

PORT OPERATIONS COMMITTEE

**Revision to Vessel Traffic Services Procedures and
Re-delineation of Very High Frequency Sectors**

PURPOSE

The purpose of this paper is to seek comments from members on the following proposals:

- (i). to streamline the Vessel Traffic Services ('VTS') reporting procedures;
- (ii). to reduce the number of reporting points; and
- (iii). to re-demarcate Very High Frequency ('VHF') sectors¹.

BACKGROUND

2. The Vessel Traffic Centre ('VTC') of the Marine Department ('MD') was commissioned in 1989 to provide vessel traffic services (VTS)² to vessels visiting Hong Kong. Over the past decades, though the marine traffic activities and pattern in Hong Kong evolved drastically with economic development, the operational mode of the VTS has not been enhanced correspondingly. With a view to enhancing the efficiency of providing VTS to vessels calling Hong Kong, a comprehensive study on Hong Kong Vessel Traffic

¹ Pursuant to Regulation 3 of Shipping and Port Control Regulations (Cap. 313A), VHF sectors refer to "any VHF sector the boundaries of which are delineated in the Second Schedule of Cap. 313A".

² A vessel traffic service (VTS) is a marine traffic monitoring system established by harbour or port authorities, similar to air traffic control for aircraft. Typical VTS systems use radar, closed-circuit television (CCTV), VHF radiotelephony and automatic identification system to keep track of vessel movements and provide navigational safety in a limited geographical area.

Services ('the Study') was conducted in 2013 to review the current Hong Kong VTS from strategic, organisational and operational perspectives.³

3. The Study revealed that all VHF sectors were loaded by radio reporting of vessels' movements as vessels are required to make a series of reports prior to any movements pursuant to the existing legislation. At present, the Hong Kong waters is divided into 3 VHF Sectors and assigned with 3 different VHF channels, they are the Eastern Approaches (VHF Ch. 12), Harbour (VHF Ch. 14) and Western Approaches (VHF Ch. 67) VHF Sectors. The available air time of each VHF sector was being utilized and approaching to its limit particularly during peak hours and typhoon periods, which might hinder the effective delivery of high level vessel traffic services (i.e. Information Service⁴, Traffic Organisation Service⁵ and Navigational Assistance Service⁶).

4. To ease the situation and maintain an effective vessel traffic service, it is proposed to combine some closely-related movement reports into a single report and eliminate certain reporting points in order to simplify the reporting procedures and ease the nearly saturated air time. Furthermore, the current two busy VHF sectors (i.e. the Harbour and Western Approach sectors) is proposed to be split into four VHF sectors according to their marine traffic nature, volume and pattern.

5. Coincidentally, the "Report of the Commission of Inquiry into the Collision of Vessels near Lamma Island on 1 October 2012" considers it is a merit to make a small adjustment to the VTS boundary between the sector of Channel 67 and Channel 14, that is the boundary between the Western Approaches VHF Sector and the Harbour VHF Sector

³ The Marine Department appointed "Ove Arup & Partners Hong Kong Limited" to conduct a study on Hong Kong Vessel Traffic Services to review the current VTS from strategic, organisational and operation perspectives. The study was completed in March 2013.

⁴ As defined in International Maritime Organisation ('IMO') Resolution A.857(20) – "Guidelines for Vessel Traffic Services", an Information Service is a service to ensure that essential information becomes available in time for on-board navigational decision-making.

⁵ As defined in IMO Resolution A.857(20), a traffic organisation service is a service to prevent the development of dangerous maritime traffic situations and to provide for the safe and efficient movement of vessel traffic within the VTS area.

⁶ As defined in IMO Resolution A857(20), a navigational assistance service is a service to assist on-board navigational decision-making and to monitor its effects.

West of Lamma Island⁷. The purpose is to include the Yung Shue Wan ferry pier and the Lamma Power Station pier into the Harbour VHF Sector, so that majority of vessels to and from these two piers would be covered under the same VHF Sector. Opportunity is taken to include the above recommendation to form part of the streamlined proposals.

PROPOSALS

Streamlining of VTS reporting procedures

6. According to Part II of the Shipping and Port Control Regulations, Cap. 313A, a vessel is required to report to VTC at different stages of its movement, including pre-movement/departure; ready to move/depart; and move/depart underway stages. With the new VTS system in place, repeated reporting at different stages of vessel movement or departure will no longer necessary. It is proposed to:

- (i). combine pre-move report, ready to move report and move underway report into a single movement report; and
- (ii). combine pre-departure report, ready to depart report and departure underway report into a single departure report.

7. Details of the combined report requirements for vessel movement and departure are depicted in **Annex I**.

Reduction of reporting points

8. With the aid of technology such as Automatic Identification System ('AIS') and Very High Frequency Direction Finding ('VHF DF'), the capability of identification and tracking of vessels has been improved. It is prudent to reduce the frequency of vessel reporting by removing certain reporting points. Having reviewed the need of vessel traffic monitoring, we propose to remove the following reporting points as to reduce ship/shore

⁷ See para. 443(10) of "Report of the Commission of Inquiry into the Collision of Vessels near Lamma Island on 1 October 2012 (The Redacted Version)", April 2013 at <http://www.legco.gov.hk/yr12-13/english/panels/edev/papers/edev0527-rpt20130430-e.pdf>

communications. They are:

- (i). Hak Kok Tau (Cape Collinson);
- (ii). Lamma Channel Separation Buoy No. 1;
- (iii). Chesterman Buoy;
- (iv). Green Island;
- (v). Shek Kok Tsui;
- (vi). North West Ma Wan Traffic Light;
- (vii). Ma Wan Buoy;
- (viii). Castle Peak No.8 Buoy; and
- (ix). West Quarantine Buoy.

Re-demarcation of VHF sectors

9. To enhance the efficiency of vessel traffic services delivery, it is proposed to split the current two VHF sectors (i.e. the Harbour VHF Sector and the Western Approaches VHF Sector) into four sectors by adding two new VHF sectors, (i.e. the Harbour East VHF Sector and the Lantau South VHF Sector). Two new VHF Channels, (i.e. VHF Channel 02 and VHF Channel 27) are allocated to these two new Sectors.

The Recommendation from the Commission of Inquiry into the Collision of Vessels near the Lamma Island on 1 October 2012

10. We also proposed to adopt the recommendation made in the “Report of the Commission of Inquiry into the Collision of Vessels near Lamma Island on 1 October 2012” regarding a small adjustment to the VTS boundary between the VHF Channel 67 and VHF Channel 14 areas.

11. The existing VHF sector layout and the proposed future VHF sector layout are indicated in **Annex II**.

Addition of reporting points

12. To cater for the efficient traffic monitoring and regulation of the additional two

VHF sectors, we also propose to add a couple of reporting points for confirming the changeover of VHF sector with VTS participating ships, namely:

- (i). Northern 4 Buoy; and
- (ii). Cheung Tsing Bridge.

SCHEDULE

13. The Pilotage Advisory Committee (PAC) has been consulted on 7 January 2016 and members of the PAC agreed the aforementioned proposals. Upon completion of the consultation with the Port Operations Committee, MD will proceed with the necessary legislative works.

ADVICE SOUGHT

14. Members' comments are sought on the proposals as outlined above.

PRESENTATION

15. This paper will be presented by Mr. W. H. Wong, the General Manager/Vessel Traffic Services.

**Vessel Traffic Section
Port Control Division
Marine Department
March 2016**

Details of the Requirements of Reports

i. Movement Report

Prior to a vessel getting underway in the waters of Hong Kong, the master/coxswain shall report the intended movement of that vessel to the VTC and request permission to move on the VHF channel appropriate to the VHF sector and provide the following information:

- (a) the name of the vessel;
- (b) the call sign of that vessel;
- (c) the present berth or other location of that vessel;
- (d) the intended berth or other location of that vessel;
- (e) any special condition of that vessel; and
- (f) any other relevant information, including the intention of the master/coxswain of that vessel to undertake a sea trial during the movement.

ii. Departure Report

Prior to a vessel getting underway in the waters of Hong Kong, the master/coxswain shall report the intended departure of that vessel to the VTC and request permission to depart on the VHF channel appropriate to the VHF sector and provide the following information:

- (a) the name of the vessel;
- (b) the call sign of that vessel;
- (c) the present berth or other location of that vessel;
- (d) the number of the port clearance obtained under section 15 of the Shipping and Port Control Ordinance (Cap. 313);
- (e) any special condition of that vessel; and
- (f) any other relevant information, including the intention of the master/coxswain of that vessel to undertake a sea trial prior to the departure.

Proposed Re-delineation of VHF Sectors

