

Islands District Council
Paper No. IDC 5/2014

Strategic Studies for Artificial Islands in the Central Waters

1. PURPOSE

The purpose of this paper is to brief the Islands District Council on Stage 2 Public Engagement (PE) results under the “Enhancing Land Supply Strategy” (ELSS) and to invite Members to provide views on the proposed Strategic Studies for Artificial Islands in the Central Waters (the Study). Subject to Members’ support, we plan to seek funding approval from the Finance Committee of the Legislative Council (LegCo) for commencing the Study.

2. BACKGROUND

- 2.1 The Government conducted the Stage 1 PE from November 2011 to March 2012 to collect public views on ELSS. The respondents generally supported the Government adopting a six-pronged approach in enhancing land supply through rezoning land, redevelopment, land resumption, reclamation, rock cavern development and reuse of ex-quarry sites to support economic and social developments and fulfil the public’s aspiration of improving the quality of living.
- 2.2 Based on the public views collected from Stage 1 PE, we confirmed the site selection criteria for reclamation and rock cavern development, conducted broad technical assessment and selected a few reclamation and rock cavern development sites to consult the public at Stage 2 PE.
- 2.3 We have reviewed the eastern waters, the central waters and the western waters of Hong Kong. A significant portion of shorelines in the eastern waters are of high ecological value and separated by country parks and geopark. It is difficult to obtain land access without causing ecological impact. Although the location of western waters is strategically important, it is heavily constrained by a number of major planned or ongoing infrastructure projects. The central waters between Hong Kong Island and Lantau have great potential for developing artificial islands as they can avoid encroaching on natural shoreline of high ecological value and have great flexibility in planning.
- 2.4 Stage 2 PE was carried out from March to June 2013. The Government sought public views on the possible land uses as well as the areas of concern to be addressed in future technical studies for the potential reclamation, rock cavern development sites and artificial islands in the central waters. The Report on Stage 2 PE was completed in January 2014 and uploaded on the ELSS website of the Civil Engineering and Development Department.

- 2.5 The Chief Executive proposed in 2014 Policy Address to explore ways to further develop the eastern waters off Lantau Island and neighbouring areas, with a view to developing an “East Lantau Metropolis” for accommodating new population. It will become a core business district in addition to Central and Kowloon East for promoting economic development and providing job opportunities. The Government is now carrying out a cumulative environmental impact assessment of the northern Lantau waters and will initiate studies on various reclamation sites, including the strategic studies for artificial islands in the central waters for development of an “East Lantau Metropolis”, and the planning and engineering study on Sunny Bay Reclamation for development as an entertainment and business node of regional significance to create synergy with other tourist attractions on Lantau. Preliminary feasibility studies on other near-shore reclamation sites will also commence in succession.

3. RESULTS OF STAGE 2 PE

- 3.1 Findings from the Stage 2 PE indicated that land reserve and residential development (in particular the public rental housing) received the highest count among the supported land uses mentioned by respondents in respect of the five near-shore reclamation sites and artificial islands in the central waters.
- 3.2 New town, in the form of comprehensive development, received more support as potential land use for artificial islands than for near-shore reclamation sites. Besides, other major supported land uses for artificial islands covered uses for commercial, industrial, Government, institution and community facilities (GIC), open space and utilities.
- 3.3 A considerable number of respondents indicated that reclamation works would increase job opportunities and help alleviate the housing problem. Some considered that constructing artificial islands in the central waters would be beneficial to the local community and economic growth.
- 3.4 The common major concerns, shared by all five near-shore reclamation sites and artificial islands, to be specially addressed in future technical studies included impact on environment (including marine ecology), ecological conservation, transportation, cost-effectiveness and the need to expedite land supply.
- 3.5 Other major concerns as regards artificial islands in the central waters included impact on water quality, water flow and fisheries, air and noise pollution near the development site, marine safety, impact on local community including cultural heritage, construction cost and engineering feasibility.

4. DEVELOPMENT OPPORTUNITIES FOR ARTIFICIAL ISLANDS IN CENTRAL WATERS

- 4.1 The central waters between Hong Kong Island and Lantau are less ecologically sensitive as compared with the eastern and western waters. In addition, the eastern waters off Lantau have the geographical advantage of being close to the business district in Central, as this region is only a narrow stretch of waters from the Western District of Hong Kong Island. It can be connected to the urban areas and other parts of Lantau through the provision of strategic transport infrastructure.
- 4.2 Construction of artificial islands somewhere between eastern Lantau and western Hong Kong Island can provide sizable land for comprehensive and holistic planning. Creative ideas of urban planning, design, engineering and construction can be introduced in developing the area into an innovative, livable, diversified and environmentally friendly “East Lantau Metropolis” which would become a focal point of Hong Kong’s long-term development.
- 4.3 By developing the transport infrastructure to connect to the existing urban areas, an “East Lantau Metropolis” can become a new core business district in addition to the ones in Central and Kowloon East. It will create synergy with other developments such as the topside development at Hong Kong Boundary Control Facilities Island of Hong Kong-Zhuhai-Macao Bridge, North Commercial District of the Airport, the proposed Tung Chung New Town Extension and the proposed reclamation at Sunny Bay and Siu Ho Wan, which will in turn scale up Lantau’s development, generate greater and more sustainable economic benefits, increase the business and job opportunities for the Lantau community, and boost the competitiveness of Hong Kong.

5. SCOPE OF STUDY

- 5.1 We plan to commence the Study this year to explore the technical feasibility of constructing artificial islands and associated reclamation in the central waters including an “East Lantau Metropolis”. The scope of the Study covers a wide range of issues, including:
 - (i) engineering feasibility and infrastructure studies and proposals for artificial islands, including broad reclamation extent, possible land uses and transport links;
 - (ii) port operation and marine traffic study;
 - (iii) strategic environmental assessment;
 - (iv) fisheries impact assessment; and
 - (v) associated site investigation works.

- 5.2 The Study will explore the feasibility of constructing artificial islands and associated reclamation in the central waters for various land uses, including developing an “East Lantau Metropolis” for accommodating new population and becoming a new core business district. A plan showing the indicative study area is at **Enclosure 1**.
- 5.3 In exploring the technical feasibility of constructing artificial islands in the central waters, the following should be considered and assessed:
- (i) Method of constructing the artificial islands and transport links to the surrounding areas: There is little experience in constructing large - scale artificial islands in Hong Kong. As such, we need to carefully study the technical and financial viabilities in connecting artificial islands via bridges or tunnels across busy fairways and deep water areas. As artificial islands will be far away from existing facilities, a convenient and yet cost-effective transportation network should be planned for connecting them to the urban areas to facilitate various land uses.
 - (ii) Impact of artificial islands on marine traffic and port operation: There are many fairways (e.g. West Lamma Channel), anchorages (e.g. Western Anchorages and Kau Yi Chau Dangerous Goods Anchorage etc.), and outlying island and cross-boundary ferry services across the central waters. When constructing artificial islands in the central waters, considerations shall be given to the impacts on port operation and navigational safety. The investigation should consider re-provisioning of the affected fairways and anchorages so as to avoid adverse impacts on the operation of relevant industries.
 - (iii) Impact of artificial islands on natural environment and residents on outlying islands: There are many islands (i.e. Sunshine Island and Kau Yi Chau etc.), with some densely-populated ones (i.e. Peng Chau and Cheung Chau etc.) in the central waters. Due considerations should be given to the impacts of artificial islands on the natural environment and the residents on these islands. Moreover, we shall carefully assess the cumulative environmental impact arising from constructing artificial islands, including water flow, water quality, air quality and marine ecology etc.
 - (iv) Impact of artificial islands on fisheries: The southern portion of central waters is characterized with abundant fishery resources. We shall assess the impact on fisheries, including fish cultural zones and fishing grounds, in order to address the impact on fisheries, enhance the proposals for artificial islands, and formulate mitigation and compensatory measures.
 - (v) Land use planning: Broad development direction for artificial islands shall be preliminarily considered so as to be compatible with the housing,

economic and commercial developments in nearby districts, or to provide land for relocation of affected facilities and communities due to onshore development. It will facilitate detailed investigation in the subsequent planning and engineering study.

6. ENVIRONMENTAL IMPLICATIONS

- 6.1 The proposed Study will not cause any adverse environmental impact. We will implement suitable mitigation measures to control nuisances on noise, dust and water spillage from construction site arising from the associated site investigation works.

7. LAND ACQUISITION

- 7.1 The proposed Study and the associated site investigation works will not require any land acquisition.

8. PROGRAMME OF STUDY

- 8.1 We plan to consult the Panel on Development of the LegCo in the first half of 2014. We will start the consultant selection as soon as possible and commence the Study in the second half of 2014 for completion in mid-2017.
- 8.2 When adequate phase results from the strategic studies for artificial islands in the central waters are available, we shall consult the Members again before we start the planning and engineering studies on the “East Lantau Metropolis”.

9. ADVICE SOUGHT

- 9.1 Members are invited to provide views on the proposed Strategic Studies for Artificial Islands in the Central Waters. Subject to Members’ support, we plan to seek funding approval from the Finance Committee of the LegCo for commencing the studies as scheduled.

Enclosure 1: Indicative Study Area for Strategic Studies for Artificial Islands in the Central Waters

Civil Engineering and Development Department
February 2014