

## Annex 3

### Assessment of Typhoon Shelter Requirements

#### Summary

Statistical data collected from various sources throughout the course of our study helps analyze the historic and anticipated growth or decline of marine users, and the availability of sheltered water. The conclusion is that there is a need for additional sheltered water in Victoria Harbour.

This study demonstrates the lack of priority given to recreational users in Victoria Harbour, highlighting the lack of consideration for pleasure vessels.

#### Assessment

One of the major government studies analyzed during the completion of this study was the Marine Department's (2009) *Assessment of Typhoon Shelter Space Requirements, 2009-2023* which identifies marine users, available shelter and moorings in Hong Kong and Victoria Harbour.

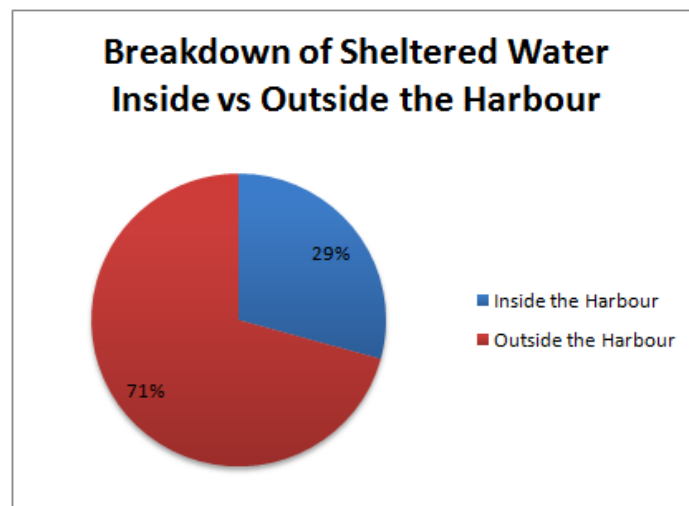


Figure C.1

Source: *Assessment of Typhoon Shelter Space Requirements*, Marine Department (2009).

The above graph shows that the majority of sheltered water is provided outside Victoria Harbour.

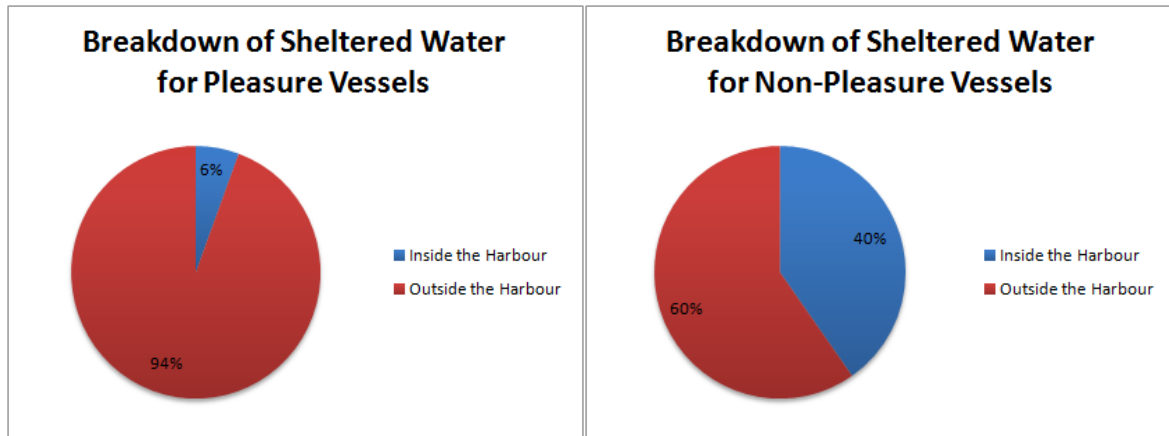


Figure C.2

Figure C.3

Source: *Assessment of Typhoon Shelter Space Requirements*, Marine Department (2009).

Figure C.2 shows that the majority of sheltered moorings for pleasure vessels are located outside Victoria Harbour. Less than 10% of all pleasure vessels have designated typhoon shelter space inside the harbour – almost entirely in the Causeway Bay typhoon shelter. On the other hand, 40% of commercial vessels are allotted mooring space in Victoria Harbour during typhoons, as shown in Figure C.3. It's assumed that pleasure vessels have returned to their home mooring well ahead of a typhoon.

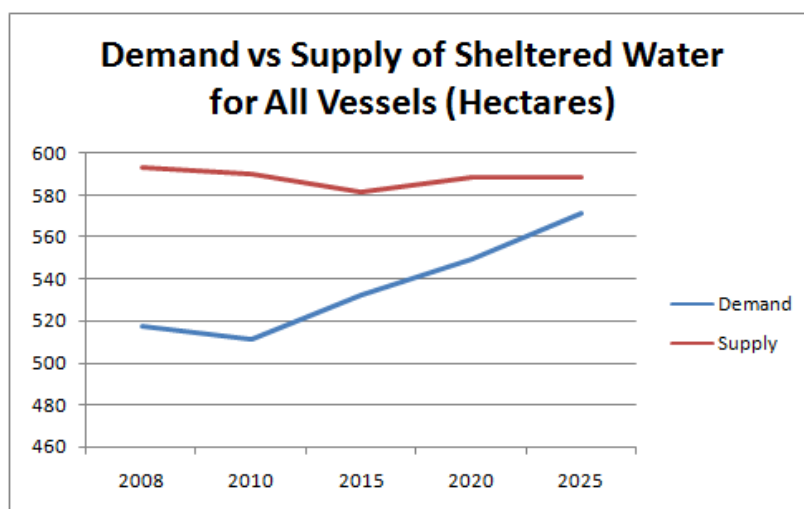


Figure C.4

Source: *Assessment of Typhoon Shelter Space Requirements*, Marine Department (2009).

According to the Marine Department, the estimated demand for supply shelter space for all vessels will be sufficient until after 2023. According to this data, no further typhoon shelter space will be required in Hong Kong overall for many years to come.

The Marine Department's (2009) *Assessment of Typhoon Shelter Space Requirements* shows that the demand and supply for non-pleasure vessels shows a narrow gap (Figure C.5.)

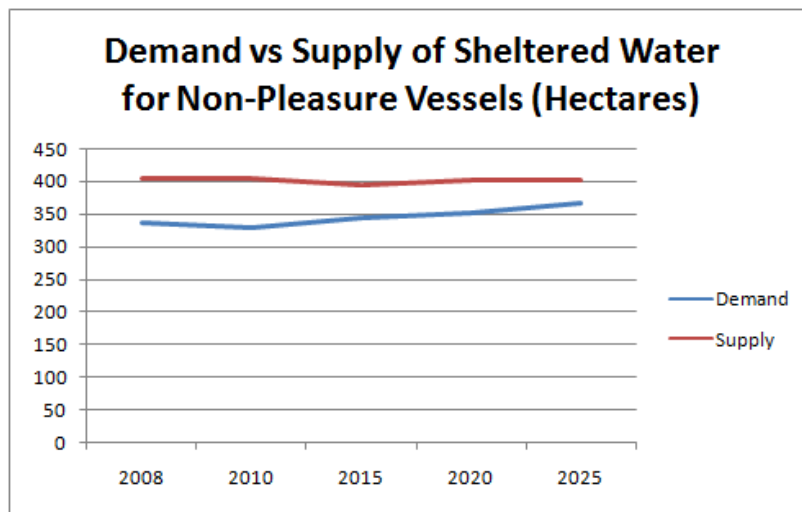


Figure C. 5

Source: *Assessment of Typhoon Shelter Space Requirements*, Marine Department (2009).

Accordingly, non-pleasure vessels will have no need for further typhoon shelter space well past 2023. The demand for shelter space for these vessels is not growing very quickly, and should be sustained for a good amount of time.

As pointed out by various stakeholders, this estimate may not be entirely accurate, as the increasing number of construction projects around Victoria Harbour will increase the need for barges and work ships. Under these circumstances, the current shelter space may prove to be insufficient much sooner than predicted herein especially shelter in the harbour is in short supply. The operators working on the project would require shelter in the harbour, rather than away in Heiling Chau. Moreover, the operators believe that shelter there has limited use (typhoon shelter only) as no support services or facilities are available.

## Pleasure vessels

The Marine Department's study regarding shelter space for pleasure vessels shows that available shelter space will become insufficient within only a few years.

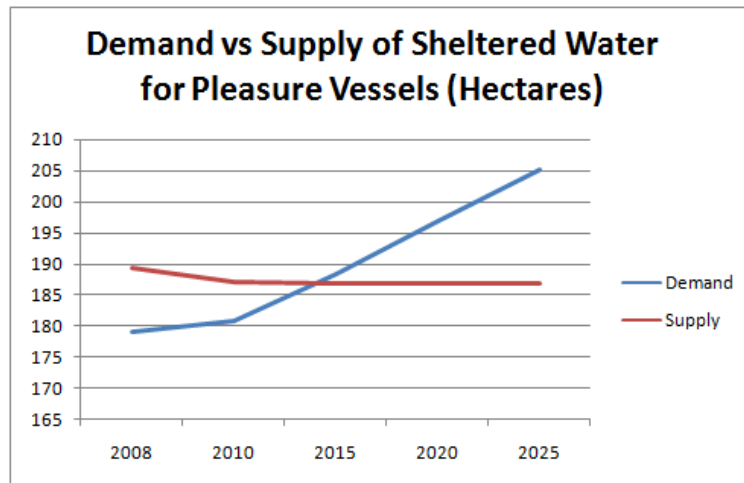


Figure C.6

Source: *Assessment of Typhoon Shelter Space Requirements*, Marine Department (2009).

Within the next five years, the demand for pleasure vessel typhoon shelter space will surpass the current space that these vessels are allotted. However, leisure boat industry has noted that there is an immediate shortage of mooring spaces throughout all marinas for various type of leisure vessels.

Further, the demand and supply of sheltered water does NOT take into account the increase in demand for sheltered mooring of community, leisure and tourism vessels in Victoria Harbour specifically.

The predictions for the growth of pleasure vessels are further supported in Fig. C.7

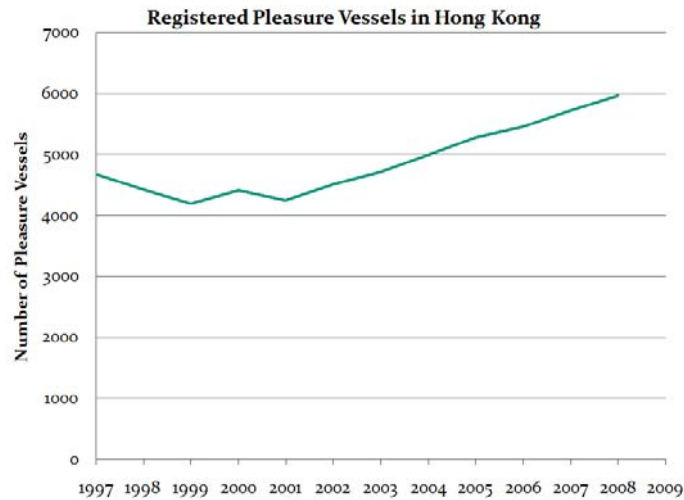


Figure C.7

Source: *Statistics on Licensed Vessels*, Marine Department (1997-2009)

### **Distance decay – the cost of travel between moorings and the use in the harbour**

The strong increase in pleasure vessels supports the need for increased space and facilities for marine users. Moreover, concerned stakeholders explain is that much of the typhoon shelter space that is provided to pleasure vessels is not located in the harbour.

They have expressed concern that the distance from the harbour requires hours of time, as well as large quantities of fuel, to travel between the harbour and the mooring. This affects community, leisure and tourism vessels who wish to enjoy Victoria Harbour, especially the area east of the Star Ferry.

### **Conclusion**

The final conclusion in the Marine Department study that the overall typhoon shelter space is sufficient until 2023 fails to take into account the distance between the harbour and the moorings. Together with the development of the harbourfront there will be an increase in demand for tourism, community, leisure and water sports which require

shelter for mooring, berthing and events, in addition to shelter during typhoons, within the limits of Victoria Harbour.

It is our finding therefore that the demand for sheltered water in Victoria Harbour has and will surpass supply.