

**Central and Western District Council
Lantau Tomorrow Vision
Latest Progress of
Studies related to Artificial Islands in the Central Waters**

Introduction

1) This paper provides the latest progress update to Central and Western District Council (the Council) about the Studies related to Artificial Islands in the Central Waters (the Study) under the Lantau Tomorrow Vision.

Background

2) We briefed the Council on 7 March 2019 regarding the “Lantau Tomorrow Vision” (the Vision) (C&W DC Paper No. 26/2019). At the meeting, the project of artificial islands in the Central Waters under the Vision was discussed. The Council requested that when taking forward the project of artificial islands in the Central Waters, the Administration shall conduct comprehensive studies and assessments having regard to climate change, fisheries impact, marine ecology and traffic impact to the Central and Western District, so as to avoid adverse impact on the residents and local traffic.

Latest Progress

3) Our plan at this stage is to conduct a detailed study (i.e. the Studies related to Artificial Islands in the Central Waters). The Study will formulate development proposal and carry out assessments for the proposal on, inter alia, planning, engineering and financial aspects. The areas of concern of the Council will be

examined in detail. On the traffic aspect, we will conduct a transport infrastructure study to evaluate different options of transport infrastructure connection including suitable connection points. We will also assess in detail the traffic impact of these options on the nearby and local traffic, and propose the corresponding mitigation measures. In addressing climate change, we will properly handle the risks in the Study and formulate suitable design options so as to ensure that the artificial islands will have sufficient resilience against climate change. As regards the potential impacts of the project on fisheries and marine ecology, we will conduct comprehensive statutory environmental impact assessment for the proposed development options and properly address these issues in the Study.

4) In the course of the Study, we will conduct various public engagement activities to provide comprehensive information for members of the public (including the Council), and gather the views of the public.

5) We obtained funding approval from the Finance Committee of Legislative Council in December 2020. We are now in the tendering stage and the Study is targeted to commence in June 2021 for completion in three and a half years. After completion of the Study, we should be able to obtain sufficient data on aspects such as environment, traffic, planning, engineering, economy, finance, etc. for the society to discuss the proposal of artificial islands in the Central Waters.

6) We have already provided written replies with regard to the follow-up actions on the Lantau Tomorrow Vision raised by the Council. We also provided responses to the concerns raised by members during the discussion at the meetings.

7) Information about the Study is at Enclosure 1.

Conclusion

- 8) Members are invited to note the content of this paper.

**Civil Engineering and Development Department
May 2021**

Studies related to Artificial Islands in the Central Waters (the Study)

Item No. & Category:	5768CL / A
Head of Bureau:	Secretary for Development
Responsible Department:	Civil Engineering and Development Department
Commencement Date: (Tentative)	June 2021
Completion Date: (Tentative)	Q4 2024
Estimated Cost (\$M):	550.4

Description of Item:

I. Scope of Study

- (a) a detailed planning and engineering study for the artificial islands around Kau Yi Chau (KYC) to establish the reclamation extent, land uses and technical feasibility, including the formulation of detailed land use proposals, preparation of preliminary design for the associated engineering works, conducting statutory environmental impact assessment (EIA) and other detailed assessments (including fisheries impact), as well as public engagement exercise arising from the development proposals;
- (b) a transport infrastructure study which covers –
 - (i) an area-wide transport study covering the priority road and rail links as well as the possible road and rail links for longer term, between Hong Kong Island, the artificial islands in the Central Waters, Lantau and coastal areas of Tuen Mun;

- (ii) an engineering study to ascertain the feasibility of the priority road links between Hong Kong Island, the KYC Artificial Islands and Northeast Lantau, and the priority rail links between Hong Kong Island, the KYC Artificial Islands, Northeast Lantau and coastal areas of Tuen Mun; and
 - (iii) an investigation study for the priority road links between Hong Kong Island and Northeast Lantau, via the KYC Artificial Islands, including preliminary design, statutory EIA and other detailed impact assessments;
- (c) collection of information (mainly including the preliminary ecological, environmental and geological conditions) on waters within and in the vicinity of the possible artificial islands near Hei Ling Chau and Cheung Chau South for future reference in long-term planning; and
- (d) associated site investigation including supervision.

II. Justifications and Benefits of the Proposed Artificial Islands in the Central Waters

- Hong Kong is facing an acute shortage of land supply. The Government agrees with the recommendations which are tendered by the Task Force on Land Supply after five months of extensive public consultation. Among them, the Government will continue to adopt a multi-pronged approach and concurrently take forward the eight land supply options worthy of priority studies and implementation, including developing brownfield sites, unlocking the development potential of private agricultural land, new development area projects, near-shore reclamation, studies related to artificial islands in the Central Waters, etc. The development of artificial islands in the Central Waters can create a vast area of new land, which will serve as an important measure of land production in the medium to long term.
- As regards social benefits, the KYC Artificial Islands with a total reclaimed area of about 1 000 hectares (ha) are capable of providing 150 000 to 260 000 housing units, 70% of which are public housing. This will facilitate us to cope with the long-term housing demand.

Moreover, Hong Kong is facing the challenges brought about by aging of a large number of buildings at a fast pace. As promulgated in “Consolidated Land Requirement and Supply Analysis” under “Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030” in October 2016, assuming no demolition of buildings from now on, a total of 326 000 private housing units would be aged 70 or above by 2046, which is nearly 300 times of the building stock of the same age in 2016 (i.e. about 1 100 units only). The KYC Artificial Islands can provide a vast area of land as decanting space for urban renewal and facilitating a larger scale of redevelopment of old districts. Further, with sizeable new land, the KYC Artificial Islands will enable comprehensive planning for livable communities with a range of compatible uses and community facilities, ample open spaces and greening, state-of-the-art infrastructure and smart city design.

- On the traffic aspect, the strategic transport corridor related to KYC Artificial Islands can increase the overall carrying capacity and resilience of the transport system in Hong Kong, and relieve the existing congestion of West Rail Line and Tuen Mun Road.
- In terms of economic benefits, the planned third Core Business District on KYC Artificial Islands can supply about 4 million square metres of commercial/office floor area (about 80% of that in Central) as well as about 200 000 diversified employment opportunities. Upon full development of the third Core Business District, it is crudely estimated that the commercial and retail space thereon, when fully utilized to accommodate the economic activities concerned, would generate around \$141 billion (in 2018 prices) of economic value added each year, amounting to about 5% of the Gross Domestic Product.

III. Main Public Concerns about the Proposed Artificial Islands in the Central Waters

- Since the government proposed to study the development of Artificial Islands in the Central Waters, we have received supporting and opposing views on various occasions. Some people welcome the proposal and opine that it can provide more land to resolve pressing housing needs and relieve the congestion of the West Rail Line and

Tuen Mun Road through the proposed strategic transport network. We fully understand some public concerns on issues related to the proposal such as environment, addressing climate change, traffic and construction costs, etc. The Study will assess and properly address these issues in detail.

- **Environment**

The prevailing reclamation techniques can reduce impacts on surrounding water quality and ecology arising from the works. We will explore other more advanced and environmentally-friendly reclamation techniques and designs in the Study. In addition, we will retain the existing natural shorelines as far as possible and establish eco-shorelines at the artificial islands if situation warrants. We will conduct the environmental impact assessments under the Environmental Impact Assessment Ordinance, and propose corresponding mitigation measures, thereby ensuring compliance with relevant statutory requirements.

- **Addressing Climate Change**

According to the professional analysis promulgated by the Hong Kong Institution of Engineers in November 2018, the engineering technology of constructing artificial islands through reclamation is mature. To address the risks arising from resilience against extreme weather, measures such as building higher seawalls and placement of dolosse could be adopted. We will properly handle the risks in the Study and formulate suitable design options so as to ensure that the artificial islands will have sufficient resilience against climate change and extreme weather.

- **Traffic**

We will conduct a transport infrastructure study in the Study and investigate different options of transport infrastructure connection (including suitable alignment and connection points). We will also assess the traffic impact on the nearby traffic of these options in detail and propose the corresponding mitigation measures.

- **Construction Cost**

The Government has never meant to put forward large-scale development proposals for the sake of “making money”. With reference to the professional estimate of the Hong Kong Institute of Surveyors (HKIS) made earlier in February 2019, the land revenue to be generated from private residential and commercial developments on the KYC Artificial Islands will be between approximately \$974 billion and \$1.143 trillion. The HKIS’s estimate is based on the upper-end parameter for private residential development (i.e. 78 000 private housing units). If the lower-end parameter (i.e. 45 000 private housing units) is adopted for the calculation, the land sale revenue will still be as high as \$707 billion to \$823 billion, which is greater than the estimated construction cost of \$624 billion (in September 2018 prices). This estimation has not taken into account the value of land used for other related development areas and the large number of public housing units.

We will carry out relevant assessments, including construction cost, land value and the direct contribution to the economy, in respect of the recommended development proposal in the Study, and we will be open-minded when exploring different funding options for the implementation of the mega-scale infrastructure projects recommended by the Study. The Government attaches great importance to cost control and has all along been implementing a stringent audit and monitoring mechanism for the approval of funding for public works and the use of public funds. We are confident and capable of ensuring that the Government can afford the expenditure of future works.