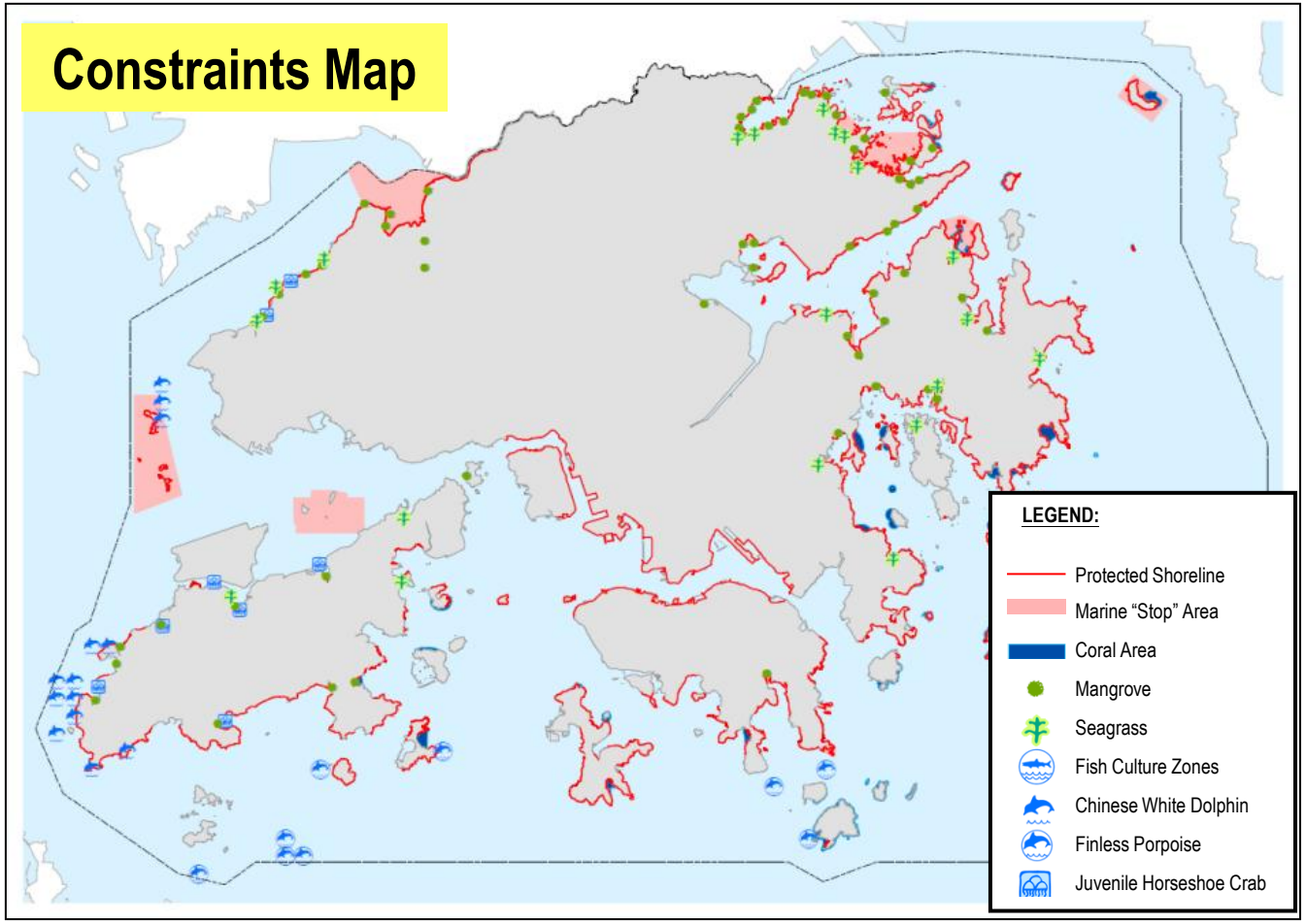
Resumption – local resentment

How we could meet these new challenges?

(1) Addressing the Environmental Concerns

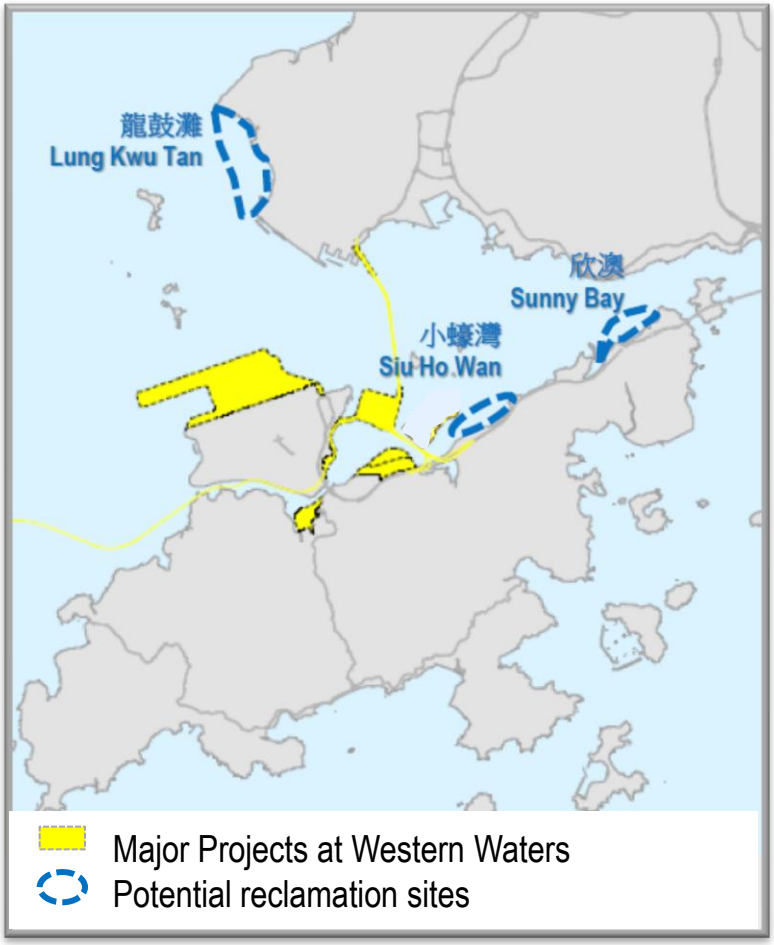
(a) Avoid environmentally sensitive areas when selecting reclamation sites

Impact on marine habitats & associated fauna will be **MUCH REDUCED** if a suitable location is chosen



(1) Addressing the Environmental Concerns

(b) Conduct baseline survey before detailed studies so as to ascertain sensitive ecological areas to be protected

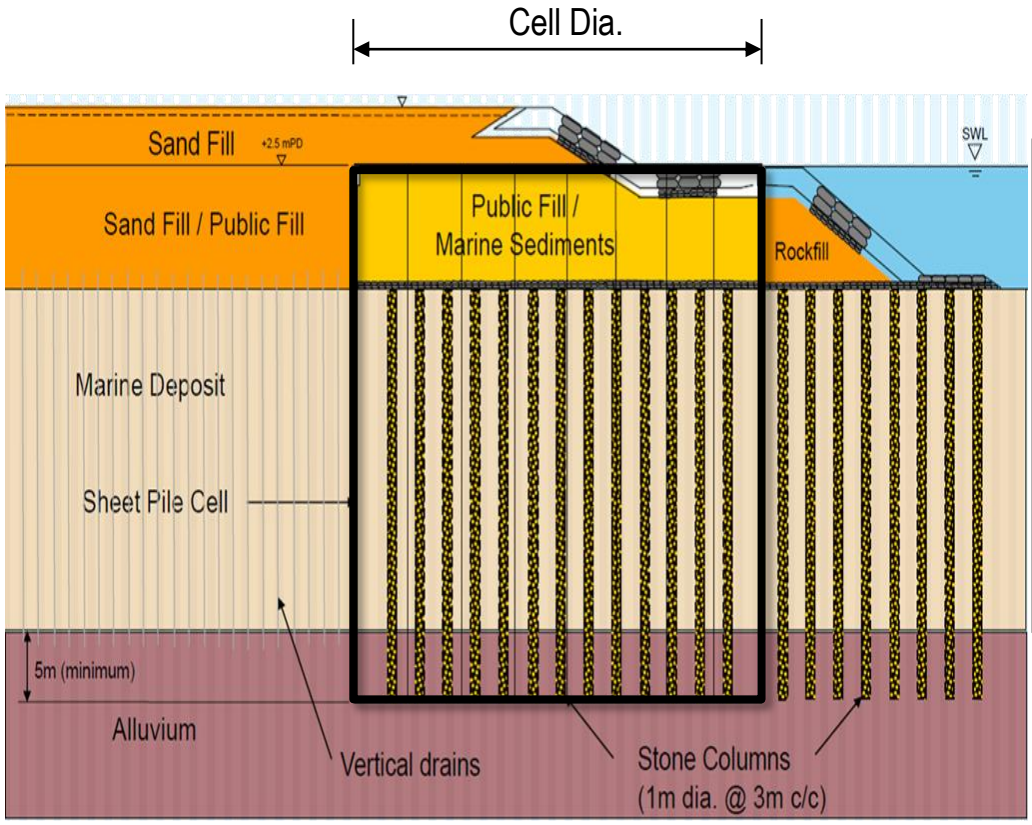


CUMULATIVE Environmental Impact Assessment (CEIA) in western waters

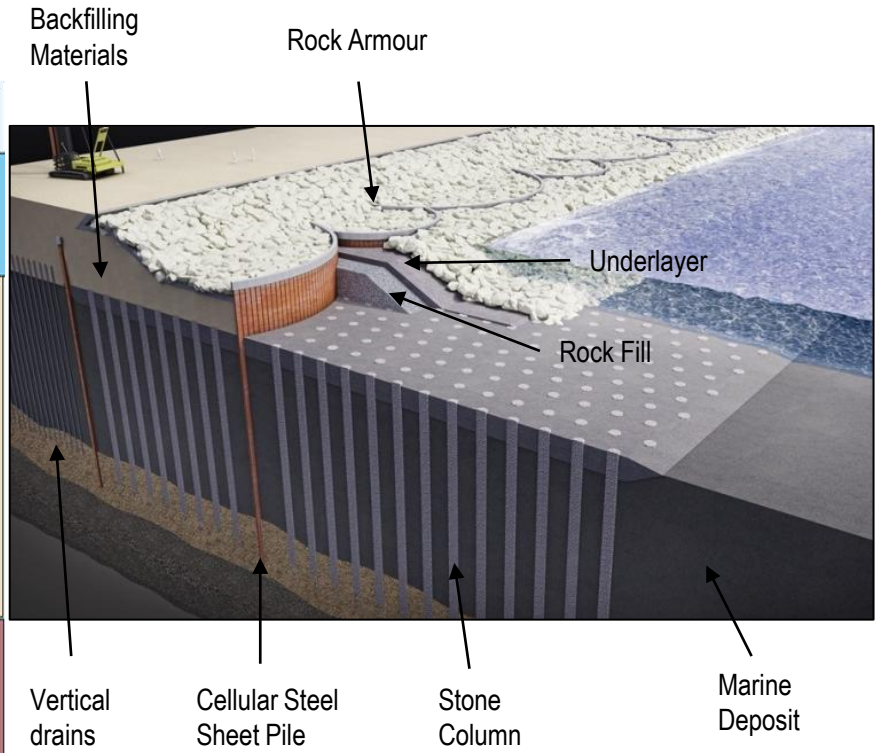
Conducting on-site monitoring to ascertain presence of CWDs at three potential near-shore reclamation sites

(1) Addressing the Environmental Concerns

(c) Minimize Impact on water quality and ecology by using advanced reclamation method and technology – non dredged method



Schematic Layout



Isometric View

Source: Hong Kong Boundary Crossing Facilities, Hong Kong–Zhuhai-Macao Bridge, Highways Department

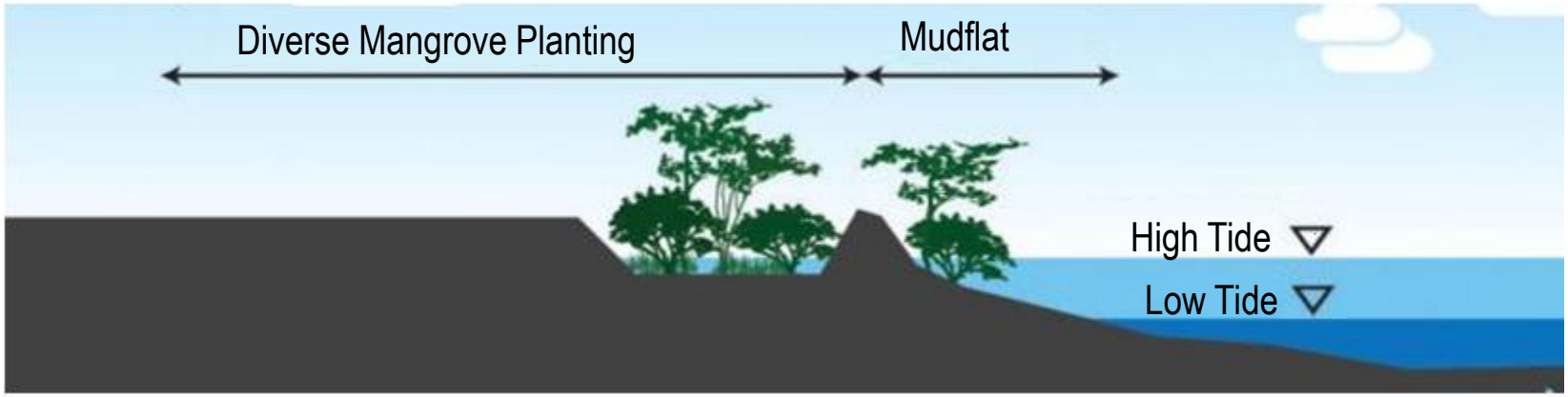
Non-dredged Method

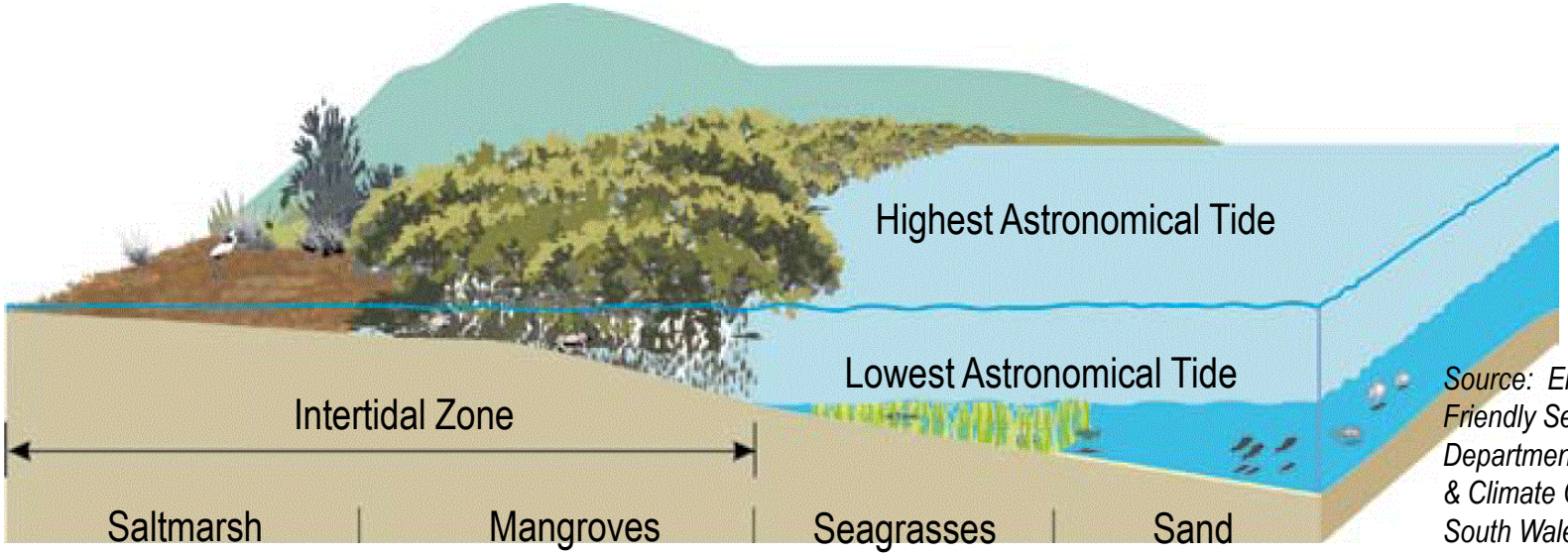
Source: Hong Kong Boundary Crossing Facilities, Hong Kong–Zhuhai-Macao Bridge, Highways Department

Non-dredged Method helps minimize impact on water quality and marine ecology

(1) Addressing the Environmental Concerns

(d) Create Eco-shorelines at suitable places to re-establish affected habitats





Source: Environmentally Friendly Seawalls by Department of Environment & Climate Change, New South Wales , Australia

Eco-shoreline - successful applications

Estuary of Parramatta River, Australia

After

Before

After

Before

Quakers Hat Bay, Sydney, Australia

Kogarah Bay, Australia

Source: Environmentally Friendly Seawalls by Department of Environment & Climate Change, New South Wales , Australia

(1) Addressing the Environmental Concerns

(e) Re-use of public fill (i.e. inert C&D waste) in reclamation projects

Hong Kong International Airport

Central Reclamation Phase 3

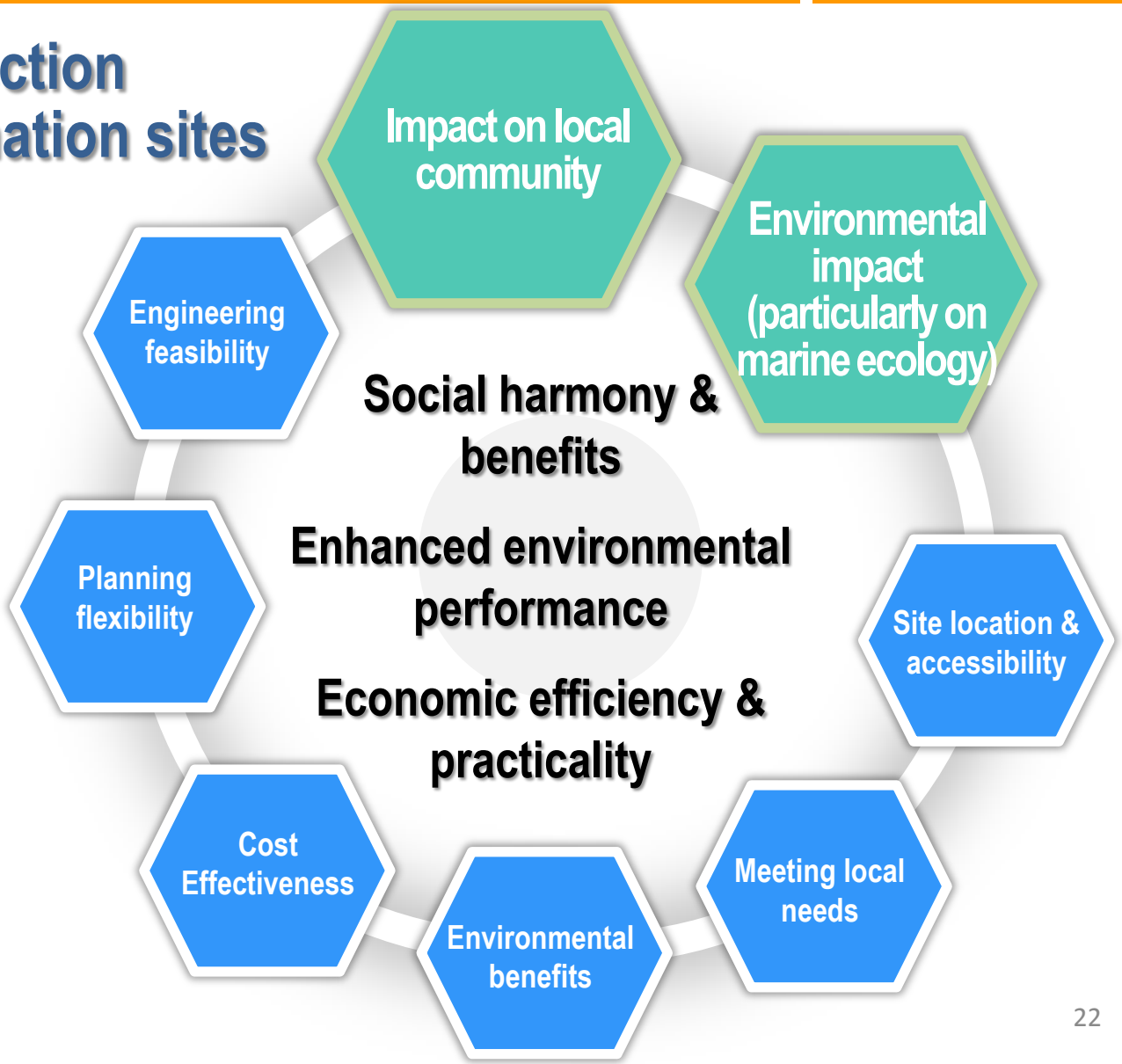
Local re-use saves the long haul of public fill to Taishan, hence reducing energy consumption, carbon emission & costs

(2) Engaging the Public

- To set agenda, propose solutions and shape the implementation policies with society
- To address public concerns scientifically through research and studies
- To communicate with the public at various stages of the development process

(2) Engaging the Public

- To determine Selection Criteria for reclamation sites



Site Selection Criteria for reclamation

Confirmed after public consultation

(2) Engaging the Public

- **To build in-principle support** towards 6-pronged approach for land supply
- **To establish the need for reclamation** as one of the land supply options
- **To show government's commitment** to pursue sustainable development

Stage 1 Public Engagement of "Enhancing Land Supply Strategy"

To Solve Acute Land Shortage Through Further Reclamation

Adopting the 6-pronged approach for land supply

Finding suitable locations and applying eco-friendly method

Engaging the public

Thank You