Public Works Subcommittee Meeting on 31 May 2017 Issues requiring follow-up actions by the Administration

PWP Item No. 786CL – Tung Chung New Town Extension

Reclamation and Advance Works

At the Public Works Subcommittee (PWSC) meeting on 31 May 2017, Members requested the Government to provide supplementary information (shown in *italics* below). After consulting the relevant departments, the Government's consolidated reply is set out below.

At the request of Hon LAM Cheuk-ting, the Administration will provide supplementary information on the growth of pleasure vessels, and the demand and supply of berthing spaces in Hong Kong.

2. According to the records maintained by the Marine Department, the number of licensed Class IV vessels in Hong Kong, including auxiliary powered yachts, open cruisers and cruisers, increased at an average rate of about 5% per annum between 2012 and 2016. There are 9,748 licensed Class IV vessels in Hong Kong as at end-2016. (see **Table 1**)

Licensed Class IV Vessels in Hong Kong *						
Year Vessel	2012	2013	2014	2015	2016	
Auxiliary Powered	725	742	753	776	786	
Yacht						
Cruiser	2 326	2 447	2 507	2 614	2 651	
Open Cruiser	4 869	5 302	5 699	6 066	6 311	
Total	7 920	8 491	8 959	9 456	9 748	
Growth Rate	5.81%	7.21%	5.51%	5.55%	3.09%	

 Table 1
 Number of Licensed Class IV Vessels

* Source: Marine Department website

(http://www.mardep.gov.hk/hk/publication/pdf/portstat_2_y_e3c.pdf)

3. Berthing space for local vessels (including pleasure vessels) is mainly provided at typhoon shelters, sheltered anchorages, private mooring areas and privately operated marinas. Under normal weather conditions, local vessels are also allowed to be moored at any suitable areas in Hong Kong except some restriction areas (e.g. fairways). There are currently nine marinas in 12 locations, providing 2,280 berthing spaces (see **Table 2**). Berthing spaces in these marinas are generally fully occupied with waiting lists.

		Berthing Spaces		
	Туре	Wet	Private Mooring	
		Berths	rent from MD	
Aberdeen Boat	Private sports club	-		
Club				
• Aberdeen			84	
• Middle Island			18	
Clearwater Bay	Private sports club	300	-	
Golf and Country				
Club				
Hebe Haven	Private sports club	53	212	
Yacht Club				
Royal Hong Kong	Private sports club			
Yacht Club				
(RHKYC)				
• Kellett Island			132 (Addition 15 at Aberdeen)	
• Middle Island			40	
• Shelter Cove		46	132 (Addition 6 at Junk Bay)	
Club Marina Cove	Part of private	360		
	development			
Gold Coast Yacht	Part of private	300		
and Country Club	development			
Discovery Bay	Part of private	218		
Marina	development			
Club				
Aberdeen	Standalone private	170		
Marina Club	marina			
Hong Kong	Standalone private	200		
Marina	marina			
	Total	1 647	639	

Table 2No. of Berthing Spaces in Marinas

Remark: The above is based on the available information in 2015. The information contained may not be exhaustive.

4. The Marine Department periodically carries out assessment on the demand of sheltered space for local vessels to ensure there is sufficient sheltered space within the Hong Kong waters suitable for local vessels to take refuge during the passage typhoons. The industry will be consulted on the new round of assessment at appropriate time.

At the request of Hon YIU Chung-yim, the Administration should provide supplementary information on the cost breakdown of the Tung Chung East (TCE) reclamation works.

5. The cost breakdown of the TCE reclamation works has been set out in paragraph 15 (a) of PWSC paper no. PWSC(2017-18)3. It should be noted that the cost estimate of a project should take full account of various factors including the geographical location of the works site, ground conditions, unique restrictions and difficulties encountered, the environment in the vicinity, design requirements, the required time for completion, etc. Regarding the cost estimate of TCE reclamation works, we have made reference to that of the Three Runway System of the Hong Kong International Airport (3RS), together with due consideration given to the following unique environmental and engineering factors, before drawing up the cost estimate:

- (a) the geographical location and shape of the reclamation sites at TCE and 3RS are different. The seabed length to reclamation area ratio (the Ratio) of the TCE reclamation works is higher than that of 3RS. As the marine mud beneath the seawall has to be strengthened by the Deep Cement Mixing (DCM) method, the higher the Ratio, the higher the overall construction cost would be;
- (b) the TCE reclamation works vessels have to pass through the Tung Chung Navigation Channel underneath the Tuen Mun – Chek Lap Kok Link Southern Viaduct to enter or leave the works site. The headroom of the viaduct is only 21 metres while the mixing rigs of DCM barges are about 30 metres in height. As such, the vessels have to be specially modified to suit the use in the TCE reclamation works; and
- (c) the TCE reclamation works involve many mechanical plants (in particular the DCM method). The TCE reclamation site is in close proximity of dwellings. In order to minimise the disturbance to the residents nearby, the working hours will be restricted.

At the request of Hon Andrew WAN Siu-kin, the Administration should provide supplementary information on the number of mechanical plants for non-dredged/deep cement mixing reclmation works currently available in Hong Kong. How many of them are currently/will be used in 3RS? What is the estimated number of the mechanical plants required for the TCE reclamation works? Would there be any shortage in the mechanical plants for the TCE reclamation works? If yes, what is the Administration's solution?

6. The TCE reclamation works are facing various challenges including the geographical location of the works site, ground conditions, unique restrictions, the environment in the vicinity, design requirements and the time for completion, etc. Thus, the mechanical plants required for the TCE reclamation works cannot be compared directly with those of 3RS.

7. The TCE reclamation works vessels have to pass through the Tung Chung Navigation Channel underneath the Tuen Mun – Chek Lap Kok Link Southern Viaduct with a headroom of 21 metres only when entering the works site from the east. When entering the works site from the west, the works vessels have to pass through the navigation channel underneath the bridge to the Airport Island having a headroom of 12 metres only. As such, the works vessels currently deployed in 3RS may not be fully applicable for the TCE reclamation works.

8. The number of mechanical plants required for the TCE reclamation works depends on the technical proposal of the Contractor. The more the number of drilling rigs per DCM barge, the less the number of DCM barges would be required. So, we are unable to provide the specific number of mechanical plants at this stage. On the other hand, the DCM method has been extensively used in Asia (mainly Japan and Korea) and the United States. We consider that the Contractor would be able to procure sufficient suitable mechanical plants to carry out the TCE reclamation works.

Development Bureau Planning Department Civil Engineering and Development Department June 2017