

Task Force on Harbourfront Developments in Kowloon, Tsuen Wan and Kwai Tsing

For information
on 27 July 2011

Construction of a Two-storey Building for Harbour Patrol Section of Marine Department

Justifications for Site Selection

PURPOSE

This paper is to inform members the detailed justifications for selecting the subject site (i.e. GLA-K432) for construction of a two-storey building for Harbour Patrol Section (HPS) of Marine Department (MD).

BACKGROUND

At the 3rd meeting of Harbour Commission's Task Force on Harbourfront Developments in Kowloon, Tsuen Wan and Kwai Tsing on 12 January 2011, MD briefed Task Force members about the site selection procedures as well as the design layout of the captioned building at the subject site which is located adjacent to the existing building of HPS of MD [Address of the existing building site (i.e. GLA-K331): 30 Hoi Fai Road, Tai Kok Tsui, Kowloon]. MD would provide detailed justifications for selecting the subject site for members' reference.

On 1 February 2011, an informal site meeting was arranged by MD with Task Force members, Mr. Paul Zimmerman and Dr Peter Cookson Smith to exchange views on this project. On the request of MD, Architectural Services Department (Arch SD) provided information to Dr Peter Cookson Smith about the restrictions of the existing building site.

SITE SELECTION

The detailed justifications for selecting the subject site are as follows:-

First of all, the construction of two additional floors on top of the existing roof is not

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structurally feasible or recommended. As advised by Arch SD, according to the structural records, the existing foundation has not been designed for construction of two additional floors on top of the existing roof. The foundation of the existing two-storey building is a shallow foundation sitting on soft soil material and it is sensitive to settlement. The extension of the two additional floors will double the loading of the original design load and the induced wind loading will also double the original design wind load of the existing building. The additional loading in this regard will exceed the soil bearing pressure under the existing foundation. This will cause excessive and uneven settlement which will damage the foundation and its superstructure. It is therefore not structurally feasible and is not recommended. In addition, referring to the engineering conditions of the existing HPS building site stipulated by the Lands Department, no part of any structure of the building shall exceed a height of 20 meters above the Hong Kong Principal Datum.

Secondly, the construction of two additional floors cannot be made in the rest of the pavement (i.e. mainly the existing HPS building rear side pavement to the fence) and Arch SD advised that the distance between the existing building and the copeline of the seawall is about 8m and the base width of the seawall is about 5m from the copeline. According to the engineering conditions of the existing HPS building site, the maximum superimposed load within 15 meters from the copeline of the existing seawall shall not exceed 10 KN/m². (N.B. 10 KN/m² means 10 KiloNewtons per square metre) Therefore, shallow foundation for the proposed extension in this area will not be feasible except pile foundation. If pile foundation is adopted, there will be only around 3 meters left (8m - 5m) in the rear part of the existing building. However, the space available for the construction is insufficient to accommodate the required office area.

In addition, a light structure for office use could not be built on one of the flat roof at the existing building. Arch SD advised that the structure design for office use portion should be calculated in accordance with the statutory requirements. According to the structural assessment, the erection of an additional office on the existing flat roof of approximate 75 m² will still cause the superimposed load to exceed 10 KN/m². It will contravene the safety factor stipulated under the engineering condition and is not structurally feasible.

For members' ease of reference, the Project Team conducted the measurements and the approximate areas of Building & Structures of HPS existing building at GLA-K331 are shown by a table & a drawing in ANNEX I & ANNEX II respectively.

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CONCLUSION

In the light of foregoing, the Project Team is of the view that the existing office building was unsuitable for extension due to insufficient structural capacity and other site constraints. Further, MD is not able to identify another piece of government land or other government facilities which meets the needs of the HPS that operated round the clock and round the year.

**Marine Department
July 2011**

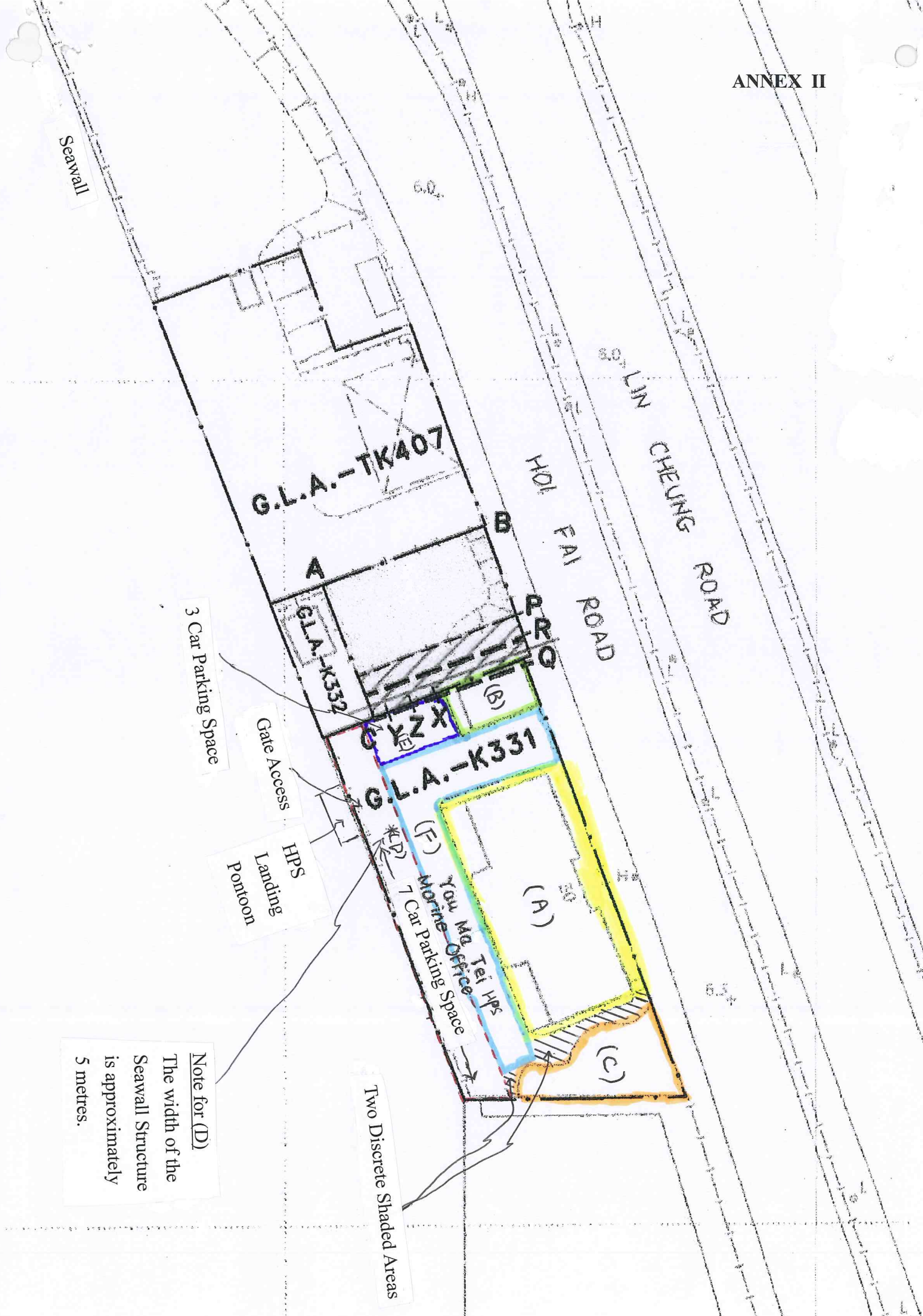
Approximate Areas of Building & Structures
of HPS Existing Building at GLA-K331
 (Address: 30 Hoi Fai Road, Tai Kok Tsui, Kowloon)

Zone	Description of Building (Office) & Structures at GLA-K331	Approx. Area in (square metres)	Calculated By Dimensions in (metres)	Percentage (%) comparing with land allocated area
				Grand Total (100%) 1,264 square metres
(A)	Existing HPS Building alone	439.6	29.7 X 14.8	34.8 %
(B)	Structures for Main Switch Room, Fuel Tank Room and Emergency Generator Room	57.9	10.15 X 5.7	4.6 %
(C)	Trees at Southern Portion	114.7	19.6 X 5.85	9.1 %
(D)	The Seawall Structure* (inside that, there are 7 Car Parking space)	225.0	45.0 (Length) X 5.0 (Width)	17.8 %
(E)	3 Car Parking space	49.5	5.5 X 9	3.9 %
(F)	Access for vehicle, pedestrian and people embarked or disembarked at HPS landing pontoon	274.6	19.0 X 6.8 and 32.3 X 4.5	21.7 %
Sub-total	(A)+(B)+(C)+(D)+(E)+(F)	1,161.3		91.9 %
two discrete areas	Residual areas for extension of the existing HPS Building at GLA-K331 are discrete (i.e. Grand Total – Sub-total)	102.7		8.1 %

Remarks:- (i) With respect to the “shaded residual areas” (i.e. sum as approximately 102.7 square metres only) remaining, the Project Team observed that they are discrete and so the existing HPS Building could not be expanded due to insufficient structural capacity and site constraints within GLA-K331 to meet the shortfall of 193 square metres accommodation space which had been identified by GPA.

(ii) The figures are taken by using measuring tape and the figures provided therein are for illustrative purpose. For ease of reference, please refer to the drawing attached.

* Note for (D): The width of the seawall structure is approximately 5 metres



3 Car Parking Space

Gate Access

HPS Landing Pointon

You Mo Tei Hps
7 Car Parking Space

Note for (D)

The width of the Seawall Structure is approximately 5 metres.

Two Discrete Shaded Areas