

## **CHAPTER 2**

**Transport and Logistics Bureau  
Marine Department  
Civil Engineering and Development Department  
Water Supplies Department**

**Planning and management of sheltered space  
within Hong Kong waters**

**Audit Commission  
Hong Kong  
28 October 2024**

*This audit review was carried out under a set of guidelines tabled in the Provisional Legislative Council by the Chairman of the Public Accounts Committee on 11 February 1998. The guidelines were agreed between the Public Accounts Committee and the Director of Audit and accepted by the Government of the Hong Kong Special Administrative Region.*

Report No. 83 of the Director of Audit contains 8 Chapters which are available on our website (<https://www.aud.gov.hk>).



The Audit Commission website

Audit Commission  
6th Floor, High Block  
Queensway Government Offices  
66 Queensway  
Hong Kong

Tel : (852) 2867 3423  
Fax : (852) 2824 2087  
E-mail : [enquiry@aud.gov.hk](mailto:enquiry@aud.gov.hk)

# PLANNING AND MANAGEMENT OF SHELTERED SPACE WITHIN HONG KONG WATERS

## Contents

	<b>Paragraph</b>
<b>EXECUTIVE SUMMARY</b>	
<b>PART 1: INTRODUCTION</b>	1.1 – 1.16
Audit review	1.17
General response from the Government	1.18 – 1.19
Acknowledgement	1.20
<b>PART 2: PLANNING AND PROVISION OF SHELTERED SPACE</b>	2.1 – 2.2
Demand and supply assessment of sheltered space	2.3 – 2.16
Audit recommendations	2.17
Response from the Government	2.18
Enhancement of wave protection in sheltered space	2.19 – 2.29
Audit recommendations	2.30 – 2.31
Response from the Government	2.32 – 2.33
Hydrographic survey and maintenance dredging in sheltered space	2.34 – 2.41

	<b>Paragraph</b>
Audit recommendations	2.42
Response from the Government	2.43
<b>PART 3: MANAGEMENT OF SHELTERED SPACE</b>	<b>3.1 – 3.3</b>
Local vessel without a valid operating licence or laid-up permission	3.4 – 3.11
Audit recommendations	3.12
Response from the Government	3.13
Removal of sunken vessels	3.14 – 3.21
Audit recommendations	3.22
Response from the Government	3.23
Removal of non-permitted floating structures	3.24 – 3.27
Audit recommendation	3.28
Response from the Government	3.29
Designation of different berthing areas within typhoon shelters	3.30 – 3.32
Audit recommendations	3.33
Response from the Government	3.34
Documentation of removal notices	3.35 – 3.36
Audit recommendation	3.37
Response from the Government	3.38
<b>PART 4: ANCILLARY FACILITIES AND SERVICES</b>	<b>4.1</b>
Public landing facilities	4.2 – 4.9

	<b>Paragraph</b>
Audit recommendations	4.10 – 4.11
Response from the Government	4.12 – 4.13
Fresh water supply for shipping purpose	4.14 – 4.20
Audit recommendations	4.21
Response from the Government	4.22
Marine refuse cleansing services	4.23 – 4.28
Audit recommendations	4.29
Response from the Government	4.30

<b>Appendices</b>	<b>Page</b>
A : List of typhoon shelters and sheltered anchorages (30 June 2024)	77
B : Marine Department: Organisation chart (extract) (30 June 2024)	78
C : Opening hours of water selling kiosks (30 June 2024)	79
D : Acronyms and abbreviations	80



# PLANNING AND MANAGEMENT OF SHELTERED SPACE WITHIN HONG KONG WATERS

## Executive Summary

1. In order to safeguard the safety of the vessels and their crew members, the Government is committed to ensuring that sufficient sheltered space is provided within Hong Kong waters for local vessels to take refuge during typhoons or inclement weather. The supply of sheltered space within Hong Kong waters mainly includes typhoon shelters (T/Ss) and sheltered anchorages (S/As). As at 30 June 2024, there were 14 T/Ss and 18 S/As in different areas of Hong Kong, providing a total sheltered space of 421.6 hectares and 184.2 hectares respectively. The Marine Department (MD) carries out daily patrols within Hong Kong waters including T/Ss and S/As. During the patrol, it ensures fairways and passage areas inside T/Ss are unobstructed, vessels are berthed in a safe and orderly manner and comply with existing marine legislation. In addition, it inspects and checks the condition of T/Ss and S/As, and conducts inspections on any safety issues related to vessels. Ancillary facilities and services are also provided by relevant government departments including the Civil Engineering and Development Department (CEDD) and the Water Supplies Department (WSD) to meet the needs of vessels berthed in T/Ss and S/As, including public landing facilities to facilitate embarkation and disembarkation to and from vessels, fresh water supply for shipping purpose and marine refuse cleansing services. The Audit Commission (Audit) has recently conducted a review to examine the planning and management of sheltered space within Hong Kong waters.

### **Planning and provision of sheltered space**

2. *Need to closely monitor the demand and supply of sheltered space.* Around every five years, MD conducts the Assessment of T/S Space Requirements on the existing and projected situations of demand and supply of sheltered space for local vessels to take refuge during typhoons or inclement weather on a territory-wide basis. The latest assessment for the period from 2022 to 2035 projected that on a territory-wide basis the supply of sheltered space for local vessels could adequately meet the demand throughout the period up to 2035. The projected overall surplus will be 3.1 hectares in 2035, assuming that among others, projects in progress/under

## Executive Summary

---

planning, including the expansion of Aberdeen South T/S, new sheltered space in Airport City Cove and under the Tung Chung New Town Extension, will be completed on schedule. If any of these projects cannot be completed by 2035, there may be a shortfall in sheltered space for meeting the projected demand (paras. 2.3, 2.4(b) and 2.6).

3. ***Need to explore using technology to assess the occupancy of T/Ss.*** In order to ensure that vessels' demand for sheltered space during typhoons can be met, MD keeps track of the highest occupancy of the 14 T/Ss during typhoons by counting the number of vessels by type and estimating the occupancy of T/Ss. However, MD does not assess the occupancy of T/Ss during normal days. As berthing areas in T/Ss are open to all vessels on a first-come-first-served basis, only limited sheltered space may be available during typhoons in T/Ss if there is a considerable occupancy during normal days. In Audit's view, a continuous assessment of occupancy of T/Ss will help MD better understand the usage of T/Ss by different types of vessels including the preference of working vessels to berth in certain T/Ss. Since the existing practice of counting the number of vessels involves substantial manpower and the estimation of occupancy may not be entirely accurate, MD needs to explore using technology to assess the occupancy of T/Ss during typhoons and normal days (paras. 2.8 to 2.10).

4. ***Need to make available layout plans of S/As for public information.*** Both T/Ss and S/As are open to all classes of local vessels on a first-come-first-served basis. While the Government does not assign any individual T/Ss and S/As for use by designated classes of vessels, some of the sheltered space are commonly used by certain classes of vessels due to location and ancillary facility factors, as well as usage habits and past practices. Pursuant to the Merchant Shipping (Local Vessels) (Typhoon Shelters) Regulation (Cap. 548E), MD prepares a plan of each T/S showing the passage and makes available a copy of such plan for inspection by the public. However, as there is no similar legislative requirement for S/As, MD does not upload the layout plans of S/As to its website showing their sizes and boundaries. In order to provide information on the sizes and boundaries of S/As, MD needs to make available on its website the layout plans of S/As for public information (paras. 1.6 and 2.11).

5. ***Need to keep in view the effectiveness of wave protection enhancement works in T/Ss.*** Based on the recommendations of a review completed by CEDD in August 2021, improvement works had been carried out so as to strengthen the wave resilience in Aberdeen South T/S, Aberdeen West T/S and Hei Ling Chau T/S.



## Executive Summary

---

In June 2023, a temporary wave monitoring station was installed in Hei Ling Chau T/S for a one-year wave-monitoring programme to monitor the wave attenuation performance of the floating barriers installed in March 2023. According to CEDD, based on the interim results, the floating barriers appeared to be able to play a role in reducing waves. MD decided to extend the operation of the wave monitoring station to October 2024. The final assessment report on the wave attenuation performance of the floating barriers was expected to be completed by the end of 2024 (paras. 2.20 and 2.21).

6. ***Wave protection capability of S/As.*** According to MD, individual S/As had their local characteristics in berthing different classes of vessels, and were considered to be viable and effective to protect the vessels therein through prolonged past experience of passage of typhoons. Since technical standards on wave protection for T/Ss are not applicable to S/As, in the absence of a unified standard, the wave protection capability of S/As may vary depending on the local geographical environment. In the aftermath of Super Typhoon Mangkhut, MD distributed a pamphlet to relevant stakeholders such as owners/operators of local vessels to educate them to prevent damage and loss of vessels during typhoons or inclement weather. In order to enhance the safe berthing of vessels in S/As, MD needs to remind the owners/operators of local vessels to take precautionary measures promulgated in its pamphlet during typhoons or inclement weather (para. 2.24).

7. ***Room for improvement in conducting hydrographic surveys.*** According to MD, it normally conducts hydrographic surveys for T/Ss and S/As at an interval of 48 months subject to workload and job priority. Audit analysis revealed that:

- (a) as at 30 June 2024, of the 14 T/Ss and 18 S/As, the latest surveys of 4 (29% of 14) T/Ss and 8 (44% of 18) S/As were conducted more than 48 months ago (i.e. before 30 June 2020). In particular, the latest surveys of 2 S/As were conducted 104 months ago; and
- (b) MD took more than 270 days to complete the latest hydrographic surveys for 1 T/S and 5 S/As (paras. 2.35 and 2.36).

8. ***Dredging work to increase the water depth of fire lanes.*** In late April 2022, the Fire Services Department completed a review on fire lanes of the 14 T/Ss and proposed to MD that in 5 T/Ss (including Aberdeen South T/S), the width

## Executive Summary

---

of fire lanes should be adjusted to at least 20 metres and all fire lanes should have a water depth not less than 4.5 metres. As the water depth of some parts of fire lanes in Aberdeen South T/S was less than 3.5 metres, in May 2023, MD proposed to CEDD to carry out maintenance dredging. According to the dredging programme as of April 2024 and the notes of meetings between MD and CEDD, maintenance dredging work was scheduled to commence in April 2026 tentatively. In order to enhance the fire safety of sheltered space, MD needs to collaborate with relevant stakeholders to facilitate the dredging work in Aberdeen South T/S for meeting the requirement on water depth (i.e. not less than 4.5 metres) of fire lanes as far as practicable (paras. 2.39, 2.40(a) and 2.41).

### Management of sheltered space

9. *Need to step up efforts in tackling expired licence/laid-up permission cases during daily patrol.* The Merchant Shipping (Local Vessels) Ordinance (Cap. 548) stipulates that every local vessel shall be certificated and licensed/granted permission for a laid-up vessel. In June and July 2024, with the accompany of MD staff, Audit visited 7 T/Ss and 1 S/A and sample checked 770 local vessels berthed therein by taking photographs. Upon matching their certificate of ownership (COO) numbers painted on deck housing/hull with the database of licensed local vessels/vessels with laid-up permissions as at 30 June 2024, Audit found that:

- (a) 67 (9%) local vessels were without valid operating licences/laid-up permissions. Of which, 43 local vessels were not issued with certificates of survey as required; and
- (b) the operating licences/laid-up permissions of 29 (43% of 67) local vessels had expired for more than 1 year (paras. 3.4 and 3.6).

10. *Need to step up efforts to ensure timely renewal of operating licences/laid-up permissions by vessel owners.* From 2021 to 2023, 1,144 prosecutions (involving 1,085 vessels) were initiated against the local vessels in T/Ss and S/As without valid operating licences/laid-up permissions. According to MD's database of local vessels as at 30 June 2024, of the 27,155 certificated local vessels, the operating licences/laid-up permissions of 6,500 (24%) local vessels had expired. Audit noted that after sending the notification letter of expiry to the vessel owner when the operating licence/laid-up permission had expired for more than

## Executive Summary

---

2 months, no further follow-up action would be taken by MD's Licensing and Port Formalities Section (paras. 3.8 and 3.9).

11. ***Need to recover the costs of removing sunken vessels from vessel owners.*** From January 2021 to June 2024, MD incurred an expenditure of \$1.1 million for removing 28 sunken vessels. Among them, the ownership of 17 sunken vessels could not be ascertained whereas the ownership of the remaining 11 sunken vessels could be traced. Pursuant to the Merchant Shipping (Local Vessels) Ordinance, MD may recover the cost of any action taken or caused to be taken including all disbursements and other expenses incurred thereby as a civil debt from the vessel owners. However, as of August 2024, MD had not issued demand notes to the 11 vessel owners requesting them to repay the cost of removing the sunken vessels totalling \$448,500 (para. 3.16).

12. ***Need to expedite the removal of sunken vessels.*** From 2021 to 2023, there were 130 sunken vessels identified by MD in the sheltered space, 113 of which had been removed by MD or the vessel owners as at 30 June 2024. Audit analysed the number of days lapsed for removing the 113 sunken vessels and noted that 37 (33%) vessels were removed more than 30 days after being identified by MD. Moreover, as at 30 June 2024, there were 19 sunken vessels located in 4 T/Ss and 1 S/A pending removal. Audit selected To Kwa Wan T/S with 14 (74%) sunken vessels pending removal for examination and noted that:

- (a) 4 sunken vessels with known COO numbers were identified by MD during 2018 to 2022 (Vessel A in 2018, Vessel B in 2021 and Vessels C and D in 2022); and
- (b) 7 and 3 sunken vessels with unknown COO numbers were identified in July and October 2023 respectively (paras. 3.15, 3.17 to 3.19).

13. ***Need to consider increasing the penalty level on failure to comply with removal/direction notices.*** Pursuant to section 56 of the Merchant Shipping (Local Vessels) Ordinance, failure to comply with the removal/direction notices constitutes an offence with a maximum fine of level 4 (i.e. \$25,000 as at 30 June 2024) and imprisonment for 1 year. Although there were 44 successful prosecutions taken against the owners of Vessels A to D (see para. 12(a)) since 2021 with a total fine of \$178,600 due to repeated failure to comply with removal/direction notices, the owners

## Executive Summary

---

had not taken action to remove these vessels. In order to increase the deterrent effect, MD needs to consider making legislative amendment to the Merchant Shipping (Local Vessels) Ordinance to increase the penalty level on failure to comply with removal/direction notices and to introduce a fine each day during which the non-compliance continues (paras. 3.20 and 3.21).

14. *Need to step up efforts in monitoring the situation of non-permitted floating structures in sheltered space.* Audit visited To Kwa Wan T/S and Sam Ka Tsuen T/S on 27 June and 10 July 2024 respectively and found some non-permitted floating structures. In particular, some non-permitted floating structures were placed in the passage area of To Kwa Wan T/S. As non-permitted floating structures occupy the berthing area of T/Ss or S/As, MD needs to step up efforts in monitoring the situation of non-permitted floating structures in sheltered space, and take enforcement action in a timely manner (paras. 3.26 and 3.27).

### Ancillary facilities and services

15. *Room for improvement in planning and provision of public landing facilities.* Audit examined CEDD records of two cases of new public landing facilities constructed/under planning for T/S users in Tuen Mun and Aberdeen and found the following room for improvement:

- (a) *Need to review need of providing additional public landing facilities within Tuen Mun T/S.* In 2019, in view of the high utilisation rates of the two existing public landing facilities within Tuen Mun T/S and the inherent danger of people climbing the breakwater to board and alight their vessels, a new public landing facility was constructed at the back of Tuen Mun T/S, and was open for public use in November 2021. However, the Transport Department's on-site utilisation survey conducted in 2023 showed that the utilisation of the new public landing facility was low. Moreover, Audit's site visit in June 2024 found that there were more than ten makeshift landings alongside the breakwater facing Tuen Mun T/S. These indicated that the three existing public landing facilities might not have fully addressed the need of the users; and
- (b) *Need to closely monitor the implementation of the provision of additional public landing facilities at Aberdeen South T/S.* The construction works of two sets of new public landing facilities located at Aberdeen South T/S

## Executive Summary

---

were originally planned to be completed by the first quarter of 2024. However, longer time was taken for conducting public consultation and responding to the objections received during the statutory consultation period upon gazetting of the proposed construction works. According to the latest schedule, the construction works were planned to be completed in the second quarter of 2026 (para. 4.3).

16. ***Need to ensure proper endorsement of cleaning completion reports submitted by contractors.*** CEDD has engaged contractors to carry out routine inspections, cleansing and maintenance to ensure that public landing facilities are proper for public use. Audit reviewed CEDD's Port Maintenance Information System (PMIS) records of the 75 public landing facilities located at T/Ss or S/As from July 2023 to June 2024 and noted room for improvement. For example, of the 2,755 cleaning completion reports (indicating any defective items identified during routine inspections) involved, 511 (19%) (involving 22 public landing facilities) had not been endorsed by CEDD through PMIS (paras. 4.4 and 4.5).

17. ***Need to closely monitor the issue of works orders.*** In May to July 2024, Audit conducted site visits to the 34 public landing facilities located at 5 T/Ss and 1 S/A and found defects in 3 (9%) public landing facilities. While those defects had been reported by the contractors through PMIS, CEDD took extra time to issue the works orders for carrying out rectification works. For example, for the two defective landing facilities reported by the contractors in October 2023 and March 2024 respectively, up to August 2024 (i.e. 10 and 5 months respectively after reporting by the contractor), CEDD had not yet issued the relevant works orders (para. 4.7).

18. ***Need to improve the operation of shipping water selling machine.*** According to the Waterworks Regulations (Cap. 102A), the charge for fresh water for shipping purposes shall be \$4.58 and \$10.93 per cubic metre when supplying to or for use on local vessels and non-local vessels respectively. Before purchasing fresh water from the shipping water selling machine, at which the water charge rate for local vessels is adopted, customers are required to enter their COO numbers into the machine. Audit analysed the sales records of July 2024 extracted from the machine and found that of the 320 transactions, COO numbers of 109 (34%) transactions could not be matched with those recorded in MD's list of local vessels as of June 2024 (paras. 4.14 and 4.17).

## Executive Summary

---

19. ***Need to investigate possible cases of non-compliance with the Waterworks Regulations.*** Owners of water boats who wish to sell or offer for sale water from the waterworks to vessels are required to obtain permission from WSD. Of the 18 licensed water boats as at 30 June 2024 according to MD's records, no permission had been granted by WSD in relation to 6 water boats. Audit noted that:

- (a) 2 of the 6 water boats, of which their owners had not been granted WSD permission, had obtained fresh water of 3,218 cubic metres in July 2024 from the Tuen Mun water selling kiosk (including those from the shipping water selling machine) after checking to relevant sales records; and
- (b) in 5 of the 12 permissions, the holders of the permission were different from the owners of the concerned water boats as recorded in MD's records (paras. 4.19 and 4.20).

20. ***Need to ensure proper handling of waste oil.*** Under the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C), waste oil is chemical waste and should be transported to licensed chemical waste disposal facilities (e.g. Chemical Waste Treatment Centre) for proper disposal. Audit analysis of the monthly information submitted by the marine refuse cleansing contractor revealed that about 30,000 litres of waste oil were handled by the contractor from October 2022 (contract commencement) to June 2024. However, Audit noted that the collection of waste oil was outside the scope of the cleansing contract. According to MD, the vessels employed by the marine refuse cleansing contractor did not meet relevant safety standards and the staff employed by the contractor had not received any relevant safety training, and therefore were not fitted for collecting waste oil from local vessels. In Audit's view, MD needs to instruct the cleansing contractor to cease the current practice of handling waste oil, and collaborate with relevant parties to work out an arrangement for handling waste oil produced by local vessels during operation at an early date (paras. 4.26 to 4.28).

### **Audit recommendations**

21. **Audit recommendations are made in the respective sections of this Audit Report. Only the key ones are highlighted in this Executive Summary. Audit has recommended that the Director of Marine should:**

## Executive Summary

---

### *Planning and provision of sheltered space*

- (a) **closely monitor the demand and supply of sheltered space and explore fallback options to address the shortfall in sheltered space if there is any project slippage (para. 2.17(a));**
- (b) **explore using technology to assess the occupancy of T/Ss during typhoons and normal days (para. 2.17(b));**
- (c) **make available on MD's website the layout plans of S/As for public information (para. 2.17(c));**
- (d) **take measures to ensure the timely completion of the final assessment report on the wave attenuation performance of floating barriers, and keep in view the effectiveness of wave protection enhancement works in T/Ss (para. 2.30(a) and (b));**
- (e) **remind the owners/operators of local vessels to take precautionary measures promulgated in MD's pamphlet during typhoons or inclement weather (para. 2.30(c));**
- (f) **take measures to ensure that hydrographic surveys are arranged and completed within a reasonable interval and timeframe (para. 2.42(a));**
- (g) **collaborate with relevant stakeholders to facilitate the dredging work in Aberdeen South T/S as far as practicable (para. 2.42(b));**

### *Management of sheltered space*

- (h) **step up efforts in tackling expired licence/laid-up permission cases during daily patrol, and make strenuous efforts to prosecute owners of certificated local vessels without valid operating licences or laid-up permissions (para. 3.12(a) and (b));**
- (i) **consider adopting e-service (e.g. iAM Smart) in the renewal of the operating licences/laid-up permissions, and step up efforts in following up with vessel owners on expired operating licences/laid-up permissions (para. 3.12(d) and (e));**

## Executive Summary

---

- (j) **take proactive measures, including considering taking legal action, to recover the costs of removing the sunken vessels from the vessel owners (para. 3.22(a));**
- (k) **take urgent rectifying action in removing sunken vessels in T/Ss and S/As (para. 3.22(b));**
- (l) **consider making legislative amendment to the Merchant Shipping (Local Vessels) Ordinance to increase the penalty level on failure to comply with removal/direction notices and to introduce a fine each day during which the non-compliance continues (para. 3.22(c));**
- (m) **step up efforts in monitoring the situation of non-permitted floating structures in sheltered space, and take enforcement action in a timely manner (para. 3.28);**

### *Ancillary facilities and services*

- (n) **in collaboration with relevant government departments, review the need of providing additional public landing facilities within Tuen Mun T/S (para. 4.10); and**
- (o) **instruct the cleansing contractor to cease the current practice of handling waste oil, and in collaboration with relevant parties, work out an arrangement for handling waste oil produced by local vessels during operation at an early date (para. 4.29(b) and (c)).**

22. **Audit has *recommended* that the Director of Civil Engineering and Development should:**

- (a) **closely monitor the implementation of the provision of the new public landing facilities at Aberdeen South T/S to ensure their timely completion (para. 4.11(a));**
- (b) **take measures to ensure that all cleaning completion reports submitted by contractors through PMIS are endorsed in a timely manner (para. 4.11(b)); and**



## Executive Summary

---

- (c) **closely monitor the issue of works orders on the rectification works for defective public landing facilities (para. 4.11(c)).**
23. **Audit has *recommended* that the Director of Water Supplies should:**
- (a) **ascertain the reasons for COO numbers recorded by the shipping water selling machine not matching those recorded in MD's list of local vessels, and enhance the functions of the shipping water selling machine (para. 4.21(a) and (b)); and**
  - (b) **investigate the possible cases of non-compliance with the Waterworks Regulations and take follow-up actions to rectify any non-compliance identified (para. 4.21(d)).**

### Response from the Government

24. The Secretary for Transport and Logistics, the Director of Marine, the Director of Civil Engineering and Development and the Director of Water Supplies agree with the audit recommendations.



## **PART 1: INTRODUCTION**

1.1 This PART describes the background to the audit and outlines the audit objectives and scope.

### ***Background***

1.2 Hong Kong is located on the coast of China within South China Sea environment and subject to the threat of tropical cyclones. In order to safeguard the safety of the vessels and their crew members, the Government is committed to ensuring that sufficient sheltered space is provided within Hong Kong waters for local vessels to take refuge during typhoons or inclement weather. The supply of sheltered space within Hong Kong waters mainly includes typhoon shelters (T/Ss) and sheltered anchorages (S/As).

1.3 Under normal weather conditions, local vessels may be anchored at any safe and suitable locations within Hong Kong waters (except for certain areas of waters where anchoring is prohibited), including T/Ss and S/As, according to their daily business and operational needs subject to no obstruction being made to marine traffic.

### ***T/Ss and S/As***

1.4 As at 30 June 2024, there were 14 T/Ss and 18 S/As (Note 1) in different areas of Hong Kong, providing a total sheltered space of 421.6 hectares and 184.2 hectares respectively (see Appendix A).

1.5 The characteristics of T/Ss and S/As are as follows:

- (a) *T/S*. Each T/S is geographically defined by law and its berth is provided for mixed use by different types of vessels. Breakwaters are constructed to form a T/S, thereby providing protection for safe navigation and berthing

---

**Note 1:** *Wan Chai Cargo Basin S/A has been managed by the Development Bureau under “Water Sports and Recreation Precinct (Phase 2)” project since late December 2021 and is not open to other vessels.*

## Introduction

---

of vessels. The Merchant Shipping (Local Vessels) (Typhoon Shelters) Regulation (Cap. 548E) governs the use of T/Ss, including:

- (i) setting the permitted length overall of local vessels entering or remaining in T/Ss. The permitted length overalls are 30.4 metres, 50 metres and 75 metres for 7, 6 and 1 T/Ss respectively;
  - (ii) prohibiting any local vessel that carries on board specified categories of dangerous goods for non-permitted uses from entering or remaining in T/Ss; and
  - (iii) prohibiting any local vessel from entering or remaining in T/Ss if the Director of Marine is of the opinion that its presence constitutes or is likely to constitute a hazard in the T/S owing to the size or design of the vessel, or the number of vessels in the T/S; and
- (b) *S/A*. There are sheltered waters in Hong Kong with terrains, landscapes and hydrographic condition allowing vessels to take refuge during typhoons or inclement weather and protecting them from gale and significant waves caused by typhoons and monsoons. These sheltered waters are protected by natural landscape and/or artificial structures (e.g. seawalls and breakwaters) created by reclamation under other development objectives. According to the Marine Department (MD):
- (i) when the number of gathered vessels within the sheltered water becomes significant, MD will list it as a *S/A* and allocate more resources to manage the area as appropriate such as defining passages by erecting aids to navigation, and enhancing the patrol frequency by MD patrol launches, etc.; and
  - (ii) *S/A* is listed because of prolonged and customary gathering of vessels after testing of inclement weather. Technical standards applicable to T/Ss (e.g. those on wave protection stated in the Port Works Design Manual (PWDM) published by the Civil Engineering and Development Department (CEDD)) are not applicable to *S/As*.

1.6 Both T/Ss and S/As are open to all classes of local vessels (Note 2) on a first-come-first-served basis. Vessels are generally berthed by anchoring (laying anchors on the seabed) or mooring (securing a vessel to marine structures, e.g. buoys or dolphins — Note 3, by using its chain cable). While the Government does not assign any individual T/Ss and S/As for use by designated classes of vessels, some of the sheltered space are commonly used by certain classes of vessels due to location and ancillary facility factors, as well as usage habits and past practices. For example, local vessels in New Yau Ma Tei T/S and Chai Wan Cargo Basin S/A are mainly working vessels (Classes I to III) while those in Aberdeen South T/S and Pak Sha Wan S/A are mainly pleasure vessels (Class IV).

### *Planning and provision of sheltered space*

1.7 *Assessment of sheltered space requirement.* In order to ensure that sufficient sheltered space is provided within Hong Kong waters for local vessels to take refuge during typhoons or inclement weather, MD conducts assessment around every five years on the existing and projected situations of demand and supply of sheltered space for local vessels on a territory-wide basis. In case of inadequate sheltered space available for local vessels in projection, MD will work with relevant government bureaux/departments such as the Transport and Logistics Bureau and CEDD to explore any viable way to provide more sheltered space by establishing a new T/S or expanding existing one(s) or other ways to cope with the demand. The latest assessment covering the period from 2022 to 2035 (the 2022-2035 assessment) was completed in December 2022, and projected that the supply of sheltered space for local vessels could adequately meet the demand throughout the period up to 2035.

---

**Note 2:** *Local vessels are classified into Classes I to IV under the Merchant Shipping (Local Vessels) (Certification and Licensing) Regulation (Cap. 548D). Broadly speaking, Classes I to IV refer to the vessels with the following functions respectively:*

- (a) Class I: passenger vessels (e.g. ferry vessel and launch);*
- (b) Class II: cargo vessels (e.g. crane barge and dredger);*
- (c) Class III: fishing vessels (e.g. fish carrier and fishing sampan); and*
- (d) Class IV: pleasure vessels (e.g. auxiliary powered yacht and cruiser).*

**Note 3:** *Dolphin is an isolated structure for mooring vessels or serving as navigation markers to demarcate fairways and different berthing areas.*

## Introduction

---

1.8 ***Berthing of vessels.*** In order to berth vessels safely in sheltered space, the following considerations should be taken into account:

- (a) ***Wave protection.*** As mentioned in paragraph 1.5(a), breakwaters are constructed in each T/S for wave protection. According to PWDM published by CEDD, the layout of breakwaters for T/Ss should be determined by considering the required sheltered conditions for vessels at berth or anchorage, maneuvering areas for vessels within the sheltered area, and adequate stopping distance for vessels entering the entrance at a safe navigating speed; and
- (b) ***Water depth.*** While there is no specific requirement of water depth in T/Ss and S/As, individual types of vessels have their own water depth requirements. MD conducts hydrographic surveys from time to time, assesses and compares the collected sounding data with the existing nautical charts/previous survey results. If there is a significant change in water depth which may affect the navigational safety of ships, MD will discuss the case with CEDD about the feasibility of maintenance dredging. If technically feasible, and after consultation with relevant stakeholders, CEDD will plan and conduct related maintenance dredging works.

### ***Management of sheltered space***

1.9 ***Daily patrol.*** MD carries out daily patrols within Hong Kong waters including T/Ss and S/As. The entire waters of Hong Kong are divided into 4 patrol sectors and each sector is served by 3 to 8 patrol launches. During the patrol in T/Ss and S/As, MD:

- (a) ensures fairways and passage areas inside T/Ss are unobstructed, vessels are berthed in a safe and orderly manner and comply with existing marine legislation;
- (b) inspects and checks the condition of T/Ss and S/As. Any defects or abnormalities found are reported to the Command Centre of the Harbour Patrol Section (HPS) who will refer to the concerned party; and
- (c) conducts inspections on any safety issues related to vessels, such as the risk of listing, sinking and fire. Apart from assisting and instructing the vessels

concerned to rectify the situation, MD also carries out investigations and appropriate follow-up actions including enforcement and prosecution when necessary.

In case of emergencies such as vessel fire, collision and sinking, patrol launch will attend to the scene to handle the incident or provide assistance to relevant government departments as appropriate.

1.10 ***Special operations.*** In addition to daily patrol, MD also conducts special operations, fire drills and publicity work in T/Ss with other relevant government departments from time to time. The number, frequency and the type of special operations may vary according to the variation of port environment and availability of resources.

1.11 ***Typhoon duties.*** When Hong Kong is affected by or under the threat of typhoons, MD:

- (a) performs traffic regulation in T/Ss to ensure that vessels are berthed in an orderly manner and that the passage areas are unobstructed;
- (b) gives advices, directions and assistances to vessel operators to ensure that vessels are anchored in an orderly manner at suitable locations in T/Ss and take refuge at safe berthing spaces to maximise the utilisation of T/Ss;
- (c) counts the number of vessels by type and reports the estimated occupancy of T/Ss to the Command Centre of HPS. When any T/S is about to come up to its full capacity, MD disseminates the message of full capacity to be broadcast via radio channels; and
- (d) maintains a comprehensive typhoon log of all events upon change of signals until cancellation of all signals and records in typhoon reports, including the number and types of vessels in T/Ss, the percentage of occupancy in T/Ss, the number of removal notices issued and any marine accidents.

## Introduction

---

### *Ancillary facilities and services*

1.12 Public landing facilities may be provided on seawalls and breakwaters to facilitate embarkation and disembarkation to and from vessels. Public landing facilities include public piers and public landing steps. As at 30 June 2024, there were 75 public landing facilities located at T/Ss and S/As.

1.13 Other than providing ancillary facilities, the Government also provides the following services to meet the needs of vessels berthed in T/Ss:

- (a) ***Water Supply.*** The Water Supplies Department (WSD) has set up seven water selling kiosks (WSKs) located at different districts to supply fresh water for shipping purpose. Alternatively, vessels may purchase fresh water from water boats (Note 4). In addition, WSD accepts applications for water supply to piers or berths for shipping purpose; and
- (b) ***Marine refuse collection.*** MD is responsible for collecting local vessel-generated domestic refuse and scavenging floating refuse in specified areas of Hong Kong waters, including foreshore areas and T/Ss, through contractual services. The marine refuse cleansing contractor of MD collects and removes floating marine refuse at all T/Ss and provides free domestic waste collection services to local vessels on a daily basis.

### *Responsible departments*

1.14 MD is responsible for all navigational matters in Hong Kong and the safety standards of all classes and types of vessels. The branch/office/sections/unit responsible for the planning and management of sheltered space within Hong Kong waters as at 30 June 2024 (see Appendix B) are as follows:

- (a) ***Planning, Development and Port Security Branch.*** Under the Planning, Development and Port Security Branch of the Planning and Services

---

**Note 4:** *As at 30 June 2024, there were 18 vessels licensed as Class II - Water Boats under the Merchant Shipping (Local Vessels) (Certification and Licensing) Regulation. MD will arrange with the Department of Health to conduct an inspection on the water boat to check its sanitary condition, prior to issuing the Certificate of Survey (for renewal of licence).*



Division of MD, the Planning and Development Sections are responsible for strategic planning of ports development and the Statistics Section is responsible for the review of sheltered space requirements within Hong Kong waters. As at 30 June 2024, the Planning, Development and Port Security Branch had an establishment of 18 posts;

- (b) ***Hydrographic Office.*** Under the Hydrographic Office of the Planning and Services Division of MD, the Charting Section and the Survey Section are responsible for producing nautical charts and conducting hydrographic surveys respectively. As at 30 June 2024, these two Sections had an establishment of 42 posts;
- (c) ***HPS.*** Under the Operations Branch of the Port Control Division of MD, HPS is responsible for the patrol within Hong Kong waters (including T/Ss and S/As) and the enforcement of marine legislation. As at 30 June 2024, HPS had an establishment of 123 posts;
- (d) ***Licensing and Port Formalities Section.*** Under the Operations Branch of the Port Control Division of MD, the Licensing and Port Formalities Section is responsible for licensing of local vessels and processing of entry and clearance formalities for local, river trade and ocean-going vessels. As at 30 June 2024, the Licensing and Port Formalities Section had an establishment of 66 posts; and
- (e) ***Pollution Control Unit (PCU).*** Under the Port Logistics Section of the Services Branch of the Planning and Services Division of MD, PCU is responsible for the provision of marine refuse cleansing services, and handling accidental oil and marine hazardous and noxious substances spillage in Hong Kong waters. As at 30 June 2024, PCU had an establishment of 23 posts.

The estimated expenditure of the programme area “Local Services” including the management of T/Ss in 2024-25 was \$222.8 million. According to MD, the related expenditure of the planning and management of sheltered space within Hong Kong waters is subsumed under the establishment of and provision for MD and there is no separate breakdown for the related expenditure.

## Introduction

---

1.15 CEDD is responsible for the design and construction as well as maintenance of most of the Government's marine structures and marine facilities (e.g. seawalls, breakwaters and public landing facilities).

1.16 WSD supplies fresh water to local vessels to meet their operational needs, including the operation of WSKs as well as the processing of application for permission to sell water (Note 5) by water boats.

## Audit review

1.17 In May 2024, the Audit Commission (Audit) commenced a review to examine the planning and management of sheltered space within Hong Kong waters. The audit review has focused on the following areas:

- (a) planning and provision of sheltered space (PART 2);
- (b) management of sheltered space (PART 3); and
- (c) ancillary facilities and services (PART 4).

Audit has found room for improvement in the above areas and has made a number of recommendations to address the issues.

## General response from the Government

1.18 The Secretary for Transport and Logistics agrees with the audit recommendations. He has said that the Transport and Logistics Bureau will make every effort to support MD, in collaboration with other relevant government departments, to implement the recommendations.

---

**Note 5:** *In accordance with the Waterworks Regulations (Cap. 102A), no person shall, without permission in writing of the Water Authority, sell or offer for sale water from the waterworks.*

1.19 The Director of Marine, the Director of Civil Engineering and Development and the Director of Water Supplies agree with the audit recommendations.

### **Acknowledgement**

1.20 Audit would like to acknowledge with gratitude the full cooperation of the staff of MD, CEDD and WSD during the course of the audit review.

## **PART 2: PLANNING AND PROVISION OF SHELTERED SPACE**

2.1 This PART examines the planning and provision of sheltered space, focusing on:

- (a) demand and supply assessment of sheltered space (paras. 2.3 to 2.18);
- (b) enhancement of wave protection in sheltered space (paras. 2.19 to 2.33);  
and
- (c) hydrographic survey and maintenance dredging in sheltered space (paras. 2.34 to 2.43).

2.2 According to MD, the Government is committed to ensuring that sufficient sheltered space is provided within Hong Kong waters for local vessels to take refuge during typhoons or inclement weather, so as to safeguard the safety of the vessels and their crew members. As at 30 June 2024, there were 14 T/Ss and 18 S/As (see Note 1 to para. 1.4) in different areas of Hong Kong, providing a total sheltered space of 421.6 hectares and 184.2 hectares respectively.

### **Demand and supply assessment of sheltered space**

2.3 Around every five years, MD conducts the Assessment of T/S Space Requirements on the existing and projected situations of demand and supply of sheltered space for local vessels to take refuge during typhoons or inclement weather on a territory-wide basis. The 2022-2035 assessment (Note 6) projected that on a territory-wide basis the supply of sheltered space for local vessels could adequately meet the demand throughout the period up to 2035, as shown in Table 1.

---

**Note 6:** *The assessment was conducted from August 2020 to December 2022 in two phases. The first phase was a survey with local vessels on shelter arrangement to provide an estimation of their need for taking shelter within Hong Kong waters. The second phase was a projection of demand and supply of sheltered space up to 2035.*

**Table 1**

**Overall balance of demand and supply of sheltered space  
for local vessels  
(2021 to 2035)**

	Actual	Projection		
	2021	2025	2030	2035
	(hectares)			
Supply	624.9	630.9	660.1	660.1
Demand	568.8	603.7	633.9	657.0
Overall surplus	56.1	27.2	26.2	3.1

*Source: MD records*

***Need to closely monitor the demand and supply of sheltered space***

2.4 ***Supply of sheltered space.*** The supply of sheltered space within Hong Kong waters includes T/Ss, S/As and private marinas with berthing facilities in their own premises (Note 7). According to the 2022-2035 assessment, the increase in the projected supply (Note 8) was mainly due to:

- (a) ***A project and a newly listed S/A from 2021 to 2025.*** These included reinstatement of Causeway Bay T/S (3.6 hectares) upon the completion of the Central-Wanchai Bypass and Island Eastern Corridor Link project in 2022 and the listing of Tseung Kwan O S/A (3.4 hectares) in 2023; and

---

**Note 7:** *According to MD, the sheltered space in marinas are operated by private marinas and yacht clubs with their operations governed by terms of respective land leases (i.e. not regulated by MD). This audit review does not cover the provision, management and ancillary facilities of sheltered space in private marinas.*

**Note 8:** *The increase in projected supply from 2021 to 2035 was netted off with the decreases in supply in Hei Ling Chau T/S for installation of floating barriers (1 hectare — see para. 2.20(b)), Tuen Mun T/S for implementation of the Tuen Mun Bypass project (0.9 hectares) and Cheung Chau T/S for construction of a new ferry pier (0.6 hectares).*

## Planning and provision of sheltered space

---

- (b) *Projects in progress/under planning from 2025 to 2035.* These included:
- (i) expansion of Aberdeen South T/S (24 hectares) under the Invigorating Island South initiative (Note 9);
  - (ii) new sheltered space in Airport City Cove (3.4 hectares — Note 10);  
and
  - (iii) new sheltered space under the Tung Chung New Town Extension (3.3 hectares).

2.5 ***Demand for sheltered space.*** According to the 2022-2035 assessment, the demand for sheltered space was projected taking into consideration the projected increase in the number of local vessels, the percentage of local vessels in need of sheltered space within Hong Kong waters, average size of local vessels and the occupancy factor (i.e. areas reserved for berthing and passage areas). The increase in projected demand for sheltered space was mainly due to the projected increase in the number of pleasure vessels. In 2021, the actual demand from pleasure vessels was 240.3 hectares (42% of the total demand) while the projected demand from pleasure vessels was expected to increase to 311.1 hectares (47% of the total demand) in 2035. According to MD, the projected demand for sheltered space in the past Assessment of T/S Space Requirements was found to be realistic and reasonably accurate.

2.6 As shown in Table 1 in paragraph 2.3, the projected overall surplus will be 3.1 hectares in 2035, assuming that among others, projects in progress/under planning will be completed on schedule. If any of these projects cannot be completed by 2035,

---

**Note 9:** *The Invigorating Island South initiative was announced in the 2020 Policy Address to develop the Southern District into a place full of vibrancy, vigour and velocity for people to work, live, explore new ideas and have fun. Key projects include exploring the expansion of Aberdeen T/S and the vessel berthing area as well as providing more landing facilities along the coastal area, and enhancing the cultural and leisure facilities in the vicinity of Aberdeen and Wong Chuk Hang, including Aberdeen T/S, Aberdeen Promenade and Ap Lei Chau Main Street.*

**Note 10:** *According to the report “From City Airport to Airport City” published in 2019 by the Airport Authority Hong Kong, new marine facilities will be developed at the bay area between the Airport Island and the Hong Kong Port which include sheltered space of 3.4 hectares mainly catering to medium-sized pleasure vessels.*

there may be a shortfall in sheltered space for meeting the projected demand. Audit considers that MD needs to closely monitor the demand and supply of sheltered space and explore fallback options to address the shortfall in sheltered space if there is any project slippage.

### *Need to explore using technology to assess the occupancy of T/Ss*

2.7 In 1950s to 1960s, the population of boat dwellers was around 80,000 in Hong Kong. In addition to the function of providing a sheltered space for refuge during typhoons or inclement weather, T/Ss were the main place where the boat dwellers lived at that time. In the 1980s, the Government began relocating boat dwellers to public housing. In 2023, there were only 3 dwelling boats locating in Causeway Bay T/S. The function of T/Ss has been evolving throughout the years. While the main role of T/Ss is to keep local seafaring people safe during typhoons or inclement weather, many vessels berth inside T/Ss during normal days and for a period of time. In recent years, the Government has made initiatives to unleash the potential of T/Ss (e.g. the Invigorating Island South initiative — see Note 9 to para. 2.4(b)(i)).

2.8 According to MD:

- (a) in order to ensure that vessels' demand for sheltered space during typhoons could be met, it would keep track of the highest occupancy of the 14 T/Ss during typhoons;
- (b) its staff would count the number of vessels by type and report the estimated occupancy of T/Ss to the Command Centre of HPS during typhoons. The highest occupancy would be recorded in the typhoon report; and
- (c) during the period from 2019 to 2023, the highest occupancy of different T/Ss during typhoons ranged from 3% to 100% (see Table 2). While some T/Ss were nearly fully occupied (e.g. New Yau Ma Tei T/S, Rambler Channel T/S and Tuen Mun T/S), the highest occupancy was below 20% for some T/Ss (e.g. Yim Tin Tsai T/S).

## Planning and provision of sheltered space

---

Table 2

**Highest occupancy of the 14 T/Ss during typhoons  
(2019 to 2023)**

T/S	2019	2020	2021	2022	2023
Aberdeen (Note)	60%	68%	64%	61%	60%
Causeway Bay	49%	56%	57%	53%	58%
Cheung Chau	45%	48%	49%	43%	41%
Hei Ling Chau	10%	48%	27%	18%	21%
Kwun Tong	78%	77%	76%	90%	90%
New Yau Ma Tei	90%	91%	100%	100%	91%
Rambler Channel	67%	92%	100%	100%	85%
Sam Ka Tsuen	42%	65%	49%	51%	58%
Shau Kei Wan	94%	93%	90%	93%	85%
Shuen Wan	43%	45%	46%	76%	80%
To Kwa Wan	98%	100%	94%	93%	92%
Tuen Mun	100%	94%	96%	100%	88%
Yim Tin Tsai	10%	8%	7%	6%	3%

Source: MD records

Note: This combines Aberdeen South T/S and Aberdeen West T/S.

2.9 Audit noted that:

- (a) although the sheltered space was sufficient on a territory-wide basis according to the 2022-2035 assessment and the record of the highest occupancy of the 14 T/Ss during typhoons, some Members of the Legislative Council expressed concerns that the 2022-2035 assessment failed to give due consideration to the habits of using T/Ss by different types of vessels and the views of users, such as the preference of working vessels to berth in T/Ss relevant to their operation;
- (b) MD assessed the occupancy of T/Ss during typhoons but not during normal days, taking into account that the occupancy during normal days might be



subject to several factors such as nearby infrastructure projects and fishing moratorium. Despite this, Audit considers an understanding of occupancy of different T/Ss during normal days may help MD manage T/Ss in performing daily patrol and responding to the needs of vessel owners/operators. In order to assess the occupancy during normal days, Audit visited 3 T/Ss (i.e. New Yau Ma Tei T/S, Rambler Channel T/S and Tuen Mun T/S) on 13 August 2024, accompanied by MD staff, to observe the occupancy situation during normal days. According to MD, the occupancy of New Yau Ma Tei T/S, Rambler Channel T/S and Tuen Mun T/S was observed to be about 60%, 40% and 48% respectively. As berthing areas in T/Ss are open to all vessels on a first-come-first-served basis, only limited sheltered space may be available during typhoons in these three T/Ss if there is a considerable occupancy during normal days; and

- (c) sole reliance on manual inspections during typhoons might not be scientific and could be subjective, especially when different MD officers were deployed for inspections of T/Ss scattered territory-wide.

2.10 In Audit's view, a continuous assessment of occupancy of T/Ss will help MD better understand the usage of T/Ss by different types of vessels including the preference of working vessels to berth in certain T/Ss. Since the existing practice of counting the number of vessels involves substantial manpower and the estimation of occupancy may not be entirely accurate, Audit considers that MD needs to explore using technology to assess the occupancy of T/Ss during typhoons and normal days.

### *Need to make available layout plans of S/As for public information*

2.11 Pursuant to the Merchant Shipping (Local Vessels) (Typhoon Shelters) Regulation, MD prepares a plan of each T/S showing the passage and makes available a copy of such plan for inspection by the public. However, as there is no similar legislative requirement for S/As, MD does not upload the layout plans of S/As (with a total area of 184.2 hectares as at 30 June 2024 — see Appendix A) to its website showing their sizes and boundaries. In order to provide information on the sizes and boundaries of S/As, Audit considers that MD needs to make available on its website the layout plans of S/As for public information.

## Planning and provision of sheltered space

---

### *Need to make available information on private mooring areas in sheltered space*

2.12 Local vessels may be berthed at any safe and suitable locations within Hong Kong waters, including T/Ss and S/As, according to their daily business and operational needs. Meanwhile, MD has designated areas for private mooring (PM) and issued permissions to lay PM at a specified space therein (Note 11). According to MD, allocated PM spaces cannot be used by other vessels for mooring without the consent of the respective PM permission holders. As at 30 June 2024, there were 43 PM areas (including those located in 7 T/Ss and 10 S/As) within Hong Kong waters and 1,978 PM permissions for mooring in these PM areas. Of the 1,978 permissions, 1,789 (90%) were located in T/Ss and S/As as follows:

- (a) ***Pak Sha Wan S/A.*** There were 669 (37% of 1,789) PM permissions covering a PM area of 62 hectares, which accounted for 74% of the S/A (total at 84 hectares);
- (b) ***Aberdeen South T/S.*** There were 367 (21% of 1,789) PM permissions covering a PM area of 13.6 hectares, which accounted for 52% of the T/S (total at 26.1 hectares);
- (c) ***Causeway Bay T/S.*** There were 296 (17% of 1,789) PM permissions covering a PM area of 8.6 hectares, which accounted for 61% of the T/S (total at 14.2 hectares); and
- (d) ***Others.*** The remaining 457 (25% of 1,789) PM permissions were scattered through the other 5 T/Ss and 9 S/As, ranging from 1 to 91 in each of these sheltered space.

2.13 Audit noted that the PM areas represented a significant proportion of berthing area in a number of T/Ss and S/As. While the sizes and boundaries of PM areas are not made available to the public, it will be difficult to distinguish a berthing space open to public use from that restricted to private use. Audit considers

---

**Note 11:** *According to the Shipping and Port Control Ordinance (Cap. 313), except with the written permission of the Director of Marine, no person shall lay, place, erect or maintain a port facility or any floating or other structure in the waters of Hong Kong.*

that MD needs to make available on its website the information (e.g. the size and boundaries) on PM areas in sheltered space.

### *Need to keep in view the effectiveness of the new mooring facility in shallow water areas in sheltered space*

2.14 As stated in the 2022-2035 assessment, a sheltered space may be bounded by a beach-type coastline and include a shallow water area. According to MD, individual types of vessels have their own water depth requirements. Generally, open sampans and open cruisers are usually berthed near to shore and some are even berthed on sand at low tides. On the other hand, larger vessels such as ferries, dumb steel lighters, tugs, steel fishing vessels and river trade vessels generally require deeper waters for safe passage and berthing.

2.15 In July 2024, MD informed Audit that:

- (a) since the traditional concrete sinker (Note 12) was one-metre high, there was a minimum water depth requirement in place for deploying concrete sinkers to ensure mooring safety; and
- (b) it was exploring the feasibility of using a new mooring facility, namely the screwing anchor, which would be suitable for mooring small vessels in shallow waters. MD was going to launch a one-year trial to install a pair of screwing anchors in Yim Tin Tsai T/S.

2.16 Audit noted that the water depth of Yim Tin Tsai T/S was up to 3 metres only, and that some other T/Ss and S/As also had inner areas with water depth below 3 metres (e.g. Sam Ka Tsuen T/S and Pak Sha Wan S/A). New mooring facility mentioned in paragraph 2.15(b) may help utilise shallow water areas in sheltered space.

---

**Note 12:** *A concrete sinker is to hold a floating mooring buoy that is used by a vessel for mooring itself by mooring rope.*

### **Audit recommendations**

- 2.17 **Audit has recommended that the Director of Marine should:**
- (a) **closely monitor the demand and supply of sheltered space and explore fallback options to address the shortfall in sheltered space if there is any project slippage;**
  - (b) **explore using technology to assess the occupancy of T/Ss during typhoons and normal days;**
  - (c) **make available on MD's website the layout plans of S/As for public information;**
  - (d) **make available on MD's website the information (e.g. the size and boundaries) on PM areas in sheltered space; and**
  - (e) **keep in view the effectiveness of the new mooring facility in shallow water areas in sheltered space.**

### **Response from the Government**

2.18 The Director of Marine agrees with the audit recommendations. He has said that:

- (a) MD will closely monitor the situation on the demand and supply of sheltered space;
- (b) in the short term, MD will take aerial photos of T/Ss periodically. In the long term, it will explore better means to ensure the accuracy of the estimated occupancy rate. In particular, if new technology that can facilitate the assessment of the occupancy of sheltered space with higher efficiency is available, MD is willing to adopt it;
- (c) MD plans to conduct an overall review of the 18 S/As along with the next round of Assessment of T/S Space Requirements exercise in 2025 and the

## Planning and provision of sheltered space

---

layout plans of S/As will be updated and made available to the public on MD's website after review;

- (d) MD will explore the provision of the relevant general information on PM areas in sheltered space to the public on its website; and
- (e) MD is willing to explore new initiatives to better utilise the shallow water areas in sheltered space.

### Enhancement of wave protection in sheltered space

2.19 MD provides advice and assistance to CEDD to design, construct and maintain the breakwaters in T/Ss (Note 13) from marine traffic and safety perspective, so as to ensure the safety of vessels taking shelters therein. In 2002, CEDD introduced PWDM which stated that:

- (a) the significant wave heights in T/Ss under extreme wave conditions should not exceed the recommended design criteria stated in Table 3; and

**Table 3**

#### Recommended wave heights under extreme wave conditions

Vessel length	Significant wave height (Note)
Less than 30 metres	Less than 0.6 metres
30 to 50 metres	Less than 0.9 metres

*Source: CEDD records*

*Note: Significant wave height is the most commonly used characteristic wave height parameter to represent the wave condition of a sea state. It has been found to be very similar to the estimated visual wave height by an experienced observer.*

---

**Note 13:** *As mentioned in paragraph 1.5(b)(ii), technical standards on wave protection stated in CEDD's PWDM are not applicable to S/As.*

## Planning and provision of sheltered space

---

- (b) the recommended design criteria should be taken only as the target design values instead of the absolute allowable values. Localised exceedance of the design values may be permitted with due consideration of the site condition and the layout of the berthing areas within T/S in consultation with MD.

### *Need to keep in view the effectiveness of wave protection enhancement works in T/Ss*

2.20 According to MD, most of T/Ss are located in relatively sheltered locations, and the existing breakwaters are generally effective in mitigating the effects of waves under extreme weather conditions whereas Aberdeen South T/S, Aberdeen West T/S and Hei Ling Chau T/S are relatively more exposed to wind in comparison with other T/Ss. Upon MD's request, CEDD completed a review in August 2021 on the capability of these three T/Ss against wave attack. Based on the recommendations of the review, the following improvement works had been carried out so as to strengthen the wave resilience:

- (a) wave walls of about one-metre high on the existing breakwaters in Aberdeen South T/S and Aberdeen West T/S were constructed by mid-2022 in stages; and
- (b) floating barriers with a total length of about 700 metres in Hei Ling Chau T/S were installed in March 2023 as a pilot project (Note 14). The cost of installation was about \$26 million.

2.21 In June 2023, a temporary wave monitoring station was installed in Hei Ling Chau T/S for a one-year wave-monitoring programme to monitor the wave attenuation performance of the floating barriers. During the passage of Super Typhoon Saola in early September 2023, the temporary wave monitoring station recorded that the significant wave height was reduced from 1.16 metres to 0.86 metres

---

**Note 14:** *According to the review, a total of about 3.5-kilometre floating barriers was proposed to be installed in Hei Ling Chau T/S. However, in view of the large scale of the proposed measures and limited experience of application of floating barriers in Hong Kong for wave attenuation purpose, a pilot project of installing 700-metre floating barriers was conducted for a small area to shed light on feasibility on extending the use of floating barriers in other parts of Hei Ling Chau T/S.*

after passing through floating barriers (Note 15). According to CEDD, based on the interim results, the floating barriers appeared to be able to play a role in reducing waves. MD decided to extend the operation of the wave monitoring station to October 2024. The final assessment report on the wave attenuation performance of the floating barriers was expected to be completed by the end of 2024.

2.22 In Audit's view, MD needs to take measures to ensure the timely completion of the final assessment report on the wave attenuation performance of floating barriers and keep in view the effectiveness of wave protection enhancement works in T/Ss.

### *Wave protection capability of S/As*

2.23 In September 2018, Super Typhoon Mangkhut caused serious damage to Hong Kong. MD received altogether 220 reports of accidents in relation to the Super Typhoon Mangkhut in Sai Kung District (including S/As in Sai Kung and Pak Sha Wan), and handled 125 stranded, listed or capsized vessels.

2.24 Since technical standards on wave protection for T/Ss are not applicable to S/As (see para. 1.5(b)(ii)), in the absence of a unified standard, the wave protection capability of S/As may vary depending on the local geographical environment. In response to Audit's enquiry on the need of assessing the wave protection capability of S/As, in September and October 2024, MD said that:

- (a) wave protection standards stated in PWDM were not applicable to S/As. However, S/As were located within bays where the surrounding natural and/or artificial landscapes could provide protection to vessels against wind and wave during typhoons or inclement weather;
- (b) the degree of protection provided in the natural geographical environment of each S/A varied according to wind directions and forces. Individual S/As had their local characteristics in berthing different classes of vessels, such as ocean-going tugs in Tsuen Wan S/A and pleasure vessels in

---

**Note 15:** *According to CEDD, adoption of the significant wave height of 0.9 metres as the assessment criteria was agreed amongst MD and CEDD, taking into account the actual site condition of Hei Ling Chau T/S.*

## **Planning and provision of sheltered space**

---

Pak Sha Wan S/A, and they were considered to be viable and effective to protect a certain class of vessels therein through prolonged past experience of passage of typhoons;

- (c) the storm surge (Note 16) caused by Super Typhoon Mangkhut was an exceptional case. Many vessels berthed near the coast were stranded, listed, capsized or missed due to an abnormal rise in sea level over and above the normal tide levels. In addition, there might be other factors, such as mooring ropes/cables not secured properly, anchors not paid out long enough to seabed to have the appropriate holding strength, etc. In the aftermath of Super Typhoon Mangkhut, MD compiled a pamphlet named “Measures to Enhance the Safety of Local Vessels During Passage of Tropical Cyclones” and distributed it to relevant stakeholders such as owners/operators of local vessels to educate them to prevent damage and loss of vessels during typhoons or inclement weather. The pamphlet had been uploaded to MD’s website for public information; and
- (d) pursuant to the Merchant Shipping (Local Vessels) Ordinance (Cap. 548), the owner had the responsibility to report to MD after the event of an accident, including the situation when a local vessel sank or became stranded or disabled. In addition, MD would patrol the Hong Kong waters after typhoons or inclement weather, and closely monitor the safe berthing of vessels in S/As through on-site observations and analysis of accident reports.

In order to enhance the safe berthing of vessels in S/As, Audit considers that MD needs to remind the owners/operators of local vessels to take precautionary measures promulgated in its pamphlet during typhoons or inclement weather.

### ***Need to keep in view the progress of under-water inspections of breakwaters***

2.25 CEDD’s Port Works Division is responsible for the maintenance inspections of marine structures, including breakwaters and dolphins. As at 30 June 2024, under its purview, there were:

---

**Note 16:** *Storm surge is a rise in sea level on top of the normal tide due to the combined effects of low atmospheric pressure and high winds associated with typhoons.*



## Planning and provision of sheltered space

---

- (a) 32 breakwaters in 14 T/Ss and 4 S/As (Note 17); and
- (b) 87 dolphins in 6 T/Ss and 1 S/A (Note 18).

2.26 According to CEDD's Instruction on Maintenance Inspections of Marine Structures:

- (a) routine inspections are performed, including:
  - (i) above-water inspections of breakwaters and dolphins not less than once every 12 months; and
  - (ii) under-water inspections of breakwaters not less than once every 5 years and of dolphins not less than once every 24 months. The adoption of this frequency for under-water inspections of breakwaters commenced in November 2019; and
- (b) special above-water inspections are carried out within 3 working days after the day of the lowering of tropical cyclone warning signal No. 8 of 10 breakwaters (in 5 T/Ss — Note 19) as stipulated in the Instruction.

2.27 Audit reviewed the records of routine above-water inspections of breakwaters and special above-water inspections from January 2020 to June 2024, and routine under-water inspections of breakwaters from November 2019 (i.e. the commencement of new frequency for routine under-water inspections) to June 2024. Audit found that:

---

**Note 17:** *These S/As were located in Chai Wan Cargo Basin, Sai Kung, Sha Tau Kok and Tai O. According to MD, other government departments would initiate the provision of breakwaters, in view of the need and development of the vicinity, e.g. protecting the residential area near to the coast of Tai O.*

**Note 18:** *These T/Ss and S/A were Cheung Chau T/S, Hei Ling Chau T/S, New Yau Ma Tei T/S, Shau Kei Wan T/S, To Kwa Wan T/S, Tuen Mun T/S and Chai Wan Cargo Basin S/A. The marker dolphins in Hei Ling Chau T/S were excluded.*

**Note 19:** *These breakwaters are located in Aberdeen South T/S, Aberdeen West T/S, Cheung Chau T/S, New Yau Ma Tei T/S and Tuen Mun T/S.*

## Planning and provision of sheltered space

---

- (a) routine above-water inspections of all the 32 breakwaters, and special above-water inspections of all the 10 breakwaters were performed in accordance with CEDD's Instruction; and
- (b) CEDD performed the routine under-water inspections of 23 (72% of 32) breakwaters for the period from November 2019 to June 2024. There was no record of under-water inspections of the remaining 9 (28%) breakwaters (in 4 T/Ss and 3 S/As) performed during the period.

2.28 In early September 2024, CEDD informed Audit that:

- (a) for 6 breakwaters (in 3 T/Ss and 1 S/A), the under-water inspections were performed in 2016 and 2017, and reviewed in 2019. Taking into account the annual above-water inspections of these breakwaters, it was considered in 2019 that the results of surveys were still valid and representative for the 5-year cycle of under-water inspections from 2019 to 2024. Hence, no additional field survey for these breakwaters was carried out after 2019 and resources were allocated to other breakwaters since 2019;
- (b) for 2 breakwaters (in 1 T/S and 1 S/A), there was no under-water inspection performed since 2019 due to existing shallow water which rendered the use of existing under-water scanning equipment infeasible in these locations. CEDD planned to perform under-water inspections for these 2 breakwaters in 2025 with the procurement of latest technology available in the market (Note 20). Referring to the routine above-water inspection records, the structural condition of these two breakwaters were considered satisfactory; and
- (c) for 1 breakwater (in 1 S/A), the under-water inspection was performed in late June 2024, the record was under processing and would be completed by October 2024.

---

**Note 20:** *The latest technology is the multi-beam echo sounder, which could be mounted on a small remote controlled survey boat for navigation in shallow water area.*

- 2.29 In Audit's view, CEDD needs to keep in view:
- (a) the conditions of marine structures and the development of new surveying technology to facilitate the under-water inspections in shallow water areas in sheltered space; and
  - (b) the need of conducting under-water inspections for the 6 breakwaters mentioned in paragraph 2.28(a) upon the expiry of the 5-year cycle in November 2024.

### **Audit recommendations**

- 2.30 **Audit has *recommended* that the Director of Marine should:**
- (a) **take measures to ensure the timely completion of the final assessment report on the wave attenuation performance of floating barriers;**
  - (b) **keep in view the effectiveness of wave protection enhancement works in T/Ss; and**
  - (c) **remind the owners/operators of local vessels to take precautionary measures promulgated in MD's pamphlet during typhoons or inclement weather.**
- 2.31 **Audit has *recommended* that the Director of Civil Engineering and Development should keep in view:**
- (a) **the conditions of marine structures and the development of new surveying technology to facilitate the under-water inspections in shallow water areas in sheltered space; and**
  - (b) **the need of conducting under-water inspections for the 6 breakwaters mentioned in paragraph 2.28(a) upon the expiry of the 5-year cycle in November 2024.**

### **Response from the Government**

2.32 The Director of Marine agrees with the audit recommendations in paragraph 2.30. He has said that MD will:

- (a) work closely with CEDD to assess the performance of the floating barriers deployed in Hei Ling Chau T/S;
- (b) keep in view the effectiveness of wave protection enhancement works in T/Ss; and
- (c) continue to hold the safety afloat seminar in the second quarter of each year to educate and remind the stakeholders to take precautionary measures promulgated in MD's pamphlet for embracing the passage of typhoons. In addition, a Marine Department Notice will be promulgated before typhoon season each year so as to remind the stakeholders to take the precautionary measures during passage of typhoons. MD will continue to conduct publicity work including dispatching leaflets to remind the stakeholders to remain vigilant to the threat of typhoons and take appropriate precautionary measures during passage of typhoons to ensure the safety of vessels and persons on board.

2.33 The Director of Civil Engineering and Development agrees with the audit recommendations in paragraph 2.31.

### **Hydrographic survey and maintenance dredging in sheltered space**

2.34 As mentioned in paragraph 1.8(b), MD conducts hydrographic surveys from time to time, assesses and compares the collected sounding data with the existing nautical charts/previous survey results. If there is a significant change in water depth which may affect the navigational safety of ships, MD will discuss the case with CEDD about the feasibility of maintenance dredging. If technically feasible, and after consultation with relevant stakeholders, CEDD will plan and conduct related maintenance dredging works. The purpose of maintenance dredging is to reinstate the original water depth.

***Room for improvement in conducting hydrographic surveys***

2.35 According to MD, it normally conducts hydrographic surveys for T/Ss and S/As at an interval of 48 months (Note 21) subject to workload and job priority. Audit obtained the reports of the latest hydrographic surveys of the 14 T/Ss and 18 S/As for analysis. As shown in Table 4, as at 30 June 2024, the latest surveys of 4 (29% of 14) T/Ss and 8 (44% of 18) S/As were conducted more than 48 months ago (i.e. before 30 June 2020). In particular, the latest surveys of 2 S/As were conducted 104 months ago.

**Table 4**

**Latest hydrographic surveys of T/Ss and S/As  
(30 June 2024)**

Status	Number		Total number of sheltered space
	T/S	S/A	
In progress	0 (0%)	1 (6%)	1 (3%)
Conducted within 48 months	10 (71%)	9 (50%)	19 (59%)
Conducted more than 48 months ago	4 (29%) (Note 1)	8 (44%) (Note 2)	12 (38%)
Total	14 (100%)	18 (100%)	32 (100%)

*Source: Audit analysis of MD records*

*Note 1: The fieldwork of the latest survey of Yim Tin Tsai T/S was completed in August 2017, which was 82 months ago.*

*Note 2: The fieldwork of the latest surveys of Sai Kung S/A and Tsam Chuk Wan S/A was completed in October 2015, which was 104 months ago.*

2.36 Audit analysed the time taken to complete the latest hydrographic surveys and noted that MD took more than 270 days to complete the hydrographic surveys for 1 T/S and 5 S/As (see Table 5).

---

**Note 21:** *According to MD, it started counting the 48-month interval since the completion of fieldwork of the previous survey.*

## Planning and provision of sheltered space

---

Table 5

**Time taken to complete the latest hydrographic surveys  
(January 2015 to June 2024)**

Time taken	Number		Total number of sheltered space
	T/S	S/A	
Within 90 days	7 (58%)	3 (21%)	10 (38%)
91 to 180 days	2 (17%)	5 (36%)	7 (27%)
181 to 270 days	2 (17%)	1 (7%)	3 (12%)
Over 270 days	1 (8%) (Note 1)	5 (36%) (Note 2)	6 (23%)
Total	12 (100%)	14 (100%)	26 (100%)

*Source: Audit analysis of MD records*

*Note 1: The hydrographic survey with the longest time taken was for Hei Ling Chau T/S, which had taken 480 days.*

*Note 2: The hydrographic survey with the longest time taken was for Kat O S/A, which had taken 735 days.*

*Remarks: The table excluded analysis for 2 T/Ss and 4 S/As as MD was performing fieldwork for 1 S/A and processing fieldwork data for 2 T/Ss and 3 S/As as of June 2024.*

2.37 In July and August 2024, MD informed Audit that:

- (a) the 48-month interval for conducting the hydrographic survey was an internal reference for the job arrangement, subject to the workload and job priority (e.g. under-water obstacle search surveys referred by HPS) in MD's Hydrographic Office; and
- (b) the time taken to complete surveys depended on the availability of specialised hydrographic survey vessels (Note 22), weather (e.g. monsoon) and data irregularities found during data processing and checking. Despite

---

**Note 22:** *As at 30 June 2024, MD had 3 specialised hydrographic survey vessels.*

that it took more than 270 days to complete some surveys, there was no impact on the accuracy of surveys.

2.38 Audit noted that the latest hydrographic surveys for some T/Ss and S/As were conducted some time ago (e.g. 104 months in Sai Kung S/A and Tsam Chuk Wan S/A) and a long time was taken to complete the surveying works in some cases (e.g. 735 days for Kat O S/A). In order to ensure that the water depth in T/Ss and S/As meets the navigation requirement of vessels, Audit considers that MD needs to take measures to ensure that hydrographic surveys are arranged and completed within a reasonable interval and timeframe.

### *Dredging work to increase the water depth of fire lanes*

2.39 In late June 2021, a No. 3 alarm fire broke out at Aberdeen South T/S and the Fire Services Department (FSD) commented that fireboats could not enter into the affected area (Note 23). In late April 2022, FSD completed a review on fire lanes (i.e. major passages which allow fireboats to get through) of the 14 T/Ss and proposed to MD on 5 T/Ss (i.e. Aberdeen South T/S, Hei Ling Chau T/S, Kwun Tong T/S, Shau Kei Wan T/S and Tuen Mun T/S) the following improvement measures:

- (a) the width of fire lanes should be adjusted to at least 20 metres (Note 24);  
and
- (b) all fire lanes should have a water depth not less than 4.5 metres.

2.40 According to MD, the width of fire lanes in the 5 T/Ss had been adjusted by June 2023 and the fire lanes in Hei Ling Chau T/S and Shau Kei Wan T/S had a water depth of 4.5 metres or above. Regarding the water depth of fire lanes in the other 3 T/Ss, MD and FSD had made the following comments:

---

**Note 23:** *In December 2022, MD completed a study on finger pier berthing arrangement in Aberdeen South T/S and Aberdeen West T/S. It was revealed that the finger pier berthing arrangement would require a larger area of water to accommodate the same number of vessels, otherwise the number of vessels berthing in the T/Ss would be reduced by half.*

**Note 24:** *According to FSD, the minimum width of fire lanes was 20 metres and the radius of the turning circle for fireboats was 30 metres.*

## **Planning and provision of sheltered space**

---

- (a) ***Aberdeen South T/S.*** The water depth of some parts was less than 3.5 metres. In May 2023, MD proposed to CEDD to carry out maintenance dredging. According to the dredging programme as of April 2024 and the notes of meetings between MD and CEDD:
- (i) from time to time, MD had to coordinate with vessel owners to vacate the proposed dredging area for preparatory work (e.g. performing hydrographic survey and sediment sampling works); and
  - (ii) maintenance dredging work in Aberdeen South T/S was scheduled to commence in April 2026 tentatively subject to the completion of preparatory work and temporary vacation of the vessels within the proposed dredging area; and
- (b) ***Kwun Tong T/S and Tuen Mun T/S.*** The water depth of some parts was 4 metres or below. According to FSD, it required that all fire lanes should have a water depth not less than 4.5 metres. Taking into account that carrying out maintenance dredging work to increase the water depth would take time, MD had agreed with FSD that, as an interim measure, appropriate fireboats would be deployed to implement alternative firefighting tactics for fire incidents within these T/Ss.

2.41 Audit notes that the maintenance dredging work in Aberdeen South T/S is scheduled to commence in April 2026 tentatively, nearly five years after the fire incident in Aberdeen South T/S in 2021. In order to enhance the fire safety of sheltered space, Audit considers that MD needs to collaborate with relevant stakeholders to facilitate the dredging work in Aberdeen South T/S for meeting the requirement on water depth (i.e. not less than 4.5 metres) of fire lanes as far as practicable. In addition, MD needs to, in consultation with FSD, consider arranging fire drills to evaluate the effectiveness of the alternative firefighting tactics in Kwun Tong T/S and Tuen Mun T/S.



## **Audit recommendations**

- 2.42 **Audit has *recommended* that the Director of Marine should:**
- (a) **take measures to ensure that hydrographic surveys are arranged and completed within a reasonable interval and timeframe;**
  - (b) **collaborate with relevant stakeholders to facilitate the dredging work in Aberdeen South T/S as far as practicable; and**
  - (c) **in consultation with FSD, consider arranging fire drills to evaluate the effectiveness of the alternative firefighting tactics in Kwun Tong T/S and Tuen Mun T/S.**

## **Response from the Government**

2.43 The Director of Marine agrees with the audit recommendations. He has said that MD will:

- (a) take measures to ensure that hydrographic surveys will be arranged properly and completed within a reasonable timeframe;
- (b) collaborate with relevant stakeholders to facilitate the dredging work in Aberdeen South T/S as far as practicable; and
- (c) work with FSD on the arrangement of fire drills in Kwun Tong T/S and Tuen Mun T/S.

## **PART 3: MANAGEMENT OF SHELTERED SPACE**

- 3.1 This PART examines MD's management of sheltered space, focusing on:
- (a) local vessel without a valid operating licence or laid-up permission (paras. 3.4 to 3.13);
  - (b) removal of sunken vessels (paras. 3.14 to 3.23);
  - (c) removal of non-permitted floating structures (paras. 3.24 to 3.29);
  - (d) designation of different berthing areas within T/Ss (paras. 3.30 to 3.34);  
and
  - (e) documentation of removal notices (paras. 3.35 to 3.38).

3.2 The objectives of MD's HPS are to maintain port and shipping safety and to protect the marine environment by ensuring compliance with local legislations and international maritime regulations and conventions by all port users. It carries out daily patrols within Hong Kong waters, including T/Ss and S/As. The entire waters of Hong Kong are divided into 4 patrol sectors and each sector is served by 3 to 8 patrol launches. Patrol officers should report their patrol activities through MD's computer system on a daily basis which include the details of vessels inspected, number of verbal warnings given and removal notices issued.

3.3 According to HPS Prosecution Guidelines, one of the most important roles of a patrol officer is to execute law enforcement duty. Whenever there is suspected or detected violation to the current maritime legislation, the patrol officer should take the initiative to investigate the case. Audit analysis of the prosecutions initiated in the period from 2021 to 2023 revealed that among the 2,037 prosecutions (involving 1,791 vessels) initiated against vessel owners/their agents/coxswains for vessels berthing in T/Ss and S/As, 1,144 (56%) cases (involving 1,085 vessels) were relating to the failure of licensing a certificated local vessel (see Table 6).

**Table 6**

**Prosecutions initiated against vessel owners/their agents/coxswains  
for vessels berthing in T/Ss and S/As  
(2021 to 2023)**

Offence	Prosecutions initiated	
	Number	Percentage
Failing to license a certificated local vessel	1,144	56%
Contravention of conditions and restrictions of licence	157	8%
Failing to remove a stranded, abandoned or sunken vessel	105	5%
Tampered with/obscured/erased the certificate of ownership (COO) number or displayed a number that did not comply with the legislation	50	2%
Vessel anchoring/lying in a prohibited area without permission	41	2%
Failing to keep full licence/temporary licence/permission for a laid-up vessel on board	35	2%
Failing to mark COO number on a vessel	32	2%
Vessel exceeding permitted length entering/remaining in T/S	31	2%
Vessel underway without a local certificated engine operator	30	2%
Vessel underway without a local certificated coxswain	26	1%
Class IV vessel underway without a local certificated pleasure vessel operator	26	1%
Failing to certificate a local vessel	25	1%
Licensed vessel carrying more passengers and crew than may lawfully be carried	25	1%
Other offences	310	15%
<b>Total</b>	<b>2,037</b>	<b>100%</b>

*Source: Audit analysis of MD records*

*Remarks: According to MD, of the 2,037 prosecutions initiated by HPS, no summonses were eventually issued for 19 (0.9%) cases by its Prosecution Unit due to insufficient evidence.*

### Local vessel without a valid operating licence or laid-up permission

3.4 The Merchant Shipping (Local Vessels) Ordinance stipulates that every local vessel shall be certificated and licensed/granted permission for a laid-up vessel (Note 25):

- (a) **Certification.** A COO is assigned with a number and the number should at all times be painted on, or permanently affixed to or mounted on each side of the vessel's deck housing/hull where it can best be seen. As at 30 June 2024, there were 27,155 certificated local vessels;
- (b) **Operating licence.** The validity period for operating licence shall not exceed 12 months. In order to apply/renew an operating licence, the owner should produce a copy of valid third party risks insurance certificate and a copy of valid certificate of survey (if applicable — Note 26). The operating licence shall be kept on board the vessel and shall on request by an authorised officer be produced for inspection; and
- (c) **Permission for a laid-up vessel.** If the vessel shall not be operated because of unemployment or pending the outcome of any legal proceedings before any court, an owner or his agent of the local vessel may apply for a permission for a laid-up vessel. The laid-up vessel shall berth in the permitted laid-up location (e.g. the mooring area in a particular T/S). As at 30 June 2024, there were 222 laid-up vessels with permissions granted.

---

**Note 25:** *The fee for operating licence/permission for laid-up vessel varies in accordance with the class type, the size of vessel, etc. For example, as at 30 June 2024, the annual operating licence fee of a Class IV pleasure vessel with an area of 30 square metres was \$1,340.*

**Note 26:** *The certificate of survey is not applicable to some vessels. For example, Class II transportation sampans (which are made of any material), Class II work boats and Class III fishing sampans (which are made of non-metal), which are not fitted with propulsion engine/internal combustion engine and with an area not exceeding 25 square metres.*

*Need to step up efforts in tackling expired licence/laid-up permission cases during daily patrol*

3.5 According to HPS Prosecution Guidelines, when a patrol officer detects any local vessel without a valid operating licence, he should initiate prosecution against the vessel owner, his agent and the coxswain subject to collection of sufficient evidence. According to HPS Operation Guidelines, patrol officers are also required to inspect laid-up vessels at intervals to ensure that the conditions laid down are being complied with and the completed inspection reports should be forwarded to supervising officers who will scrutinise the reports and note any action they consider necessary. Pursuant to sections 13 and 66 of the Merchant Shipping (Local Vessels) Ordinance:

- (a) for a certificated local vessel without valid operating licence, the owner, his agent and the coxswain commit an offence and each of them is liable on conviction to a fine at level 4 (i.e. \$25,000 as at 30 June 2024) and to imprisonment for 1 year; and
- (b) for a laid-up vessel without written permission of the Director of Marine or any conditions attached to the written permission being contravened, the owner, his agent and the coxswain commit an offence and each of them is liable on conviction to a fine at level 3 (i.e. \$10,000 as at 30 June 2024) and to imprisonment for 6 months.

3.6 In June and July 2024, with the accompany of MD staff, Audit visited 7 T/Ss and 1 S/A and sample checked 770 local vessels berthed therein by taking photographs. Upon matching their COO numbers painted on deck housing/hull with the database of licensed local vessels/vessels with laid-up permissions as at 30 June 2024, Audit found that:

- (a) 67 (9%) local vessels were without valid operating licences/laid-up permissions (see Table 7), 43 of which were not issued with certificates of survey as required (see Note 26 to para. 3.4(b));

## Management of sheltered space

Table 7

**Local vessels berthed in the 7 T/Ss and 1 S/A  
without valid operating licences/laid-up permissions during Audit's visits  
(June and July 2024)**

Location	Date of visit	Vessels checked	Vessels without valid operating licences/laid-up permissions	
		(a) (Number)	(b) (Number)	(c) = (b) ÷ (a) × 100% (Percentage)
<b>T/S</b>				
Aberdeen West	5 July 2024	115	7	6%
Causeway Bay	5 July 2024	119	7	6%
Kwun Tong	27 June 2024	122	9	7%
New Yau Ma Tei	25 June 2024	159	22	14%
Sam Ka Tsuen	10 July 2024	64	4	6%
To Kwa Wan	27 June 2024	49	10	20%
Tuen Mun	8 July 2024	80	2	3%
<b>S/A</b>				
Tseung Kwan O	10 July 2024	62	6	10%
Overall		770	67	9%

Source: *Audit analysis of MD records*

- (b) the operating licences/laid-up permissions of 29 (43% of 67) local vessels had expired for more than 1 year (see Table 8);

**Table 8**

**Number of years lapsed since the expiry of  
the operating licences/laid-up permissions for the 67 local vessels  
(June and July 2024)**

Number of years lapsed	Number of local vessels
1 or less	38 (57%)
More than 1 to 2	12 (18%)
More than 2 to 3	9 (13%)
More than 3 to 4	2 (3%)
More than 4 to 5	1 (1%)
More than 5 (Note)	5 (8%)
Total	67 (100%)

*Source: Audit analysis of MD records*

*Note: The longest period lapsed since the operating licence had expired for a vessel was 8.7 years.*

- (c) upon enquiry, MD informed Audit in September 2024 that for the 29 local vessels with licences expired for more than 1 year, prosecutions were initiated against the owners of 5 (17%) vessels in 2023 for expired licences; and
- (d) there was a vessel (an oil carrier in Class II) with cancelled COO berthed in New Yau Ma Tei T/S. According to MD, in June 2020, it approved the application from vessel owner to cancel the certification of the vessel on the ground that the vessel had left Hong Kong permanently.

3.7 In Audit's view, MD needs to:

- (a) step up efforts in tackling expired licence/laid-up permission cases during daily patrol, especially for those vessels requiring certificates of survey;

## Management of sheltered space

---

- (b) make strenuous efforts to prosecute owners of certificated local vessels without valid operating licences or laid-up permissions; and
- (c) investigate whether the vessel mentioned in paragraph 3.6(d) had permanently left Hong Kong waters when applying for cancellation in 2020, and take appropriate follow-up action.

### *Need to step up efforts to ensure timely renewal of operating licences/laid-up permissions by vessel owners*

3.8 The irregularities identified in the 7 T/Ss and 1 S/A (see para. 3.6) brought up a territory-wide issue of unlicensed local vessels/non-permitted laid-up vessels within Hong Kong waters. Audit obtained MD's database of local vessels as at 30 June 2024 and noted that of the 27,155 certificated local vessels, the operating licences/laid-up permissions of 6,500 (24%) local vessels had expired. According to MD:

- (a) its Licensing and Port Formalities Section:
  - (i) conducts monthly check on the expired operating licences/laid-up permissions by retrieving data of vessels from MD's system on both local vessels and laid-up vessels;
  - (ii) issues a notification letter of the expiry to the vessel owner if the operating licence/laid-up permission had expired for more than 2 months. For example, notification letters of the expiry were sent to vessel owners in late August 2024 for which the operating licences/laid-up permissions expired in June 2024, involving 295 vessels; and
  - (iii) consolidates the expiry information and notification letters and refers to HPS by email on a monthly basis for its follow-up action; and
- (b) vessels without valid operating licences/laid-up permissions may be due to different circumstances, for example, the vessels are stored on shore or



have left from Hong Kong (Note 27), and MD has not been informed after the passing away of the vessel owners/dissolution of the companies. The 6,500 local vessels are an accumulated figure over the years which might not reflect the current situation.

3.9 Audit noted that after sending the notification letter of expiry to the vessel owner when the operating licence/laid-up permission had expired for more than 2 months, no further follow-up action would be taken (e.g. sending reminders) by the Licensing and Port Formalities Section. Although 1,144 prosecutions (involving 1,085 vessels) were initiated from 2021 to 2023 against the local vessels in T/Ss and S/As without valid operating licences/laid-up permissions (see Table 6 in para. 3.3), according to MD's database, there were still 6,500 local vessels without valid operating licences/laid-up permissions as at 30 June 2024.

3.10 In Audit's view, MD needs to:

- (a) consider adopting e-service (e.g. iAM Smart) in the renewal of the operating licences/laid-up permissions. With the use of e-service, reminders could be sent to vessel owners electronically before the expiry dates of the operating licences/laid-up permissions; and
- (b) step up efforts in following up with vessel owners on expired operating licences/laid-up permissions, and take prosecution action as appropriate.

### *Need to inspect the laid-up vessels according to HPS guidelines*

3.11 As mentioned in paragraph 3.5, patrol officers should inspect laid-up vessels at intervals to ensure that the conditions laid down are being complied with. Whenever an inspection is made, the patrol officer should complete a "Laid-up Ship Inspection Report". Audit examined the 164 "Laid-up Ship Inspection Reports" for inspections conducted in T/Ss from 2021 to 2023 and noted that all the inspections were conducted only at the time of initial application or renewal of permission for a laid-up vessel for validating the vessels' condition and situation. However, no

---

**Note 27:** *According to MD, as at 30 June 2024, of the 6,500 local vessels without valid operating licences/laid-up permissions, 293 had departed from Hong Kong and had not returned after departure.*

## **Management of sheltered space**

---

inspections were conducted during the validity period of permissions. In order to ensure that the conditions laid down in the permissions are complied with, Audit considers that MD needs to inspect the laid-up vessels at intervals within the validity period of permissions according to its guidelines.

### **Audit recommendations**

- 3.12 **Audit has *recommended* that the Director of Marine should:**
- (a) **step up efforts in tackling expired licence/laid-up permission cases during daily patrol, especially for those vessels requiring certificates of survey;**
  - (b) **make strenuous efforts to prosecute owners of certificated local vessels without valid operating licences or laid-up permissions;**
  - (c) **investigate whether the vessel mentioned in paragraph 3.6(d) had permanently left Hong Kong waters when applying for cancellation in 2020, and take appropriate follow-up action;**
  - (d) **consider adopting e-service (e.g. iAM Smart) in the renewal of the operating licences/laid-up permissions;**
  - (e) **step up efforts in following up with vessel owners on expired operating licences/laid-up permissions, and take prosecution action as appropriate; and**
  - (f) **inspect the laid-up vessels at intervals within the validity period of permissions according to MD's guidelines.**

### **Response from the Government**

3.13 The Director of Marine agrees with the audit recommendations. He has said that MD will:

- (a) step up inspection of vessels subject to operational priority and resources;

- (b) take appropriate action and prosecution action against the vessels concerned if any marine legislation is suspected to be contravened and sufficient evidence is obtained;
- (c) conduct investigation on the vessel mentioned in paragraph 3.6(d) and take appropriate follow-up action and prosecution action against the vessel if sufficient evidence is obtained;
- (d) explore the feasibility of adopting iAM Smart for renewal of the operating licences/laid-up permissions;
- (e) step up efforts in following up with vessel owners on expired operating licences/laid-up permissions, and take prosecution action as appropriate; and
- (f) review the current practice to better administer laid-up vessel's inspections from the operational and marine safety perspectives.

### Removal of sunken vessels

3.14 According to HPS Operation Guidelines and the Merchant Shipping (Local Vessels) Ordinance:

- (a) patrol officers are responsible for keeping a lookout for sunken vessels whilst on patrol duty. Should a sunken vessel be found, a removal notice specifying a reasonable time for the responsible person to remove the vessel should be fixed onto the vessel; and
- (b) if the direction of removal notice is not complied with or the ownership of the vessel cannot be ascertained, MD may seize and detain the vessel, and may take, or cause to be taken, any action that is necessary to remove the sunken vessel. MD should publish in the Gazette and in a Chinese language newspaper and an English language newspaper a notice effecting the seizure of the vessel.

## **Management of sheltered space**

---

### ***Need to recover the costs of removing sunken vessels from vessel owners***

3.15 From 2021 to 2023, there were 130 sunken vessels identified by MD in the sheltered space. 85 and 28 sunken vessels had been removed by the vessel owners and MD respectively while the remaining 17 sunken vessels were still located in the sheltered space as at 30 June 2024. According to MD, it was the vessel owners' responsibility to salvage their sunken vessels and therefore, only when a vessel owner was unable to fulfil his responsibility, MD would salvage and remove the sunken vessel.

3.16 According to MD, it incurred an expenditure of \$1.1 million from January 2021 to June 2024 for removing the 28 sunken vessels. Among them, the ownership of 17 sunken vessels could not be ascertained whereas the ownership of the remaining 11 sunken vessels could be traced. Pursuant to the Merchant Shipping (Local Vessels) Ordinance, MD may recover the cost of any action taken or caused to be taken including all disbursements and other expenses incurred thereby as a civil debt from the vessel owners. However, Audit noted that, as of August 2024, MD had not issued demand notes to the 11 vessel owners requesting them to repay the cost of removing the sunken vessels totalling \$448,500. Audit considers that MD needs to take proactive measures, including considering taking legal action, to recover the costs of removing the sunken vessels from the vessel owners.

### ***Need to expedite the removal of sunken vessels***

3.17 Audit analysed the number of days lapsed for removing the 113 (i.e. 85 plus 28) sunken vessels identified by MD and noted that 37 (33% of 113) vessels were removed more than 30 days after being identified by MD (see Table 9).

Table 9

**Number of days lapsed for removal of sunken vessels after  
being identified by MD  
(2021 to 2023)**

Number of days lapsed	Number of sunken vessels		
	Removed by owners	Removed by MD	Total
30 or less	63	13	76 (67%)
31 to 60	16	2	18 (16%)
61 to 90	2	2	4 (4%)
91 to 180	2	3	5 (4%)
181 to 360	1	6	7 (6%)
More than 360 (Note)	1	2	3 (3%)
Total	85	28	113 (100%)

*Source: Audit analysis of MD records*

*Note: The longest period lapsed for removal of sunken vessel after being identified by MD was 766 days. The sunken vessel was located in Shau Kei Wan T/S, identified by MD in July 2021 and removed by MD in September 2023.*

3.18 According to MD, as at 30 June 2024, there were 19 sunken vessels (including 17 identified by MD during 2021 to 2023 — see para. 3.15, and 2 identified by MD in September 2018 and March 2024 respectively) located in 4 T/Ss and 1 S/A pending removal (see Table 10).

Table 10

**Number of days lapsed after the sunken vessels identified  
by MD and pending removal  
(30 June 2024)**

Number of days lapsed	Number of sunken vessels					
	T/S				S/A	Total
	To Kwa Wan	Kwun Tong	Rambler Channel	Aberdeen South	Tseung Kwan O	
180 or less	0	0	1	0	0	1
181 to 360	10	2	0	1	0	13
361 to 720	2	0	0	0	1	3
More than 720	2 (Note)	0	0	0	0	2
Total	14	2	1	1	1	19

*Source: Audit analysis of MD records*

*Note: These 2 sunken vessels were identified by MD in September 2018 and November 2021 respectively.*

3.19 Audit selected To Kwa Wan T/S (with 14 sunken vessels — see Photograph 1 for examples) for examination and noted that:

- (a) 4 sunken vessels with known COO numbers were identified by MD during 2018 to 2022 (1 in 2018, 1 in 2021 and 2 in 2022):
  - (i) *Vessel A.* Vessel A was identified as sunken by MD in September 2018 (Note 28). From September 2018 to July 2021, MD had issued 115 removal notices to direct the vessel owner to

---

**Note 28:** *According to MD, from December 2012 to August 2018, 25 prosecutions were taken against the owner of Vessel A due to the exceedance of vessel's permitted length overall entering To Kwa Wan T/S (see para. 1.5(a)(i)). The owner pleaded guilty to the offences in all the prosecutions with fines from \$800 to \$6,000 for each prosecution, totalling \$67,700.*

raise and remove the vessel in view that Vessel A exceeded the permitted length overall entering To Kwa Wan T/S. One prosecution was initiated against the vessel owner in 2021 for not complying with the removal notice issued and the vessel owner was convicted with a fine of \$2,500. According to MD, as Vessel A had been submerged in the water for some time in an uncertain condition, in view of navigational safety, it had issued 19 direction notices (instead of removal notices) from February 2022 to September 2023 to direct the vessel owner to raise the vessel for determining the follow-up action required. During the period, MD initiated 16 prosecutions against the vessel owner for not complying with the direction notices issued. However, only one prosecution was successful with a fine of \$10,000 as the summonses could not be served on the vessel owner and the vessel owner was absent from hearing in the other 15 prosecutions. From 1 October 2023 to 30 June 2024, no further removal/direction notices had been issued to the owner of Vessel A;

- (ii) **Vessel B.** Vessel B was first identified as sunken by MD in November 2021. From November 2021 to December 2023, MD had issued 22 direction notices to direct the vessel owner to raise the vessel and initiated 17 prosecutions against the vessel owner for not complying with the direction notices issued. However, only 1 prosecution was successful with a fine of \$2,500 as the summonses concerned for 2 prosecutions could not be served on the vessel owner and 14 prosecutions were withdrawn in May 2024 due to the creditors' voluntary winding up against the vessel owner (which was a limited company); and
- (iii) **Vessels C and D.** Vessels C and D were first identified as sunken by MD in November and December 2022 respectively. Up to June 2024, MD had issued 23 and 22 direction notices to direct the owners of Vessels C and D respectively to raise their vessels. Since the vessel owners failed to comply with the direction notices, MD initiated 21 and 20 prosecutions against the owners of Vessels C and D respectively. They were convicted with a total fine of \$72,400 and \$91,200 respectively;

## Management of sheltered space

---

- (b) in 2023, MD was informed by the maritime industry of the existence of other sunken vessels in To Kwa Wan T/S. After conducting under-water inspections in July 2023, 7 sunken vessels with unknown COO numbers were identified. “Notice of seizure of vessels” was published in the Gazette in September 2023. According to MD, a tender was invited in August 2024 for the salvage, removal and disposal of these 7 sunken vessels; and
- (c) the remaining 3 sunken vessels with unknown COO numbers were found by patrol officers in October 2023 after a typhoon. “Notice of seizure of vessels” was published in the Gazette in May 2024.

Audit notes that sunken vessels in sheltered space not only pose a danger to the vessels navigating or berthing in the vicinity, but also occupy the berthing area. Audit considers that MD needs to take urgent rectifying action in this regard.

### Photograph 1

#### Examples of sunken vessels in To Kwa Wan T/S



*Source: Photograph taken by Audit staff on 27 June 2024*

*Remarks: COO numbers of 3 of these 4 sunken vessels could not be identified by MD*



### *Need to consider increasing the penalty level on failure to comply with removal/direction notices*

3.20 Pursuant to section 56 of the Merchant Shipping (Local Vessels) Ordinance, failure to comply with the removal/direction notices constitutes an offence with a maximum fine of level 4 (i.e. \$25,000 as at 30 June 2024) and imprisonment for 1 year. As mentioned in paragraph 3.19(a), although there were 44 successful prosecutions taken against the owners of Vessels A to D since 2021 with a total fine of \$178,600 (ranging from \$1,000 to \$10,000) due to repeated failure to comply with removal/direction notices, the owners had not taken action to remove these vessels.

3.21 For benchmarking, under the Land (Miscellaneous Provisions) Ordinance (Cap. 28), any person who, without reasonable excuse, fails to comply with a notice for ceasing the unlawful occupation of unleased land shall be guilty of an offence and shall be liable on conviction to a fine of \$500,000 and to imprisonment for 6 months and, further to a fine of \$50,000 for each day during which the offence continues. In order to increase the deterrent effect, MD needs to consider making legislative amendment to the Merchant Shipping (Local Vessels) Ordinance to increase the penalty level on failure to comply with removal/direction notices and to introduce a fine each day during which the non-compliance continues.

## **Audit recommendations**

3.22 **Audit has recommended that the Director of Marine should:**

- (a) **take proactive measures, including considering taking legal action, to recover the costs of removing the sunken vessels from the vessel owners;**
- (b) **take urgent rectifying action in removing sunken vessels in T/Ss and S/As; and**
- (c) **consider making legislative amendment to the Merchant Shipping (Local Vessels) Ordinance to increase the penalty level on failure to comply with removal/direction notices and to introduce a fine each day during which the non-compliance continues.**

### Response from the Government

3.23 The Director of Marine agrees with the audit recommendations. He has said that MD:

- (a) will consider the recommendation in paragraph 3.22(a) and further review the situation on a case-by-case basis and the possibility of recovering the salvage cost in future;
- (b) will endeavour to speed up the process of removing the sunken vessels, and prioritise its resources on those wrecks endangering navigation safety; and
- (c) is open to explore relevant measures, including increasing the penalty level.

### Removal of non-permitted floating structures

3.24 Pursuant to the Shipping and Port Control Ordinance (Cap. 313), except with the written permission of the Director of Marine, no person shall lay, place, erect or maintain any floating or other structure in the waters of Hong Kong, including T/Ss and S/As. Removal notices are issued by MD for removal of any non-permitted floating structures.

### *Need to step up efforts in monitoring the situation of non-permitted floating structures in sheltered space*

3.25 Audit examined the complaints received by MD in 2023 in relation to sheltered space (see Table 11) and noted that non-permitted floating structures ranked the top of complaints received (i.e. 53 (33% of 162) complaints) in relation to sheltered space.

**Table 11**

**Complaints received by MD in relation to sheltered space  
(2023)**

<b>Complaints against</b>	<b>Number of complaints</b>		
	<b>T/S</b>	<b>S/A</b>	<b>Total</b>
Non-permitted floating structures	26	27	53 (33%)
Sunken, abandoned or stranded vessels	16	10	26 (16%)
Unknown COO numbers or expired licences	18	0	18 (11%)
Illegal berthing	6	8	14 (9%)
Speeding	1	6	7 (4%)
Others	26	18	44 (27%)
<b>Total</b>	<b>93</b>	<b>69</b>	<b>162 (100%)</b>

*Source: Audit analysis of MD records*

3.26 Audit visited To Kwa Wan T/S and Sam Ka Tsuen T/S on 27 June and 10 July 2024 respectively and found some non-permitted floating structures (see Photograph 2 for an example). In particular, some non-permitted floating structures were placed in the passage area of To Kwa Wan T/S. In July and August 2024, MD informed Audit that:

- (a) 5 removal notices were issued for non-permitted floating structures placing in To Kwa Wan T/S on 24 July 2024 (i.e. 27 days after discovering the non-permitted floating structures during Audit’s visit); and
- (b) considering the water depth at Sam Ka Tsuen T/S and the operational difficulty in approaching the floating structures, normal patrol launch was not suitable for carrying out the operation of issuing removal notices. HPS had to arrange small boats to support the operation and prioritise the operation to be conducted according to the urgency so as to fully utilise the resource. Law enforcement of issuing removal notices was conducted on 29 August 2024 (i.e. 50 days after discovering the non-permitted floating structures during Audit’s visit).

### Photograph 2

#### An example of non-permitted floating structures in Sam Ka Tsuen T/S



Source: Photograph taken by Audit staff on 10 July 2024

3.27 In view of the fact that non-permitted floating structures occupy the berthing area of T/Ss or S/As, Audit considers that MD needs to step up efforts in monitoring the situation of non-permitted floating structures in sheltered space, including sheltered space with shallow water depth (e.g. Sam Ka Tsuen T/S), and take enforcement action in a timely manner.

### Audit recommendation

3.28 Audit has *recommended* that the Director of Marine should step up efforts in monitoring the situation of non-permitted floating structures in sheltered space, and take enforcement action in a timely manner.

### Response from the Government

3.29 The Director of Marine agrees with the audit recommendation. He has said that MD will continue to monitor the situation and step up efforts to address the matter of non-permitted floating structures subject to operational priority and resources.

## **Designation of different berthing areas within typhoon shelters**

3.30 As stated in the 2017 Policy Agenda, the Government would endeavour to facilitate hosting of mega events and activities in Kowloon East that were popular with the general public and tourists, and co-use of the Kwun Tong T/S water body for water recreation activities. According to the Guidelines for Co-using Kwun Tong T/S, more recreation and sports activities would take place in the T/S during non-typhoon period. To address the trade's concern that different classes of vessels berthed in close proximity could lead to minor chafing with each other and compensation claim, particularly for pleasure vessels and non-pleasure vessels (i.e. working vessels), in 2018, MD launched a pilot scheme for the exclusive mooring of non-pleasure vessels within Kwun Tong T/S, under which non-pleasure vessels berthed in the southern area of the T/S, whereas the northern area was for the berthing of all classes of vessels. Drawing on the experience of Kwun Tong T/S and after several rounds of discussion with the stakeholders of T/Ss in Aberdeen, in June 2023, MD has also launched a one-year trial of the designation of different berthing areas in Aberdeen West T/S and a review will be conducted after the fishing moratorium in August 2024.

### ***Need to review the effectiveness of designation of different berthing areas within T/Ss***

3.31 Pursuant to section 7 of the Merchant Shipping (Local Vessels) (Typhoon Shelters) Regulation, the Director of Marine has the authority to direct any local vessel berthing within any T/S to move from a particular position to another. Audit notes that, in HPS Operation Guidelines, there is a template of removal notice issued under this section, directing the vessel to remove from its current position to any other unoccupied space within mooring area inside Kwun Tong T/S within a specified period. However, according to MD:

- (a) no removal notices had been issued using this template. While the Director of Marine has the power under the existing legislation to direct a vessel to berth at a specified location, such power has to be exercised with considerable prudence;
- (b) it was necessary to maintain close engagement of the relevant stakeholders to handle the berthing arrangements flexibly having regard to different

## Management of sheltered space

---

characteristics of each T/S and the varying needs of users at different times, so as to make the best use of the berthing spaces available in T/Ss; and

- (c) MD has stepped up patrols and will explore the feasibility of implementing the pilot scheme in other T/Ss. If the pilot scheme is found to be ineffective, MD will not rule out the possibility of amending the legislation to give the Director of Marine more power.

3.32 On 13 August 2024, with the accompany of MD staff, Audit visited Kwun Tong T/S and noted that:

- (a) in the southern area (where exclusive mooring of non-pleasure vessels was designated), there were 20 non-pleasure vessels and 83 pleasure vessels; and
- (b) in the northern area (for mooring of all classes of vessels), there were 18 non-pleasure vessels and 156 pleasure vessels.

Overall, there were 38 (14% of 277 vessels) non-pleasure vessels and 239 (86 % of 277 vessels) pleasure vessels berthing at Kwun Tong T/S on the date of Audit's visit. According to MD, the occupancy of Kwun Tong T/S was around 77% on the date of visit and the northern area was almost fully occupied. Therefore, it was not possible to direct the pleasure vessels berthing at the southern area to the northern area.

## Audit recommendations

3.33 **Audit has *recommended* that the Director of Marine should:**

- (a) **evaluate the effectiveness of designation of different berthing areas for different classes of vessels in Kwun Tong T/S and make adjustments to the size of berthing areas for exclusive mooring of non-pleasure vessels and mooring of all classes of vessels where appropriate; and**
- (b) **review the effectiveness of trial-run of the designation of different berthing areas for different classes of vessels in Aberdeen West T/S in a timely manner.**

## Response from the Government

3.34 The Director of Marine agrees with the audit recommendations. He has said that MD will conduct a review of:

- (a) the pilot scheme on designation of different berthing areas for various types of local vessels in Kwun Tong T/S to assess its effectiveness and determine the way forward; and
- (b) the trial-run on the designation of different berthing areas in Aberdeen West T/S in due course.

## Documentation of removal notices

3.35 Pursuant to the relevant sections of the Merchant Shipping (Local Vessels) Ordinance and the Shipping and Port Control Ordinance, removal notices may be served for the removal of stranded, abandoned or sunken vessels, and non-permitted floating structures. According to HPS Operation Guidelines:

- (a) on serving a removal notice, the owner, coxswain or person-in-charge is required to sign on the notice to acknowledge receipt;
- (b) if the owner, coxswain, person-in-charge cannot be found on board, the removal notice should be fixed in a prominent position and subsequently an attempt should be made to contact the owner, coxswain or person-in-charge;
- (c) after a removal notice has been issued, a duplicate copy of the notice should be filed and submitted to the Command Centre of HPS; and
- (d) if the removal is not effected within the time limit stipulated, follow-up action is to be taken and Marine Officer of HPS should be informed of the arrangements for removal.

### *Need to improve the documentation of removal notices issued*

3.36 Audit noted that the duplicate copies of removal notices were not filed and submitted to the Command Centre of HPS and there was no centralised record for removal notices issued. According to MD, each sector would retain its record of removal notices issued (e.g. file a copy in the case file) to facilitate prompt follow-up action. Upon Audit's request, in August 2024, MD provided the number of removal notices that each sector issued for each T/S and S/A for each of the years from 2021 to 2023. However, as there was no centralised record for removal notices issued, Audit could not ascertain the completeness of the number of removal notices issued.

### **Audit recommendation**

3.37 **Audit has *recommended* that the Director of Marine should maintain a centralised record on removal notices issued to ensure the completeness of the records so that prompt follow-up action can be taken.**

### **Response from the Government**

3.38 The Director of Marine agrees with the audit recommendation. He has said that MD will explore the feasibility of establishing a centralised record to enhance the filing system.



## **PART 4: ANCILLARY FACILITIES AND SERVICES**

4.1 This PART examines the Government's work in providing ancillary facilities and services to vessels berthed at T/Ss and S/As, focusing on:

- (a) public landing facilities (paras. 4.2 to 4.13);
- (b) fresh water supply for shipping purpose (paras. 4.14 to 4.22); and
- (c) marine refuse cleansing services (paras. 4.23 to 4.30).

### **Public landing facilities**

4.2 Public landing facilities are open for use by members of the public free of charge to facilitate embarkation and disembarkation to and from vessels (see Photograph 3 for an example). According to the Transport and Logistics Bureau, the daily management of public landing facilities is handled by different government departments in accordance with their respective scopes of work. As at 30 June 2024, there were 75 public landing facilities located at T/Ss and S/As. For these public landing facilities, CEDD is responsible for the structural maintenance while the Transport Department (TD) is responsible for monitoring the usage condition and will conduct on-site utilisation surveys regularly. According to CEDD's PWDM, a public landing facility normally comprises:

- (a) landings, handrails and fenders;
- (b) depending on the cope or crest level, intermediate landings to cater for different tidal levels;
- (c) rough cast finish with thickness of 25 millimetres on the landing steps; and
- (d) capping units on the top of the fenders to close the gap between the landing and the vessel.

PWDM also states that an identification plate containing a marine structure number should be displayed on a marine structure depending on the use of the structure.

## Ancillary facilities and services

---

According to CEDD, identification plates with marine structure number are provided for public landing facilities.

### Photograph 3

#### A public landing facility at Aberdeen West T/S



Source: Photograph taken by Audit staff on 30 May 2024

### ***Room for improvement in planning and provision of public landing facilities***

4.3 Audit noted that some new public landing facilities had been constructed/under planning for T/S users in recent years. Audit examined CEDD records of two cases and revealed room for improvement in the planning and provision of public landing facilities, as follows:

- (a) ***Need to review need of providing additional public landing facilities within Tuen Mun T/S.*** According to MD records, there were considerable amount of pleasure vessels, fishing vessels and work boats habitually moored near the Tuen Mun Area 27 breakwater (i.e. Castle Peak Bay Waterfront Promenade). In view of the high utilisation rates of the existing public landing facilities within Tuen Mun T/S (i.e. marine structure numbers NP 044 and NP 045) and the inherent danger of people climbing the breakwater to board and alight their vessels, in March 2019, MD requested CEDD to construct a new public landing facility at the Tuen Mun Area 27 breakwater, situating at the back of Tuen Mun T/S (i.e. marine structure number NP 188). In December 2020, the construction works

commenced. In November 2021, the new public landing facility was open for public use (Note 29). According to TD's on-site utilisation survey conducted in 2023, the utilisation of the new public landing facility at the back of Tuen Mun T/S (i.e. marine structure number NP 188) was low. Audit's site visit in June 2024 found that besides the three public landing facilities, there were also more than ten makeshift landings (i.e. not constructed by the Government — see Photograph 4 for an example) alongside the breakwater facing Tuen Mun T/S. The results of TD's on-site utilisation survey and the considerable number of makeshift landings alongside the breakwater facing Tuen Mun T/S indicated that the three existing public landing facilities might not have fully addressed the need of the users. In Audit's view, taking into account the utilisation and locations of the three public landing facilities and those makeshift landings, MD needs to, in collaboration with relevant government departments, review the need of providing additional public landing facilities within Tuen Mun T/S; and

### Photograph 4

#### An example of makeshift landing at Tuen Mun T/S



*Source: Photograph taken by Audit staff on 9 June 2024*

---

**Note 29:** *The construction cost of the public landing facility was about \$9 million.*

## **Ancillary facilities and services**

---

- (b) *Need to closely monitor the implementation of the provision of additional public landing facilities at Aberdeen South T/S.* Since 2022, the then Transport and Housing Bureau (now the Transport and Logistics Bureau), the Invigorating Island South Office of the Development Bureau, MD and CEDD had discussed with the trade the proposal of constructing public landing facilities in Aberdeen T/Ss for use by small vessels. After conducting site visits with relevant stakeholders and carrying out consultation on the design proposal, 3 sets of additional public landing facilities were proposed, as follows:
- (i) for the set of public landing facility located at the vertical seawall at Aberdeen West T/S on Ap Lei Chau (near Ap Lei Chau Bridge), the construction works commenced in late 2022 and were completed and open for public use in August 2023 (Note 30); and
  - (ii) for the other two sets of public landing facilities located at the sloping seawall at Aberdeen South T/S adjoining Ap Lei Chau Praya Road (near Marina South), the construction works were originally planned to commence in the second quarter of 2023 for completion by the first quarter of 2024. However, longer time was taken for conducting public consultation and responding to the objections from some owners of small vessels received during the statutory consultation period upon gazetting of the proposed construction works in January 2023 (Note 31). In the event, the project was authorised by the Chief Executive in Council in November 2023. CEDD then proceeded to kick start the detailed design. According to the latest schedule, the construction works were planned to commence in the first quarter of 2025 for completion in the second quarter of 2026. In Audit's view, for the convenience and safety of users, CEDD needs to closely monitor the implementation of the provision of the two sets of additional public landing facilities at Aberdeen South T/S to ensure their timely completion.

---

**Note 30:** *The construction cost of the public landing facility was about \$6.4 million.*

**Note 31:** *According to the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127), any person who considers that he or she has an interest, right or easement in or over the foreshore and sea-bed involved may submit a written objection to the Director of Lands before the expiration of the time specified in the notice.*

***Room for improvement in maintaining public landing facilities***

4.4 CEDD has engaged two contractors (Note 32) to carry out routine inspections, cleansing and maintenance to ensure that public landing facilities are proper for public use. Duties of the contractors include:

- (a) inspecting and cleaning each public landing facility at intervals generally ranging from 7 to 28 days, and submitting a cleaning completion report through the Port Maintenance Information System (PMIS — Note 33) within 48 hours for review and endorsement by CEDD; and
- (b) for defective items identified:
  - (i) if they are within the scope of the common and safety related minor works specified in the contract (e.g. concrete steps with crack greater than 2 millimetres wide and cracked/spalled area less than 2 square metres, any defect of anti-skid nosing, etc.), indicating such through PMIS, completing the rectification works within the respective time limits and uploading the rectification completion reports through PMIS within 48 hours; and
  - (ii) if they are outside the scope of the common and safety related minor works specified in the contract, indicating such through PMIS and CEDD will issue works orders separately for carrying out rectification works in an orderly manner.

---

**Note 32:** *In September 2021, CEDD awarded a 60-month re-measurement maintenance contract mainly for existing seawalls, landings and navigation channels within Hong Kong waters and the construction of new minor works at an estimated contract value of \$311 million. In March 2022, CEDD awarded another 60-month re-measurement maintenance contract mainly for existing piers within Hong Kong waters and the construction of new minor works at an estimated contract value of \$317 million.*

**Note 33:** *PMIS is a computerised database adopted by CEDD for the planning and scheduling of maintenance works of marine structures. It also contains the history and records of individual marine structures.*

## Ancillary facilities and services

---

4.5 *Need to ensure proper endorsement of cleaning completion reports submitted by contractors.* According to CEDD, the cleaning completion reports submitted by the contractors should be checked by Works Supervisor rank staff and endorsed by Assistant Inspector of Works rank staff through PMIS. Audit reviewed PMIS records of the 75 public landing facilities located at T/Ss or S/As from July 2023 to June 2024 and noted that of the 2,755 cleaning completion reports involved:

- (a) 511 (19%) (involving 22 public landing facilities) had not been endorsed by CEDD through PMIS, including 141 cleaning completion reports for 3 landing steps at Tuen Mun T/S and 126 cleaning completion reports for 6 landing steps at Cheung Chau T/S; and
- (b) for the remaining 2,244 (81%) cleaning completion reports endorsed by CEDD through PMIS, while there was no stipulated time limit for endorsing the reports, the time which CEDD took to endorse the reports ranging from on the submission date to 287 days after submission date, averaging 21 days.

4.6 Regarding the 511 cleaning completion reports not endorsed through PMIS, in October 2024, CEDD informed Audit that:

- (a) the responsible staff of 502 (98%) reports confirmed that reviews had been conducted but the endorsements through PMIS were missed. Relevant staff had been reminded to strictly comply with the endorsement requirement;
- (b) the remaining reports not endorsed were mainly due to the transition period arising from change of posts between staff; and
- (c) CEDD carried out audit inspections (Note 34) to check on site that the cleaning work and rectification works were duly completed by the contractors. CEDD's audit inspection results during the period affirmed that cleaning work had been satisfactorily completed.

---

**Note 34:** *According to the contract provisions, engineers of CEDD shall carry out audit inspections for at least 10% of the total number of landing facilities which the contractors have completed the cleaning work.*

Audit considers that CEDD needs to take measures to ensure that all cleaning completion reports submitted by contractors through PMIS are endorsed in a timely manner.

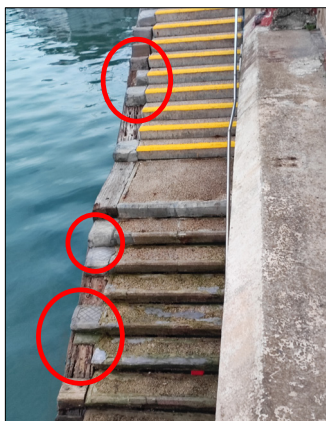
4.7 *Need to closely monitor the issue of works orders.* In May to July 2024, Audit conducted site visits to the 34 public landing facilities located at 5 T/Ss and 1 S/A and found defects in 3 (9%) public landing facilities (see Photographs 5(a) and (b) for examples). While those defects had been reported by the contractors through PMIS as defects outside the scope specified in paragraph 4.4(b)(i), CEDD took extra time to issue the works orders for carrying out rectification works, as follows:

- (a) for the defective landing facility at Causeway Bay T/S, while the defects were identified and reported by the contractor in November 2023, CEDD issued the relevant works order in April 2024 (i.e. 5 months after reporting by the contractor). The rectification works were completed in July 2024; and
- (b) for the remaining 2 defective landing facilities, while the defects were identified and reported by the contractors in October 2023 and March 2024 respectively, up to August 2024 (i.e. 10 and 5 months respectively after reporting by the contractor), CEDD had not yet issued the relevant works orders.

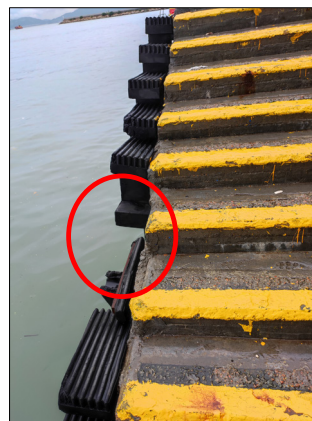
### Photographs 5(a) and (b)

#### Examples of public landing facilities with defects

(a) Causeway Bay T/S



(b) Tuen Mun T/S



Source: Photographs taken by Audit staff on 28 May and 9 June 2024

4.8 In October 2024, CEDD informed Audit that:

- (a) for the identified defects which were not part of the rectification works to be carried out by the contractors under relevant contract provisions, they could be broadly grouped into urgent tasks involving public safety and minor defects not involving public safety. CEDD would issue separate works orders to the contractors to rectify the defects. Taking into account the urgency of the defects, contractors' resources and tidal levels of different months, etc., the maintenance works would be prioritised and carried out in an orderly manner;
- (b) regarding the defective landing facility mentioned in paragraph 4.7(a), the repair works involved working in the splashing zone which required suitable time period (i.e. low tide in summer daytime); and
- (c) regarding the remaining 2 defective landing facilities mentioned in paragraph 4.7(b):
  - (i) the defect reported by the contractor in October 2023 was a minor crack of a rubber fender. As the rubber fender was still functioning



and the minor crack could only be rectified by replacing the whole fender, CEDD would keep in view the situation and arrange repair works as and when necessary; and

- (ii) the defect reported by the contractor in March 2024 was a damaged rubber step. Works order was issued in September 2024 to the contractor. Rectification works were planned to commence near the end of 2024 when the relevant preparatory work (e.g. application for the Marine Department Notice) was completed.

In Audit's view, as defective public landing facilities may pose danger to passengers, CEDD needs to closely monitor the issue of works orders on the rectification works.

4.9 ***Room for improvement for concrete steps in T/Ss.*** Audit's site visits conducted in May to July 2024 (see para. 4.7) found that there were three concrete steps with handrails used by the vessels for embarkation and disembarkation of passengers in Causeway Bay T/S. However, these concrete steps did not meet the design standard stipulated in PWDM and did not have any marine structure numbers displayed on them (see Photographs 6(a) to (c)). In July and October 2024, CEDD informed Audit that:

- (a) the three concrete steps were not included in TD's list of public piers and public landing steps (Note 35). They were integral parts of the seawall structure and CEDD would provide structural maintenance for the seawall structure in entirety;
- (b) when CEDD received public suggestion to provide handrails at those concrete steps in 2021, with a view to meeting public expectation, it provided the said handrails on an ad hoc basis after seeking advice from relevant government departments (e.g. MD); and
- (c) CEDD had reviewed the conditions of similar concrete steps in other T/Ss in July 2024 with a view to exploring and taking forward potential

---

**Note 35:** *According to the list of public piers and public landing steps under the management of TD, as at 30 June 2024, TD is responsible for monitoring the usage condition of public landing facilities of 65 public piers and 126 public landing steps. The three concrete steps fall outside the list of facilities under TD's management.*

## Ancillary facilities and services

---

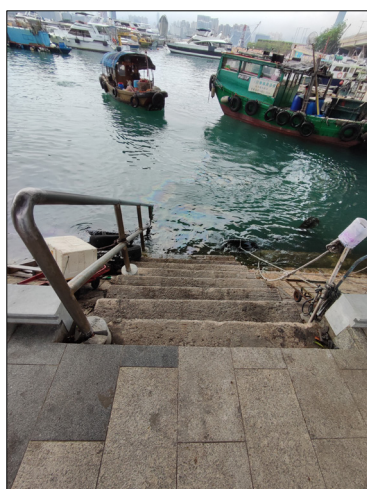
improvement works on these concrete steps. While CEDD was the maintenance agent, it had communicated with TD and MD since July 2024 respectively on matters relating to the management role for these concrete steps, and sought comments on the potential improvement works for passenger safety (e.g. rough cast finish and non-slip yellow nosing).

With a view to ensuring the safety of passengers who make use of the concrete steps in T/Ss for embarking and disembarking, CEDD needs to take appropriate follow-up actions in collaboration with relevant government departments and closely monitor the implementation of potential improvement works on these concrete steps.

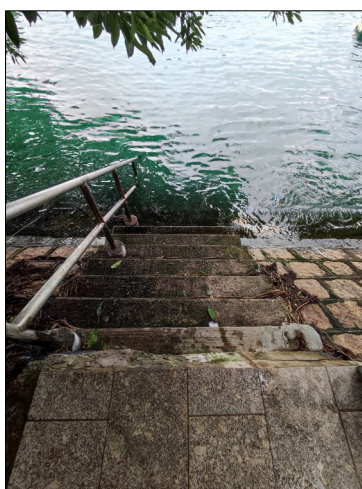
### Photographs 6(a) to (c)

#### Concrete steps at Causeway Bay T/S

(a) Concrete step A



(b) Concrete step B



(c) Concrete step C



Source: Photographs taken by Audit staff on 6 June 2024

## Audit recommendations

4.10 Audit has *recommended* that the Director of Marine should, in collaboration with relevant government departments, review the need of providing additional public landing facilities within Tuen Mun T/S.

4.11 **Audit has *recommended* that the Director of Civil Engineering and Development should:**

- (a) **closely monitor the implementation of the provision of the new public landing facilities at Aberdeen South T/S to ensure their timely completion;**
- (b) **take measures to ensure that all cleaning completion reports submitted by contractors through PMIS are endorsed in a timely manner;**
- (c) **closely monitor the issue of works orders on the rectification works for defective public landing facilities; and**
- (d) **in collaboration with relevant government departments, closely monitor the implementation of potential improvement works on the concrete steps in T/Ss.**

## **Response from the Government**

4.12 The Director of Marine agrees with the audit recommendation in paragraph 4.10. He has said that MD will collaborate with relevant government department(s) to proceed with the review.

4.13 The Director of Civil Engineering and Development agrees with the audit recommendations in paragraph 4.11. He has said that CEDD is enhancing the workflow in PMIS to ensure that all cleaning completion reports submitted by contractors through PMIS are endorsed in a timely manner.

## **Fresh water supply for shipping purpose**

4.14 In meeting the demand for water supply for shipping purpose, WSD has set up seven WSKs (see Photograph 7 for an example). WSD has contracted out the manning services for all WSKs since October 2017. The current 36-month contract was commenced in October 2022 with a contract sum of about \$5.3 million. The water selling service is provided at each WSK during their respective opening hours (see Appendix C). According to the Waterworks Regulations (Cap. 102A), the charge

## Ancillary facilities and services

---

for fresh water for shipping purposes (Note 36) shall be \$4.58 and \$10.93 per cubic metre when supplying to or for use on local vessels and non-local vessels respectively.

### Photograph 7

#### WSK at New Yau Ma Tei T/S



*Source: Photograph taken by Audit staff on 30 May 2024*

4.15 According to WSD:

- (a) it planned to provide additional WSKs in Aberdeen, Sai Kung, South Lantau, Tai Po, Kowloon East and Tai O to facilitate vessels in those

---

**Note 36:** *Supply of water for shipping purpose means water supplied:*

- (a) (i) *to or for use on any non-local vessels;*
- (ii) *to any pier for use on non-local vessels; or*
- (iii) *to or for use on any vessel employed for the conveyance of water to non-local vessels;*
- (b) (i) *to or for use on any local vessels; or*
- (ii) *to any pier for use on such pier.*

districts to procure fresh water. The public standpipes (Note 37) at Sai Kung, South Lantau, Tai Po and Tai O would be removed after setting up of the new WSKs; and

- (b) the site search of the additional WSKs in South Lantau, Tai Po, Kowloon East and Tai O was still in progress. The additional WSKs were planned to be commissioned by the end of 2026.

4.16 With a view to enhancing its services, as a trial operation, WSD set up a new automatic shipping water selling machine (see Photograph 8 — Note 38) at the Tuen Mun WSK to provide 24-hour water selling service starting from December 2023 (Note 39). In July 2024, WSD informed Audit that WSD planned to install:

- (a) 2 shipping water selling machines in Aberdeen West T/S and 1 in Aberdeen South T/S. The construction works were scheduled to commence in 2024 for completion by the end of 2025; and
- (b) 3 shipping water selling machines at Sai Kung, with 2 at Sai Kung Promenade due to higher demand for vessels in Sai Kung S/A and 1 at Tui Min Hoi to serve vessels with deeper draft.

---

**Note 37:** *According to WSD, before 1980s, the water supply distribution networks were not well established in the New Territories. In this connection, WSD established public standpipes in remote areas to cater for the demand of water supply. Fresh water from a public standpipe is free of charge and shall be taken away only in a bucket or any other suitable receptacle. No person shall draw water from a public standpipe by means of a hosepipe or similar apparatus.*

**Note 38:** *The cost of the shipping water selling machine was about \$2.59 million, including cost for design, procurement, associated civil works for installation and operation cost during the trial period.*

**Note 39:** *According to WSD, the trial operation will end in September 2024 and around four months will be required for conducting the implementation review.*

**Photograph 8**

**Shipping water selling machine at  
Tuen Mun WSK**



*Source: Photograph taken by Audit staff  
on 9 June 2024*

***Need to improve the operation of shipping water selling machine***

4.17 According to WSD, the water charge rate for local vessels (i.e. \$4.58 per cubic metre) is adopted for purchasing fresh water from the shipping water selling machine. Customers are required to enter their COO numbers into the machine before purchasing fresh water from the machine. Audit analysed the sales records of July 2024 extracted from the machine and found that of the 320 transactions, COO numbers of 109 (34%) transactions could not be matched with those recorded in MD's list of local vessels as of June 2024. In Audit's view, WSD needs to:

- (a) ascertain the reasons for COO numbers recorded by the shipping water selling machine not matching those recorded in MD's list of local vessels; and
- (b) enhance the functions of the shipping water selling machine so that water will be sold only when valid COO numbers have been entered into.

***Need to ascertain the reasons for decrease in water consumption in WSKs***

4.18 As shown in Table 12, the total water consumption in WSKs decreased significantly by 47% from 257,690 cubic metres in 2019 to 137,688 cubic metres in 2023. In particular, for A Kung Ngam WSK and Sai Wan Ho WSK which are both located near Shau Kei Wan T/S, the decreases in the water consumption were 61% and 65% respectively during the period. With a view to ensuring that the water selling service can meet the users' needs, WSD needs to ascertain the reasons for the significant decrease in water consumption in WSKs, and take appropriate follow-up actions.

**Table 12**  
**Water consumption of WSKs**  
**(2019 to 2023)**

WSK	Amount of water sold (cubic metre)					Percentage change between 2019 and 2023
	2019	2020	2021	2022	2023	
A Kung Ngam	33,049	32,247	29,771	19,452	12,759	(61%)
Causeway Bay	4,015	4,686	5,692	7,838	4,767	19%
Sai Wan Ho	17,041	14,708	19,234	10,816	6,017	(65%)
Western	10,652	12,544	10,550	6,879	3,007	(72%)
Yau Ma Tei	7,729	12,417	5,867	9,281	9,878	28%
Tuen Mun	95,220	97,021	95,413	77,843	47,869	(50%)
Lai Chi Kok	89,984	67,332	77,624	63,972	53,391	(41%)
Overall	257,690	240,955	244,151	196,081	137,688	(47%)

Source: Audit analysis of WSD records

### *Need to investigate possible cases of non-compliance with the Waterworks Regulations*

4.19 As at 30 June 2024, there were 18 licensed water boats (see Note 4 to para. 1.13(a)). Owners of water boats who wish to sell or offer for sale water from the waterworks to vessels are required to obtain permission from WSD (see Note 5 to para. 1.16). There is no validity period specified in the permission.

4.20 While there were 18 licensed water boats as at 30 June 2024 according to MD's records, WSD could only retrieve the records of the permission relating to 12 water boats. According to WSD, no permission had been granted in relation to the remaining 6 water boats. Audit noted that:

- (a) 2 of the 6 water boats, of which their owners had not been granted WSD permission, had obtained fresh water of 3,218 cubic metres in July 2024 from the Tuen Mun WSK (including those from the shipping water selling machine) after checking to relevant sales records. The 2 water boats might have sold water to vessels without WSD permission; and
- (b) in 5 of the 12 permissions, the holders of the permissions were different from the owners of the concerned water boats as recorded in MD's records. The owners of those 5 water boats may not be granted WSD permission to sell water to vessels.

In Audit's view, WSD needs to investigate the cases mentioned above and take follow-up actions to rectify any non-compliance identified.

### **Audit recommendations**

4.21 **Audit has recommended that the Director of Water Supplies should:**

- (a) **ascertain the reasons for COO numbers recorded by the shipping water selling machine not matching those recorded in MD's list of local vessels;**



- (b) **enhance the functions of the shipping water selling machine so that water will be sold only when valid COO numbers have been entered into;**
- (c) **ascertain the reasons for the significant decrease in water consumption in WSKs, and take appropriate follow-up actions; and**
- (d) **investigate the cases mentioned in paragraph 4.20 and take follow-up actions to rectify any non-compliance identified.**

## **Response from the Government**

4.22 The Director of Water Supplies agrees with the audit recommendations.

## **Marine refuse cleansing services**

4.23 PCU of MD is responsible for cleanliness of the sea surface within Hong Kong waters. It engages contractors to provide marine refuse collection and scavenging service, as well as marine oil pollution and marine hazardous and noxious substances spillage cleansing services (Note 40). Duties of the marine refuse cleansing contractor include:

- (a) deploying work boats to patrol within Hong Kong waters including the priority areas and T/Ss to search for floating refuse and scavenge them from the sea;

---

**Note 40:** *As of June 2024, the pollution control and marine refuse cleansing services were covered by three 36-month contracts commencing from 1 October 2022, as follows:*

- (a) *2 contracts covering the marine refuse cleansing and disposal services were awarded to the same contractor with a total contract sum of about \$300 million; and*
- (b) *1 contract covering the marine oil pollution and marine hazardous and noxious substances spillage cleansing services was awarded to a subsidiary company of the contractor in (a) with a contract sum of about \$53 million.*

## **Ancillary facilities and services**

---

- (b) collection of domestic refuse from all local vessels within the specified T/Ss and anchorages and other water areas as required by MD (i.e. Chai Wan, Junk Bay, Sai Kung, Tsuen Wan and Tai O) not less than once a day; and
- (c) transporting of all refuse scavenged and collected to the Marine Refuse Collection Points (MRCPs) for temporary storage and subsequent conveyance and disposal, and maintaining MRCPs in tidy and clean conditions.

4.24 On a monthly basis, management meetings are being held between the contractors and MD to discuss the overall operations in the previous month. MD can provide feedback or comment on the contractors' performance, and give any requests for improvement during the meetings.

### ***Need to enhance the cleanliness of T/Ss and S/As***

4.25 Audit noted that the marine refuse cleansing contractor provided monthly black spots reports to MD, showing the conditions of black spots with relevant photographs provided for reference. Audit analysed the black spots reports in the 21-month period from October 2022 (i.e. contract commencement) to June 2024 and found that for the black spots in 11 T/Ss and 6 S/As, the number of months with average cleanliness level rated as unsatisfactory ranged from 3 to 21 months. In particular, the average cleanliness level of the black spots in Aberdeen T/S had been rated as unsatisfactory in all the 21 months (see Table 13). Audit noted that MD had reminded the contractor to enhance its refuse scavenging work for some specific locations during monthly meetings. According to MD, the reason for unsatisfactory cleanliness level was mainly caused by the overnight accumulation of floating refuse which was outside the working hours of the contractor. In view of the unsatisfactory average cleanliness level for the black spots in T/Ss and S/As, Audit considers that MD needs to closely monitor the performance of the cleansing contractor to enhance the cleanliness of T/Ss and S/As.

Table 13

**Black spots in T/Ss and S/As  
with average cleanliness level rated as unsatisfactory  
(October 2022 to June 2024)**

Location	Average cleanliness level rated as unsatisfactory (Month)
<i>T/S</i>	
Aberdeen (Note)	21
Cheung Chau	16
Kwun Tong	10
New Yau Ma Tei	6
Rambler Channel	3
Sam Ka Tsuen	4
Shau Kei Wan	4
Shuen Wan	6
To Kwa Wan	5
Tuen Mun	12
<i>S/A</i>	
Chai Wan Cargo Basin	3
Pak Sha Wan	8
Sai Kung	4
Ting Kau/Tsuen Wan	9
Tai O	7

*Source: Audit analysis of MD records*

*Note: Aberdeen South T/S and Aberdeen West T/S are treated as Aberdeen T/S in the monthly black spots reports.*

### ***Need to ensure proper handling of waste oil***

4.26 Under the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C), waste oil is chemical waste and should be transported to licensed chemical waste disposal facilities (e.g. Chemical Waste Treatment Centre) for proper disposal. In October and December 2023, MD informed the Legislative Council that:

## **Ancillary facilities and services**

---

- (a) any local motor vessels, including fishing vessels, would produce waste oil during operation and maintenance. Such waste oil was usually mixed with various oil products and that was considered to be Class 3 dangerous goods (i.e. flammable liquids). The collection, conveyance and storage of the waste oil must therefore comply with the relevant safety regulations and safety standards for the handling of the dangerous goods. In addition, the personnel responsible for handling dangerous goods must receive relevant safety training while the contractor responsible for collecting and conveying the waste oil must also be qualified and licensed as chemical waste collector by the Environmental Protection Department (EPD);
- (b) the vessels employed by the marine refuse cleansing contractor did not meet relevant safety standards and the staff employed by the marine refuse cleansing contractor had not received any relevant safety training, and therefore were not fitted for collecting waste oil from local vessels; and
- (c) as the original design of the onshore MRCP facilities did not take into account the collection or storage of vessel waste oil, they did not meet the relevant safety requirements. In order to set up a long-term mechanism, MD would work with EPD to explore the feasibility of incorporating the additional local vessel waste oil collection services into the next marine cleansing service contract or other viable options.

4.27 Audit noted that the collection of waste oil was outside the scope of the cleansing contract. However, according to the monthly information submitted to MD by the contractor, waste oil had been handled from October 2022 (contract commencement) to June 2024. Audit analysis of the monthly information revealed that about 30,000 litres of waste oil were handled by the contractor during the period. In September and October 2024, MD and FSD informed Audit that:

- (a) **MD.** The contractor's vessels and MRCPs were not operated round the clock and no staff was on duty at the contractor's vessels or MRCPs outside working hours. Some waste oil was found unauthorisedly dumped onto the contractor's vessels or MRCPs outside working hours without the consent from MD nor the contractor. To avoid the situation to get worsened, such as illegal dumping at sea, the contractor had no choice but to handle the waste oil. MD would arrange the conveyance of waste oil found during operation to the Chemical Waste Treatment Centre through EPD's licensed chemical waste collector; and

- (b) **FSD.** The manufacture, storage, conveyance and use of dangerous goods are regulated under the Dangerous Goods Ordinance (Cap. 295 — Note 41). A person must have a licence granted by FSD under the Dangerous Goods Ordinance to manufacture any dangerous goods, or store, convey or use dangerous goods exceeding the exempt quantity (i.e. the maximum quantity of dangerous goods each person (or legal person) can store without holding a dangerous goods storage licence). When determining whether a liquid resulting from the mixture of various oil products would be classified as Class 3/3A dangerous goods (Note 42) as mentioned in paragraph 4.26(a), tests must be conducted on those substances in accordance with “The Code of Practice for Control of Dangerous Goods on Land”.

4.28 In Audit’s view, MD needs to instruct the cleansing contractor to cease the current practice of handling waste oil, which is outside the scope of the cleansing contract (see para. 4.27). There is also a need for MD to collaborate with relevant parties to work out an arrangement for handling waste oil produced by local vessels during operation at an early date.

## **Audit recommendations**

- 4.29 **Audit has recommended that the Director of Marine should:**
- (a) **closely monitor the performance of the cleansing contractor to enhance the cleanliness of T/Ss and S/As;**
  - (b) **instruct the cleansing contractor to cease the current practice of handling waste oil; and**

---

**Note 41:** Pursuant to the Dangerous Goods (Control) Regulation (Cap. 295G), FSD regulates the manufacture, conveyance, storage and use of Schedule 2 dangerous goods under the Dangerous Goods (Application and Exemption) Regulation 2012 (Cap. 295E) on land by way of licensing regime.

**Note 42:** Generally, a liquid with a flashpoint of no more than 60°C is classified as Class 3 dangerous goods. If the liquid has a flashpoint exceeding 60°C and is intended for use as fuel, it will be classified as Class 3A dangerous goods.

## **Ancillary facilities and services**

---

- (c) **in collaboration with relevant parties, work out an arrangement for handling waste oil produced by local vessels during operation at an early date.**

## **Response from the Government**

4.30 The Director of Marine agrees with the audit recommendations. He has said that MD:

- (a) will continue to monitor closely the cleanliness level of T/Ss and S/As;
- (b) has already instructed the cleansing contractor to cease the current practice of handling waste oil; and
- (c) will work out an appropriate arrangement with relevant parties for the collection of waste oil generated by vessels.

**Appendix A**  
(paras. 1.4 and  
2.11 refer)

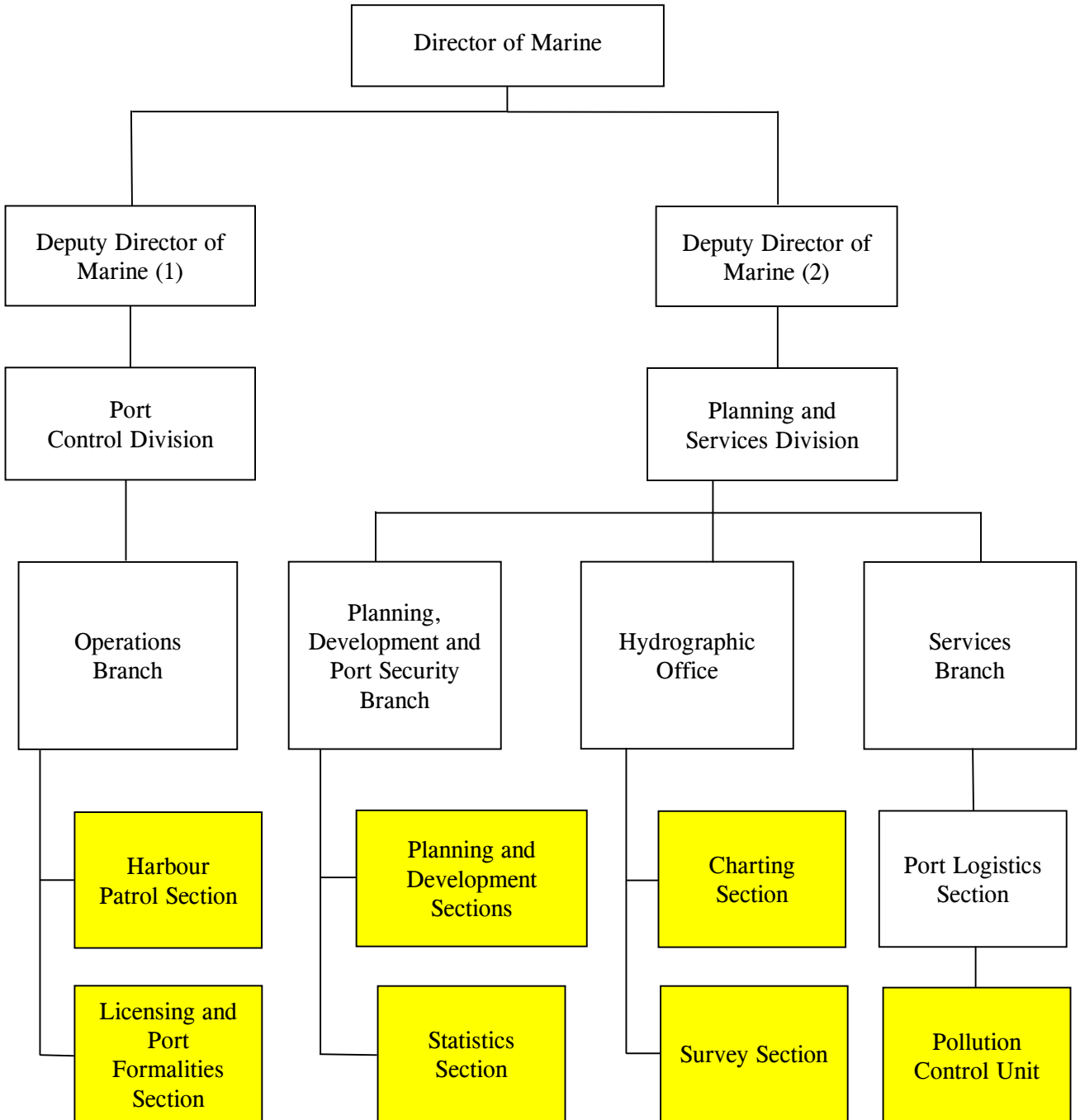
**List of typhoon shelters and sheltered anchorages**  
**(30 June 2024)**

Location	Area (hectares)
<b>(A) T/S</b>	
TS1 Aberdeen South	26.1
TS2 Aberdeen West	34.2
TS3 Causeway Bay	14.2
TS4 Cheung Chau	50.0
TS5 Hei Ling Chau	75.6
TS6 Kwun Tong	33.8
TS7 New Yau Ma Tei	64.6
TS8 Rambler Channel	12.9
TS9 Sam Ka Tsuen	1.9
TS10 Shau Kei Wan	17.2
TS11 Shuen Wan	10.3
TS12 To Kwa Wan	14.8
TS13 Tuen Mun	56.8
TS14 Yim Tin Tsai	9.2
Sub-total	421.6
<b>(B) S/A</b>	
SA1 Chai Wan Cargo Basin	11.2
SA2 Cheung Sha Lan	6.7
SA3 Kat O	1.6
SA4 Middle Island	6.9
SA5 Nim Shue Wan	2.3
SA6 Pak Sha Wan (Hebe Haven)	84.0
SA7 Sai Kung	4.3
SA8 Sha Tau Kok	0.6
SA9 Shuen Wan Hoi	26.0
SA10 St. Stephen's Bay	1.3
SA11 Tai Mei Tuk	12.3
SA12 Tai O	4.0
SA13 Tai Tam Harbour	5.7
SA14 Ting Kau	0.7
SA15 Tsam Chuk Wan	7.5
SA16 Tsuen Wan	3.7
SA17 Wan Chai Cargo Basin (Note)	2.0
SA18 Tseung Kwan O	3.4
Sub-total	184.2
Total	605.8

Source: Marine Department records

Note: Wan Chai Cargo Basin S/A has been managed by the Development Bureau under "Water Sports and Recreation Precinct (Phase 2)" project since late December 2021 and is not open to other vessels.

**Marine Department:  
Organisation chart (extract)  
(30 June 2024)**



Legend:  Sections/unit covered in this Audit Report

Source: MD records



**Opening hours of water selling kiosks  
(30 June 2024)**

No.	Location of WSK	Year of commencement	Mondays to Fridays	Saturdays	Public holidays	Sundays
1	A Kung Ngam	1985	8 am to 12 pm and 1 pm to 5 pm			
2	Causeway Bay	1965	8 am to 12 pm and 1 pm to 5 pm	8 am to 1 pm	8 am to 12 pm	
3	Sai Wan Ho	1991		Closed		
4	Western	1994			8 am to 12 pm and 1 pm to 5 pm	
5	Yau Ma Tei	1994			8 am to 1 pm	
6	Tuen Mun	1983	8 am to 12 pm and 1 pm to 5 pm			Closed
7	Lai Chi Kok	1993	7 am to 11 pm			

*Source: Audit analysis of WSD records*

## Acronyms and abbreviations

Audit	Audit Commission
CEDD	Civil Engineering and Development Department
COO	Certificate of ownership
EPD	Environmental Protection Department
FSD	Fire Services Department
HPS	Harbour Patrol Section
MD	Marine Department
MRCPs	Marine Refuse Collection Points
PCU	Pollution Control Unit
PM	Private mooring
PMIS	Port Maintenance Information System
PWDM	Port Works Design Manual
S/As	Sheltered anchorages
TD	Transport Department
T/Ss	Typhoon shelters
WSD	Water Supplies Department
WSKs	Water selling kiosks