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

19th Century

1947

Urban areas
New Town Development

Legend:
- New towns on reclaimed land
- Other new towns
Reclamation for Airport Core Programme

- Hong Kong International Airport
- Lantau Link
- Route 3 (part)
- West Kowloon Reclamation
- Tung Chung New Town (Phase 1)
- North Lantau Expressway
- Central Reclamation (Phase 1)
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

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

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

Fully dredged seawall foundation
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

Each method has its own difficulties and challenges
Acute Shortage in Land Supply

Reclamation from 1985 to 2013

Remarks: The reclamation of 467 ha in 1990-94 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)
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.
(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**

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.

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

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

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
22

(2) Engaging the Public

- To determine Selection Criteria for reclamation sites

Site Selection Criteria for reclamation

Confirmed after public consultation

- Impact on local community
- Environmental impact (particularly on marine ecology)
- Social harmony & benefits
- Enhanced environmental performance
- Economic efficiency & practicality
- Site location & accessibility
- Meeting local needs
- Cost Effectiveness
- Environmental benefits
- Planning flexibility
- Engineering feasibility
(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