

EXPERT REPORT (PART 2)

PREPARED BY

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Expert Witness appointed by the Commission of Inquiry
into the Collision of Vessels
near Lamma Island on 1 October 2012

3 March 2013

Commission of Inquiry into the Collision of Vessels
near Lamma Island on 01.10.2012

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Instructions

I have been instructed to give my opinion on the matters under the Terms of Reference and this Expert Report represents **Part 2** of my opinion which seeks to address my advice on parts (b) and (c) of the Terms of Reference with a view to assisting the Commission in making appropriate findings. In particular, I will focus on the safe practices in ship operation to prevent human injury and loss of human life, with reference to the guidelines recommended by the International Management Code for the Safe Operation of Ships and for Pollution Prevention (“the **ISM Code**”) adopted by the International Maritime Organization (“**IMO**”), and my personal experience in managing high speed ferries, conventional ferries and port operations.

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PART A INTRODUCTION

1. Hong Kong is a world-class port with an exceptionally high level of traffic. On any day there may be up to 130 ocean going vessels and 150 river trade vessels being monitored by the Vessel Traffic Centre (“VTC”) of the Marine Department (“Mardep”)¹. It is estimated by vessel traffic services (“VTS”) managers of the VTC that there are also 609,000 voyages by ferries and kaitos every year in the area being monitored², that means around 1668 single trips daily or 92 per hour if we assume they are operating 18 hours per day. Clearly this is a huge traffic management and safety challenge for both the Port Control Division and the Shipping Division of Mardep. It is important to recognise in the first instance that the overall safety record³ is very good for such a diverse and busy port.
2. Nevertheless, the present Inquiry into the incident on 1 October 2012 has revealed a number of issues relating to the safe operation of local vessels, in particular passenger vessels and local high speed craft. After conducting interviews with various Mardep officers on 6 February 2013⁴, I understand that exemptions from local regulations may sometimes be granted to small ferry operators for reasons of strategic transport provision⁵. In this Report, I will highlight a number of suggestions which I believe will improve the safety environment around the operation of local passenger vessels.

¹ Interview with Mr Chung Siu Man on 6 February 2013, Appendix V, p.2.

² See Table 2 in Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, pp.4626-4627.

³ Paras.29-31 in Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, pp.4625-4627.

⁴ I had interviews with Mr Leung Wing-fai, Mr S.H. Wan, Mr Y.K. Lai and Mr Chung Siu Man on 6 February 2013. Transcripts of those meetings are available at Appendices III, IV and V.

⁵ For instance, Mardep grants speed restriction exemption certificates to certain ferry lines, as mentioned in paragraph 39 below.

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3. This Report will begin by setting out the basic principles of maritime safety that are pertinent to the collision near Lamma Island on 1 October 2012. I will then show how such principles of maritime safety in respect of local passenger vessels were addressed in Hong Kong before the incident on the 1 October 2012. Finally, this Report will suggest measures which might be considered in order to prevent a recurrence with reference to international and national requirements from other administrations.
4. My views in this Report are set out to assist the Commission in evaluating the adequacy of the present system in Hong Kong and making recommendations for the prevention of similar incidents recurring in the future. This Report is based on the documents and evidence before the Commission as of 1 March 2013.

PART B GENERAL PRINCIPLES OF MARITIME SAFETY

B.1 Background

5. The development of the ISM Code and its applicability to ocean-going vessels and vessels on short international voyages has already been explained in the papers before the Commission⁶. This Report focuses on the maritime safety of local vessels, which are not subject to the ISM Code⁷. My views in this Report are generally applicable to all local vessels, but the thrust of my suggestions are directed at local vessels carrying more than 100 passengers.
6. In relation to local passenger vessels which do not have to comply with all of the international rules and codes from the IMO, it is the responsibility of the local administration to set out the requirements, monitor compliance with those requirements, ensure that non-compliance is effectively dealt with and update

⁶ Paras.5-15 of Witness Statement of Leung Wing Fai, Marine Bundle 12, Item 75a, pp.4662-4665.

⁷ Para.16 of Witness Statement of Leung Wing Fai, Marine Bundle 12, Item 75a, p.4665.

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and improve regulations in line with changes in marine transportation advances and international standards.

7. The discussions and opinions set out in this Report, which are directed at local vessels carrying more than 100 passengers, are in part made with reference to the international standards already applicable to vessels engaged in international voyages. In other words, my general view is for the local administration to consider applying appropriate standards to local passenger vessels, so as to ensure and enhance maritime safety in the waters of Hong Kong.
8. I do not propose to be exhaustive in setting out the general principles of maritime safety, as they are already set out in the conventions and guidelines of the IMO. I would only set out those principles of maritime safety I consider relevant in light of the incident of 1 October 2012. In my opinion, they can be broadly categorized into general requirements of five categories, namely relating to :-
 - (a) the ferry operator;
 - (b) the vessel in service;
 - (c) harbour traffic control;
 - (d) the monitoring of compliance with local regulations by the Local Vessels Safety Branch (“**LVS**B”) of Mardep; and
 - (e) the investigation of marine accidents involving local passenger vessels in Hong Kong waters by Marine Accident Investigation and Shipping Security Policy Branch (“**MAISSP**B”), which is the accident investigation branch of Mardep.
9. I will elaborate my observations in each of these categories below.

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B.2 Operational safety requirements for the ferry operator

10. The fundamental requirement of the ISM Code is the establishment of a safety management system by the company⁸ or person who has assumed responsibility for operating the vessel⁹. The principles of the ISM Code may be applied to all ships¹⁰, which has been done in the United Kingdom¹¹ and European Union¹².
11. One of the functions of establishing a safety management system is to enable the ferry operator to effectively implement the safety and environmental protection policy of that company¹³. To ensure a safety management system is effectively implemented, the operator should establish a safety and environmental protection policy which is signed by the highest level of management¹⁴.
12. Under the ISM Code, the vessel and its equipment should be maintained and inspected according to the relevant rules and regulations and with any additional requirements which may be established by the ferry operator¹⁵. The ship manager or operator should ensure the same. The ISM Code also provides for the designation of a “designated person” to have direct access to the highest level of management, who will be monitoring the safety and pollution-prevention aspects of the operation of each ship and ensuring that adequate resources and shore-based support are applied, as required¹⁶. Likewise, local ferry operators should

⁸ “Company” in the ISM Code is defined to mean “the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the shipowner and who, on assuming such responsibility, has agreed to take over all duties and responsibility imposed by the [ISM] Code”; see para.1.1.2 of the ISM Code, Marine Bundle 12, Item 75b, p.4668.

⁹ Para.1.4 of the ISM Code, Marine Bundle 12, Item 75b, p.4670.

¹⁰ Para.1.3 of the ISM Code, Marine Bundle 12, Item 75b, p.4670.

¹¹ The Merchant Shipping (Domestic Passenger Ships) (Safety Management Code) Regulations 2001 (UK), Appendix VI.

¹² Regulation (EC) No 336/2006 of the European Parliament and of the Council of 15 February 2006 (EU), Appendix VII.

¹³ Paras.1.1.4 & 1.4.1 of the ISM Code, Marine Bundle 12, Item 75b, pp.4669 & 4670.

¹⁴ See para.6 of the Preamble to the ISM Code, Marine Bundle 12, Item 75b, p.4668.

¹⁵ Para.10 of the ISM Code, Marine Bundle 12, Item 75b, p.4672.

¹⁶ Para.4 of the ISM Code, Marine Bundle 12, Item 75b, pp.4670-4671.

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embrace this concept, which can be done by appointing an existing ship manager to the role.

13. In addition to the ISM Code, the ferry operator should comply with the standards set out in the other codes and guidelines adopted by the IMO, in particular, the *International Convention for the Safety of Life at Sea, 1974* (“**SOLAS 1974**”). In light of the facts and issues highlighted in the Inquiry, there are at least the following aspects which I consider relevant to ferry operation in Hong Kong, namely that local passenger vessels should :-

- (a) carry appropriate navigational and radio equipment¹⁷;
- (b) be equipped with appropriate lifesaving and fire fighting appliances and equipment in the event of emergency¹⁸;
- (c) carry sufficient trained and medically fit crew to manage routine operations and emergency situations including the safe evacuation of all passengers¹⁹;
- (d) implement procedures on board which prepare for and respond to emergency situations, which is sometimes referred to as a muster list²⁰;
- (e) ensure that its vessels are serviced to the minimum safe manning levels to fulfil the tasks and duties required for the safe operation of the ship and adequately deal with emergency situations²¹; and

¹⁷ Regulation 19 of Chapter V of SOLAS 1974, Appendix VIII.

¹⁸ Chapters II-2 (in particular Regulations 2, 14-16 & 20) and III of SOLAS 1974, Appendices IX and X.

¹⁹ Regulation 10 of Chapter III of SOLAS 1974, Appendix X; see also Regulation I/14 of 2010 *Manila amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978* (IMO), Appendix XI.

²⁰ Regulations 8 & 37 of Chapter III of SOLAS 1974, Appendix X.

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- (f) ensure that procedures are in place to manage fatigue and/or inappropriate use of drink or drugs affecting performance²².

B.3 General safety requirements in service

14. Regarding the human element in the service and performance of local passenger vessels, safety of navigation must be given the highest priority. Reference can be made to the many conventions and guidelines issued by the IMO, in particular SOLAS 1974, the *Convention on the International Regulations for Preventing Collisions at Sea, 1972* (“COLREG”) ²³, and the *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978* (“STCW Convention”) and the *Seafarers’ Training, Certification and Watchkeeping (STCW) Code* (“STCW Code”) ²⁴.
15. In my view, the following principles should be highlighted to address the issues relating to vessels’ crews in service in light of the incident of 1 October 2012 :-
- (a) Appropriate use must be made of the radio, radar and other navigation equipment provided²⁵.

²¹ Regulation 10 of Chapter III and Regulation 14 of Chapter V of SOLAS 1974, Appendix VIII; see also para.2 of Annex 3 “*Responsibilities in the Application of Principles of Safe Manning*” to Resolution A.1047(27), *Principles of Safe Manning*, 20 December 2011 (IMO), Appendix X.

²² Chapter VIII of *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW)* CONF.2/34, Appendix XIII; see also para.2.6 of Annex 3 “*Responsibilities in the Application of Principles of Safe Manning*” to Resolution A.1047(27), *Principles of Safe Manning*, 20 December 2011 (IMO), Appendix XII.

²³ COLREG has been adopted in Hong Kong into the Schedule of the Merchant Shipping (Safety) (Signals of Distress and Prevention of Collisions) Regulations (Cap.369N), Legislation Bundle, Item 8.

²⁴ 2010 Manila amendments to the *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978* and the *Seafarers’ Training, Certification and Watchkeeping (STCW) Code* (IMO); for the STCW Convention, see Appendix XI; for Chapter 8 of the STCW Code, which is referred to in this Report, see Appendix XIII.

²⁵ Rule 7 of COLREG, Legislation Bundle, Item 8, pp.4-5; see also paras.8.5, 8.6 & 8.7 of Section A-VIII/2, Chapter VIII of the STCW Code, Appendix XIII.

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- (b) Lookout should be maintained throughout the trip of the vessel²⁶. In my opinion, the provision of an additional person as a lookout on the bridge to assist the Master/Coxswain would decrease the possibility of human error on the bridge²⁷.
- (c) Passengers should receive a safety briefing at the commencement of each trip²⁸.
- (d) The crew should be regularly exercised in their emergency duties and the muster list kept up to date so that every member of the crew knows exactly what is expected of him in the event of an emergency²⁹.

B.4 General requirements for Port Control

16. Chapter V (Safety of Navigation) of SOLAS 1974 provides that governments may establish vessel traffic services (“VTS”) when the volume of traffic or the degree of risk justifies such services³⁰. Hong Kong already has a well-established VTS operated from the VTC which forms the centre of harbour control in Hong Kong³¹. It would be safe to say that most, if not all, of the general principles of effective

²⁶ Para.14 of section A-VIII/2, Chapter VIII of the STCW Code, Appendix XIII.

²⁷ Reference can be made of the UK practice of requiring two officers to be on the bridge of local high speed ferries, see para.18.1.3.6 of Chapter 18 of the *International Code of Safety for High-Speed Craft (2000)*, 2008 Edition, Appendix XIV.

²⁸ Regulation 8 of Chapter III of SOLAS 1974, Appendix X; see also para.8.4 of Chapter 8 of the *International Code of Safety for High-Speed Craft (2000)*, 2008 Edition, Appendix XIV; s.5(2) of *The Merchant Shipping (Emergency Information for Passengers) Regulations 1990*, Appendix XV.

²⁹ Regulation 8 of Chapter III of SOLAS 1974, Appendix X; see also para.8.4 of Chapter 8 of the *International Code of Safety for High-Speed Craft (2000)*, 2008 Edition, Appendix XVI.

³⁰ Regulation 12 of Chapter V of SOLAS 1974, Appendix VIII; see also Chapter 7 of *Vessel Traffic Services Manual*, Edition 5 2012, International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), Appendix XVII.

³¹ This has been explained in the Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, pp.4616-4629; see also Shipping and Port Control Ordinance (Cap.313), Legislation Bundle, Item 4A.

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harbour control are already in place in Hong Kong and there is a continual improvement in the VTS infrastructure³².

17. Nevertheless, in my opinion, the following issues have been raised by the incident of 1 October 2012 in relation to harbour control and would merit commenting :-

- (a) management and approval of shore navigation lights;
- (b) vessel traffic management including VTS radar control and communication with vessels;
- (c) management of appropriate speed limits;
- (d) notices to mariners and other safety notices; and
- (e) the issue of Pilot Exemption Certificates.

B.5 General requirements for the safety administration

18. The final category of requirements of maritime safety relates to the setting and regulation of safety requirements for local vessels in local legislation and regulations, the reporting and investigation of incidents, and the enforcement of such standards in Hong Kong waters. In my view, this would involve the performance of the following functions :-

- (a) setting out safety requirements for local vessels in local legislation or regulations and providing or specifying and training requirements³³;

³² See para.10.5-10.6 of *Voluntary IMO Member State Audit Scheme, Audit of Hong Kong, China, Final Report*, 8-15 March 2010, available at <http://www.mardep.gov.hk/en/news/pdf/aireport.pdf>, Appendix XVIII.

³³ Article I(b) of SOLAS 1974 provides that “*The Contracting Governments undertake to promulgate all laws, decrees, orders and regulations and to take all other steps which may be necessary to give the present Convention full and complete effect, so as to ensure that, from the point of view of safety of life, a ship is fit for the service for which it is intended*”.

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- (b) monitoring compliance with international and local safety requirements through surveying and auditing, and issuing Passenger Safety Certificates, Safe Manning Certificates and Documents of Compliance with safety management codes as appropriate³⁴;
 - (c) ensuring non-compliance is managed effectively and that there are procedures in place for dealing with non compliant vessel owners and masters through effective sanctions³⁵;
 - (d) ensuring all serious accidents and life threatening incidents and “near misses” to be reported to and properly investigated by an independent marine accident investigation unit³⁶; and
 - (e) continuously modernise and revise safety legislation for local passenger vessels in line with new craft and higher international standards³⁷.
19. Given that the functions mentioned above largely relate to Mardep, in particular LVSB, I refer this category as “General requirements for LVSB” in the discussion below.

³⁴ Para.13 of the ISM Code, Marine Bundle 12, Item 75b, pp.4673-4676.

³⁵ Article VI(d) of SOLAS 1974 provides that “*All matters which are not expressly provided for in the present Convention remain subject to the legislation of the Contracting Governments*”; see also regulations 6 & 19 of Chapter I of SOLAS 1974, Appendix XIX.

³⁶ Sections 1.2 & 1.3 of the *Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (Casualty Investigation Code)*, MSC.255(84), Appendix XX.

³⁷ Section 1.3 of the *Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (Casualty Investigation Code)*, MSC.255(84), Appendix XX.

PART C SAFETY MANAGEMENT OF LOCAL PASSENGER VESSELS

C.1 Safety management of local passenger vessels before 1 October 2012

20. I have been given a general understanding of the regime of safety management in Hong Kong which was in place at the time of the incident from the witness statements given by Mardep officers to the Commission, and my interviews with Mardep officers on 6 February 2013³⁸.
21. In this section, I will summarize my observations on certain aspects of the local regime (or more importantly for present purposes, the absence of certain aspects of maritime safety in the local regime) with reference to the principles of maritime safety set out in the previous section.

C.2 General safety requirements for the ferry operator

C.2.1 Absence of a safety management system

22. The first feature to highlight is that local passenger vessels are surveyed according to local rules, in particular, the “Code of Practice - Safety Standards for Classes I, II and III Vessels” (“the **2006 Code**”)³⁹. Under the 2006 Code, local vessels permitted to carry more than 12 passengers are considered as Class I vessels⁴⁰, which is inclusive of local passenger-carrying high speed craft. However, there is no local requirement for ferry operators to have a safety policy or to use a safety management system such as the ISM Code⁴¹. The reason for

³⁸ See footnote 4 above.

³⁹ Paras.6-8 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4163; for the 2006 Code, Marine Bundle 11, Item.29, pp.3415-3669.

⁴⁰ Para.3.1 of the 2006 Code, Marine Bundle 11, Item.29, pp.3435.

⁴¹ Para.16 of Witness Statement of Leung Wing Fai, Marine Bundle 12, Item 75a, p.4665.

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this is attributed to the general lack of management structure amongst the owners or literacy of the crew of local vessels⁴².

C.2.2 Designated person of ferry companies

23. Although The Hongkong Electric Company, Limited (“HKE”) has a marine officer⁴³, there is no requirement for ferry operators to nominate a “designated person” with responsibility for operational safety along the lines of the ISM Code⁴⁴. Nevertheless, it is clear that there is often an appropriate ship manager already in place who could carry out the role of a “designated person” after training.

C.2.3 Requirements for navigation equipment

24. There is also no requirement for local passenger vessels to carry Very High Frequency (“VHF”) radio, unless it plies outside the Victoria port⁴⁵. Mardep’s instructions to coxswains of passenger-carrying vessels in case of emergency are to inform the VTC via VHF Channels 12, 14 or 67 or dial the police emergency hotline 999 via mobile phone⁴⁶.
25. As for navigation equipment, there is no requirement for all local passenger vessels to carry radar⁴⁷ or Automatic Identification System (“AIS”) equipment⁴⁸. Radar is required to be installed only on local vessels with speed restriction

⁴² Paras.17-19 of Witness Statement of Leung Wing Fai, Marine Bundle 12, Item 75a, pp.4665-4666.

⁴³ I.e. Mr Tang Wan On; see Witness Statement of Tang Wan On, RSRB Bundle 1, Item 7, pp.258-267.

⁴⁴ Para.4 of the ISM Code, Marine Bundle 12, Item 75b, pp.4670-4671.

⁴⁵ Para.12 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4641-4642.

⁴⁶ Para.12 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4641-4642.

⁴⁷ Para.15 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4643.

⁴⁸ See footnote 2 in para.33 of Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, p.4627.

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exemption certificates (“SREPs”)⁴⁹ and high speed local ferries⁵⁰. Only high speed local ferries are required to have an operating manual, route operating manual, training manual and maintenance manual⁵¹. Although there was a tailor-made radar operations manual for “Lamma IV”⁵², and the coxswain and crew members attended radar training courses⁵³, whether this was actually read or understood by the crew is questionable⁵⁴. I also note that there is no mention of requiring electronic charts to be on board local passenger vessels.

C.2.4 Life-saving appliances

26. The regime concerning life-saving appliances for local vessels has already been explained in some detail⁵⁵, and I note that Chapter VII of the 2006 Code requires life-saving appliances to be of approved types, including those which conform to the *International Life-Saving Appliances (LSA) Code* adopted by the Maritime Safety Committee of the IMO⁵⁶. I do not propose to go through every type of life-saving appliance, but I will highlight some features which, in my view, merit consideration for improvement.

⁴⁹ Para.28 in Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, p.4625.

⁵⁰ Section 9.1 of Chapter XI of the 2006 Code, Marine Bundle 11, Item 29, p.3528; para.11 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4640-4641.

⁵¹ Para.11 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4641-4642.

⁵² Evidence of Cheng Cho Ying Francis, Transcript Day 14, p.60; evidence of Tang Wan On, Transcript Day 29, p.36; Appendix 9 to Witness Statement of Tang Wang On, RSRB Bundle 1, Item 7, pp.458-691.

⁵³ Para.16 to Witness Statement of Tang Wang On, RSRB Bundle 1, Item 7, p.263; evidence of Tang Wan On, Transcript Day 29, p.35. The coxswain and crew nevertheless denied attending such courses, see evidence of Chow Chi Wai, Transcript Day 35, pp.95-96 and Transcript Day 36, pp.28-31; evidence of Leung Pui Sang, Transcript Day 37, pp.11 & 103-104; evidence of Leung Tai Yau, Transcript Day 37, p.114 and Transcript Day 38, p.35.

⁵⁴ See for example, Transcript Day 35, p.85; Transcript Day 36, pp.28-29.

⁵⁵ Paras.71-99 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, pp.4184-4191; paras.4-23 of Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 11, Item 40b, pp.3953-6-3953-11.

⁵⁶ Paras.11-12 of Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 11, Item 40b, pp.3953-7-3953-8; Chapter VII of the 2006 Code, Marine Bundle 11, Item 29, pp.3507-3511.

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27. Regarding the quantity of lifejackets on board local vessels, it has been explained that, according to the requirements in Part 1 and Part 2 of Schedule 3 to the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation (Cap.548G)⁵⁷, a Class I vessel like the Lamma IV was required to have 100% adult lifejackets plus 5% children's lifejackets by reference to the total number of persons on board⁵⁸. While I take this to mean that local passenger vessels are not required to routinely carry children's lifejackets with reference to the actual number of children carried on board, Mardep appears to have developed the practice of using an asterisk "*" to designate compliance with the requirement for children's lifejackets in its certificates of survey⁵⁹, and there is some dispute as to what this actually means⁶⁰.
28. There is no requirement for local passenger vessels (being a Class I vessel) to carry liferafts for all persons on board⁶¹, or to carry equipment to break open sealed windows⁶².
29. Regarding emergency and evacuation procedures, I note that local passenger vessels are required to carry out fire drill and abandon ship drill as part of their annual final survey⁶³, and every Class I vessel carrying more than 100 passengers is required to exhibit its safety plan in conspicuous places on board⁶⁴. However, I also note that there is no requirement for Class I vessels to set out a muster list

⁵⁷ Legislation Bundle, Item 15, pp.31-36.

⁵⁸ Para.18 of Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 11, Item 40b, p.3953-10.

⁵⁹ See, for example, evidence of Tang Wan On, Transcript Day 30, pp.42-43, 50, 61, 88, 99-101.

⁶⁰ See, for example, evidence of Wong Kam Ching, Transcript Day 34, pp.25-30.

⁶¹ Para.87 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, pp.4188.

⁶² Para.89 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, pp.4188-4189.

⁶³ Para.99 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4191.

⁶⁴ Para.97 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4191.

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on board⁶⁵, and I am given to understand that, while some ferry operators do provide muster lists to Mardep, such requirement is not mandatory⁶⁶.

C.2.5 Competency requirements of the crew

30. The coxswains and engineers on local ferries are required to respectively hold local certificates of competency (or equivalent certificates) as a coxswain appropriate for the vessel and as an engine operator appropriate for the total propulsion power of the engines⁶⁷. The system of examination and certification requirements has been explained to the Commission⁶⁸, which I note already includes training on navigational safety and emergency situations⁶⁹. The coxswains and crew involved had received training⁷⁰. Hong Kong and Kowloon Ferry Holdings Limited and Islands Ferry Company Limited (collectively “HKKF”) and HKE provide guidance on how to handle emergency situations⁷¹ and require crew to conduct emergency drills⁷². However, it is striking that both coxswains involved in this incident seemed to be unaware of the high degree of

⁶⁵ Para.98 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4191.

⁶⁶ Interview with Mr Leung Wing-fai and Mr S.H. Wan, Appendix III, pp.9-10.

⁶⁷ Paras.6-7 of Witness Statement of Lai Ying Keung, Marine Bundle 12, Item 76a, pp.4680-4682.

⁶⁸ Paras.10-16 of Witness Statement of Lai Ying Keung, Marine Bundle 12, Item 76a, pp.4682-4685.

⁶⁹ Para.11 of Witness Statement of Lai Ying Keung, Marine Bundle 12, Item 76a, pp.4683.

⁷⁰ See for example, Appendix 2 to Witness Statement of Cheng Cho Ying, Francis, RSRB Bundle 1, Item 1, pp.171-175; Appendix 6 to Witness Statement of Tang Wan On, RSRB Bundle 1, Item 7, pp.448-449.

⁷¹ Para.18 of and p.5/8 of Operational Guidelines in Appendix 11 to Witness Statement of Tang Wan On, RSRB Bundle 1, Item 7, pp.264, 743 & 754; para.13 of and Attachment E to Witness Statement of Ng Siu Yuen, HFW Bundle 1, Item 1, pp.3 & 38-45.

⁷² Para.18 of Witness Statement of Tang Wan On, RSRB Bundle 1, Item 7, p.264; evidence of Ng Siu Yuen, Transcript Day 33, p.129; see also records of emergency drills by crew of HKE, RSRB Bundle 2, Item 44, pp.1327-1361; para.22 of Witness Statement of Ng Siu Yuen, HFW Bundle 1, Item 1, p.5.

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attention required when vessels are approaching each other at high speed⁷³. This indicates a training requirement.

31. Regarding the medical requirements of the crew, the coxswain must have an eyesight test⁷⁴ which will be valid until he is 65 years old⁷⁵. There is no requirement for seamen to have an eyesight test⁷⁶. There is no requirement from Mardep for any crew members on these vessels to have a medical certificate⁷⁷. There is also no legislation in place for drug and alcohol testing in respect of seafarers in Hong Kong⁷⁸.
32. As for the working hours of the crew, I note that the crew of “Sea Smooth” work in 24-hour shifts, where they would work for a whole day and rest for another⁷⁹. Issues of fatigue and calls for more rest periods have been recorded amongst the meetings of HKKF⁸⁰. There are no proper meal times for the crew, such that the coxswain and crew had to heat up their meals in the wheelhouse of “Sea Smooth” and quickly have their meals before (or perhaps sometimes during) trips⁸¹.

⁷³ Paras.47-53 of Witness Statement of Chow Chi Wai, RSRB Bundle 3, Item 51, pp.1577-1579; paras.45-52 of Witness Statement of Lai Sai Ming, HFW Bundle 1, Item 3, p.130.

⁷⁴ Chapter 4 of “Examination Rules for Local Certificates of Competency”, Marine Bundle 12, Item 76b, p.4704.

⁷⁵ Para.10.1(2) of “Examination Rules for Local Certificates of Competency”, Marine Bundle 12, Item 76b, p.4725.

⁷⁶ Interview with Mr Lai Ying Keung, Appendix IV, pp.3-4.

⁷⁷ Interview with Mr Lai Ying Keung, Appendix IV, pp.2-3.

⁷⁸ Interview with Mr Chung Siu Man, Appendix V, pp.16-18.

⁷⁹ Para.6 of Witness Statement of Lai Sai Ming, HFW Bundle 1, Item 3, p.124. The crew of “Lamma IV” work on average 42 hours a week, see, for example, para.32 of Witness Statement of Chow Chi Wai, RSRB Bundle 3, Item 51, p.1571. See also para.12(ii) of *Improvement Measures to Enhance Safety of Local Vessels and Navigational Safety*, Local Vessels Advisory Committee, LVAC Paper No.5/2012, Misc Bundle, Item 10, p.48.

⁸⁰ HKKF staff meeting minutes, HFW Bundle 1, Item, pp.173-174, 188; see also evidence of Ng Siu Yuen, Transcript Day 32, pp.34-38; Transcript Day 33, pp.108-109.

⁸¹ Evidence of Wong Tai Yau, Transcript Day 39, pp.67-71, 109 & 111 and Transcript Day 40, pp.9-10 & 22; evidence of Wong Yung Shing, Transcript Day 41, pp.24-25.

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33. It appears from the evidence given to the Commission that there is no consistent approach to safe manning levels on local ferries⁸². The arrangements made by HKE to cope with the increased manning levels of “Lamma IV” from 2 to 4 in 2008 are also noted⁸³. Evidence was given that Mr Lai Ho Yin was considered by the coxswain to be the additional 4th crew member on “Lamma IV” on the night of the event⁸⁴, but Mr Lai apparently had no maritime experience and received no training as a crew member⁸⁵. More importantly, Mr Lai was not told that he was considered as an additional crew member⁸⁶ and he did not seem to know what duties to carry out as the extra member of crew⁸⁷.

C.3 General safety requirements in service

C.3.1 Navigational safety on the bridge

34. I do not make any further comments on what has already been set out my previous Reports and evidence given to the Commission in relation to the cause of the collision on 1 October 2012. However, I do attribute one of the main reasons for the collision to be the failure to maintain adequate lookout on the bridge of the vessels. It appears to me that there has been a heavy reliance on a visual lookout⁸⁸, and a general neglect of the use of electronic navigational aids⁸⁹, notwithstanding the presence of radar on board “Lamma IV”⁹⁰ and “Sea

⁸² Evidence of Tam Yun Shing, Transcript Day 22, pp.39-44.

⁸³ See evidence of Wong Wah Yau, Transcript Day 10, pp.15; evidence of Tang Wan On, Transcript Day 30, pp.34-37; paras.11-16 of Supplemental Witness Statement of Tang Wan On, RSRB Bundle 1, Item 7a, pp.774-5-774-7.

⁸⁴ Evidence of Chow Chi Wai, Transcript Day 36, pp.20-22.

⁸⁵ Evidence of Lai Ho Yin, Transcript Day 6, p.50.

⁸⁶ Evidence of Cheng Cho Ying Francis, Transcript Day 14, pp.41-42.

⁸⁷ Evidence of Lai Ho Yin, Transcript Day 6, p.55.

⁸⁸ Para.30 of Witness Statement of Lai Sai Ming, HFW Bundle 1, Item 3, pp.127-128; para.50 of Witness Statement of Chow Chi Wai, RSRB Bundle 3, Item 51, p.1578.

⁸⁹ Para.18 of Witness Statement of Chow Chi Wai, RSRB Bundle 3, Item 51, p.1567-1568.

⁹⁰ Marine Bundle 1, Item 16, p.144; para.18 of Witness Statement of Chow Chi Wai, RSRB Bundle 3, Item 51, p.1567-1568.

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Smooth”⁹¹. I also note here that there is no requirement for another person to be on lookout on the bridge with the coxswain⁹².

C.3.2 Dissemination of safety information to passengers

35. There is an express requirement in the 2006 Code for the coxswain to ensure, before the commencement of the voyage, that all persons on board are briefed on the stowage and use of personal safety equipment such as lifejackets, buoyancy aids and lifebuoys, and the procedures to be followed in cases of emergency⁹³. However, no safety briefings were actually given to the passengers of either “Lamma IV”⁹⁴ or “Sea Smooth”⁹⁵.
36. It is also an express requirement for the provision of safety information by way of safety guide plates or cards⁹⁶. There were notices posted on “Lamma IV”⁹⁷ and “Sea Smooth”⁹⁸ which set out evacuation routes and procedures to don lifejackets. However, there was no provision for safety information to be displayed at the pier⁹⁹, and there was no requirement to advise passengers of the emergency signal or the abandon ship signal¹⁰⁰.

⁹¹ Marine Bundle 8, Item 13, p.1986; para.11 of Witness Statement of Lai Sai Ming, HFW Bundle 1, Item 3, p.125.

⁹² Interview with Mr Chung Siu Man, Appendix V, pp.7-8.

⁹³ Annex U-5 of the 2006 Code, Marine Bundle 11, Item 29, p.3663.

⁹⁴ See for example, evidence of Cheng Cho Ying Francis, Transcript Day 14, p.25.

⁹⁵ See for example, evidence of Niu Gang, Transcript Day 6, p.116.

⁹⁶ Paras.2 & 3 of Annex U-5 of the 2006 Code, Marine Bundle 11, Item 29, p.3663.

⁹⁷ Photograph 63 of 79, Police Photo Album V, p.318.

⁹⁸ Photograph 33 of 61, Police Photo Album II, p.94.

⁹⁹ This is not set out as a requirement in Annex U-5 of the 2006 Code, Marine Bundle 11, Item 29, p.3663.

¹⁰⁰ These are not set out as requirements in para.1 of Annex U-5 of the 2006 Code, Marine Bundle 11, Item 29, p.3663.

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C.4 General requirements for Port Control

C.4.1 Management and approvals of shore lights

37. The only issue regarding shore lights relating to this incident is the power of the fog light on the end of the typhoon shelter pier¹⁰¹ which may have affected the Coxswain Lai's vision on board "Sea Smooth"¹⁰². I am given to understand that there is a complaints system in place for Mardep to receive complaints about shore lights affecting navigational safety¹⁰³, and there were no serious complaints about this fog light prior to 1 October 2012¹⁰⁴.

C.4.2 Harbour traffic management and VTS control

38. The control of marine traffic in the port of Hong Kong through the VTS system has been explained to the Commission¹⁰⁵. There are a few points to raise. First, no warning was issued to "Sea Smooth" by VTS control notwithstanding the collision alerts shown in the VTS system¹⁰⁶. Recognising the degree of difficulty for the operator to monitor all collision alerts there may be an opportunity for technical improvements to the system. Secondly, the vast majority of local vessels are not VTS participants¹⁰⁷. Thirdly, no warning could have been issued to "Lamma IV" because she was not equipped with VHF radio¹⁰⁸. Fourthly, the location of Yung Shue Wan and the position where collision occurred is situated

¹⁰¹ Police Bundle Part O, Item 11, p.4654-2.

¹⁰² Paras.44 & 48 of Witness Statement of Lai Sai Ming, HFW Bundle, Item 3, pp.129 & 130.

¹⁰³ Interview with Mr Chung Siu Man, Appendix V, p.10.

¹⁰⁴ Evidence of Cho Chi Wai, Transcript Day 34, p.93; Transcript Day 35, pp.27-28.

¹⁰⁵ Paras.5-19 in Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, pp.4617-4628; Statement of Yim Kit-ming, Marine Bundle 8, Item 3, pp.1873-1877.

¹⁰⁶ See Track report –File name "IN26831_Sea_Smth_trip" on 2012-10-01, Police Bundle Part E, Item 6, pp.1241-1242. As mentioned in paragraph 78 below, I find this understandable given the very high levels of traffic and the continuously very high number of collision alarms on the VTS system.

¹⁰⁷ Para.19 in Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, p. 4628.

¹⁰⁸ Evidence of Tang Wan On, Transcript Day 29, p.18.

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beyond the Southernmost extent of the VHF sector of Channel 14 assigned for communication with the VTC¹⁰⁹.

C.4.3 Regulation of speed limits

39. The position where the collision occurred was not situated in areas with specific speed limits¹¹⁰. The system of speed limits and traffic management has been explained to the Commission¹¹¹. Generally speaking, while there are speed restricted zones for local vessels in Victoria Harbour, Mardep would also grant SREPs to local passenger ferries to facilitate efficient public transportation of passengers¹¹².
40. SREPs are valid and applicable in conditions where the visibility is above one nautical mile¹¹³, which means that speed limits must be obeyed by all vessels when the visibility falls below one nautical mile. Vessels with SREPs are also subject to special safety requirements which are set out in the particular SREP¹¹⁴, including requirements to install AIS, navigate in specific routes, and following the fairways while within Victoria Harbour¹¹⁵, and also the safe speed requirement of Rule 6 of the COLREG¹¹⁶. An appropriate Route Operating Manual would assist Coxswains in understanding the “safe speed” rule.

¹⁰⁹ See Hong Kong Harbour Facilities & Layout 2012, Marine Bundle 12, Item 73b, p.4630.

¹¹⁰ Para.10 of Witness Statement of Li Kin-pong, Marine Bundle 11, Item 37, p.3761.

¹¹¹ See paras.25-28 of Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, pp.4624-4625; paras.5-19 of Witness Statement of Li Kin-pong, Marine Bundle 11, Item 37, pp.3759-3764.

¹¹² See para.28 of Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, p.4625.

¹¹³ See para.28 of Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, p.4625.

¹¹⁴ See for example, Miscellaneous Permit dated 18 June 2012 granted to “Sea Smooth”, Marine Bundle 11, Item 37, pp.3819-3820.

¹¹⁵ See para.28 of Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, p.4625.

¹¹⁶ Paras.10-11 of Witness Statement of Li Kin-pong, Marine Bundle 11, Item 37, pp.3761-3762.

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41. There appears to be no requirement in the SREPs to have any special lights or indication that the vessel possesses a SREP¹¹⁷, such that there are no simple means of distinguishing vessels with or without SREPs. It is interesting to note that, while “Sea Smooth” would have been a “High Speed Craft” (“HSC”) if it was constructed in accordance with the Merchant Shipping (Local Vessels) Ordinance (Cap.548), she is not required as a matter of law to be fitted with a yellow flashing light¹¹⁸.

C.4.4 Dissemination of Marine Department Notices

42. Mardep disseminates port- or navigation-related information to the port and shipping communities in Hong Kong through Marine Department Notices (“**MD Notices**”), which are issued to, faxed or emailed to members of the port and shipping communities on Mardep’s distribution list, and are accessible via Mardep’s website¹¹⁹. The operating companies do not appear to have a satisfactory system to ensure that crew members (some have little formal education¹²⁰) understand the content of such MD Notices and implement the provisions and requirements set out in such notices¹²¹.
43. MD Notices would also be used for special events, such as the 2012 National Day Fireworks Display, MD Notice 131, which set out special marine traffic control measures and advised safety measures to masters, coxswains, owners and

¹¹⁷ See for example, Miscellaneous Permit dated 18 June 2012 granted to “Sea Smooth”, Marine Bundle 11, Item 37, pp.3819-3820.

¹¹⁸ See para.11 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4640-4641. “Sea Smooth” was nevertheless fitted with a yellow flashing light, see Marine Bundle 8, Item 13, p.1998.

¹¹⁹ Paras.5-7 of Witness Statement of Shuen Chi-keung Ivan, Marine Bundle 11, Item 30, pp.3671-3672.

¹²⁰ For example, Coxswain Lai was not sure if he could be said to have received formal education at all, evidence of Lai Sai Ming, Transcript Day 42, p.91.

¹²¹ Evidence of Ng Siu Yuen, Transcript Day 31, pp.89-94; evidence of Cheng Cho Ying Francis, Transcript Day 15, pp.19 & 21; evidence of Tang Wan On, Transcript Day 29, pp.59-60.

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operators of vessels¹²². In addition to the usual faxing and emailing, Mardep also raised awareness of MD Notice 131 by holding two meetings before the event, and broadcasting safety messages via VHF radio and fax¹²³.

44. Most of the advice in MD Notice 131 was advisory in nature¹²⁴, including the advice that all children on board were required to don lifejackets at all times¹²⁵. This meant that it was left to the discretion of the operator of the vessel to decide how to implement such advice¹²⁶.
45. Mardep made efforts to monitor compliance with MD Notice 131 on 1 October 2012¹²⁷. However, the focus of such monitoring was on violations of the law such as travelling at excessive speed, overloading of persons on board and illegal carriage of passengers, and Mardep did not check to see if children on board were wearing lifejackets¹²⁸.

C.4.5 Pilot Exemption Certificates

46. The Port Control Division does not issue Pilot Exemption Certificates to Coxswains of local ferry vessels¹²⁹. There is a local knowledge aspect to the Coxswains licence¹³⁰. Pilots, trainee pilots and the captains of high speed ferries

¹²² Paras.5 & 8 of Witness Statement of Shuen Chi-keung Ivan, Marine Bundle 11, Item 30, pp.3671 & 3672.

¹²³ Paras.9-10 of Witness Statement of Shuen Chi-keung Ivan, Marine Bundle 11, Item 30, pp.3672-3674.

¹²⁴ Paras.12-13 of Witness Statement of Shuen Chi-keung Ivan, Marine Bundle 11, Item 30, p.3675.

¹²⁵ Para.6(b) of the Annex to MD Notice 131, Marine Bundle 11, Item 11, p.3686.

¹²⁶ See evidence of Mr Shuen Chi-keung Ivan, Transcript Day 9, pp.103-106.

¹²⁷ Para.11 of Witness Statement of Shuen Chi-keung Ivan, Marine Bundle 11, Item 30, pp.3674-3675.

¹²⁸ See evidence of Mr Shuen Chi-keung Ivan, Transcript Day 9, p.106.

¹²⁹ Interview with Mr Chung Siu Man, Appendix V, p.11.

¹³⁰ Para.11 of Witness Statement of Lai Ying Keung, Marine Bundle 12, Item 76a, pp.4683.

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visit the VTS centre to exchange views¹³¹. This does not currently include masters of local passenger vessels¹³².

C.5 General requirements for LVSB

C.5.1 Setting of standards in local legislation and regulations

47. I note that Mardep's approach to review and improvement is incremental¹³³, and the 2006 Code was developed by Mardep in consultation with the local maritime industry through representation in relevant working groups and committees¹³⁴. It appears to me that change is mostly negotiated with local trade unions and operators at stakeholders meetings¹³⁵.

48. I see from the papers that Mardep has been reviewing various aspects of its regime since the incident and have made various suggestions for improvement, for instance, regarding the regime concerning life-saving appliances for local vessels¹³⁶. However, the timetable for implementing such changes is unclear.

C.5.2 Issue of certificates

49. There are at least two aspects of certification which, in my opinion, require review.

50. First, local ferries and launches are not issued with passenger certificates or safe manning certificates. Each vessel has an annual survey (and if successful) will be

¹³¹ Interview with Mr Chung Siu Man, Appendix V, pp.12-13.

¹³² Interview with Mr Chung Siu Man, Appendix V, pp.12-13.

¹³³ Para.29 in Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, p.4625.

¹³⁴ Paras.8 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4163.

¹³⁵ See for example, para.20 of Witness Statement of Lai Ying Keung, Marine Bundle 12, Item 76a, pp.4686-4687.

¹³⁶ Paras.100-107 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4192-4195.

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issued with a safety certificate which is known as the certificate of survey¹³⁷. This will state the maximum passenger number to be carried and the minimum crew required, and will be displayed in a conspicuous place at all times on local passenger vessels¹³⁸.

51. Secondly, high speed craft which were built before 2007 (such as “Sea Smooth”) do not have to comply with the requirements of providing an operating manual, route operating manual and a training manual¹³⁹, which are actually requirements in the HSC Code¹⁴⁰. As mentioned in paragraph 41 above, the reason for this seems to be more of a technicality rather than policy.

C.5.3 Reporting and investigation of incidents

52. Shipowners, their agents and the coxswains have a statutory duty to report marine incidents (including collisions, sinkings, strandings, fatalities, serious injuries etc.) to Mardep within 24 hours of the occurrence¹⁴¹. In this connection, Mardep has an established reporting system which allows reporting of marine accidents by telephone, in person, fax, or e-mail¹⁴². A person who fails to comply with the above reporting requirement may be prosecuted¹⁴³, and there is a record

¹³⁷ Paras.45 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4176.

¹³⁸ See for example, Certificate of Survey dated 8 May 2012 for “Lamma IV”, Marine Bundle 4, Item 164, pp.822-823.

¹³⁹ Para.11 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4640-4641.

¹⁴⁰ Para.18.2 of Chapter 18 of the International Code of Safety for High-Speed Craft (2000), 2008 Edition, Appendix XIV.

¹⁴¹ Section 57(1) of the Merchant Shipping (Local Vessels) Ordinance (Cap.548); para.5.1, Chapter XII of the 2006 Code, Marine Bundle 11, Item 29, p.3532; paras.16-18 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4643-4644.

¹⁴² Paras.19-22 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4644-4645.

¹⁴³ Section 57(2) of the Merchant Shipping (Local Vessels) Ordinance (Cap.548); para.17 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, p.4644.

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of cases of prosecution for failure to discharge the statutory duty of reporting marine accidents¹⁴⁴.

53. I am aware that the MAISSPB of Mardep is responsible for conducting investigations into all marine accidents occurring in Hong Kong and on board Hong Kong registered ships¹⁴⁵. The primary purpose of investigation carried out by MAISSPB is to ascertain the circumstances and the causes with the aim of improving the safety of life at sea and, by publicising the findings of the investigations, the avoidance of accidents in the future. It is not the purpose of the investigation or the report to apportion blame or to take disciplinary action. In addition, the summary together with the lessons learnt and the full investigation report on serious and very serious accidents will be posted on their website.¹⁴⁶
54. There has been some difficulty at the inquiry to ascertain all the relevant facts leading to the collision. I also note the absence of voyage data recorders (“VDRs”) on either “Lamma IV” or “Sea Smooth”, and the absence of requirements of local passenger ships to carry VDRs or closed-circuit television systems to assist in accident investigations¹⁴⁷.

C.5.4 Enforcement

55. Mardep has a Prosecution Unit which is responsible for all cases referred to them by the enforcement units of Mardep¹⁴⁸. As the prosecution policy of the

¹⁴⁴ Para.23 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, p.4646.

¹⁴⁵ See http://www.mardep.gov.hk/en/pub_services/casualty.html, Appendix XXI.

¹⁴⁶ See http://www.mardep.gov.hk/en/pub_services/eoverview.html, Appendix XXI.

¹⁴⁷ Regulation 18 of Chapter V of SOLAS 1974, Appendix VIII.

¹⁴⁸ Paras.51 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4177.

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Prosecution Unit is a general one¹⁴⁹, it would appear that prosecution is not common practice for safety deficiencies in local ferries. As mentioned in paragraph 41 above, I note the ambiguity in differentiating vessels possessing a SREP, and I suppose this may create some difficulty with enforcement on speed limits. As mentioned in paragraph 31 above, I also note the absence of drug and alcohol testing in Hong Kong waters.

C.5.5 Updates with modern international standards

56. Change is sometimes slow to take place, as evidenced by the non-requirement for “Sea Smooth” to comply with the 2007 HSC Rules¹⁵⁰. Also the requirement for the carriage of children’s lifejackets seems not to have been fully implemented¹⁵¹.
57. Although I am aware of the Local Vessels Advisory Committee under Mardep, and the presence of local industry representatives therein¹⁵², I have so far not been given any reference to risk assessment and risk control in relation to maritime safety of local vessels in Hong Kong. There are statistics provided by MAISSPB for the number of collisions and number of casualties in Hong Kong waters¹⁵³. In 2008 there were 163 collisions with 18 fatalities¹⁵⁴; in 2009, 159 collisions with 1 fatality¹⁵⁵; in 2010, 183 collisions with 8 fatalities¹⁵⁶; in 2011, 204

¹⁴⁹ Paras.51 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4177; email of 27 February 2013 from DoJ, Marine Bundle 12, Item 73f, pp.4636-19-4363-21.

¹⁵⁰ See para.11 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4640-4641.

¹⁵¹ See para.2.1 of Minutes of the 4th Meeting of the Working Group for the Safety of Local Passenger Carrying Vessels (19 December 2012), Marine Bundle 12, Item 71t, p.4609-14.

¹⁵² Mr Ng Siu Yuen has given evidence that the Class I Vessels Subcommittee of the Local Vessels Advisory Committee is merely “supposed to be a bridge between the industry and Mardep” and has not held a single meeting in the two years of his tenure. See Transcript of hearing day 34 (18 February 2013) at p.15.

¹⁵³ <http://www.mardep.gov.hk/en/publication/ereport.html>, Appendix XXI.

¹⁵⁴ http://www.mardep.gov.hk/en/publication/mai_st2008.html, Appendix XXI.

¹⁵⁵ http://www.mardep.gov.hk/en/publication/mai_st2009.html, Appendix XXI.

¹⁵⁶ http://www.mardep.gov.hk/en/publication/mai_st2010.html, Appendix XXI.

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collisions with 1 fatality¹⁵⁷; and in 2012, 147 collisions with 39 fatalities¹⁵⁸. I have been unable to establish how these figures relate to local passenger vessels and local high speed craft.

**PART D AREAS OF CONSIDERATION FOR ALL LAUNCHES AND FERRY VESSELS
CARRYING MORE THAN 100 PASSENGERS**

D.1 General observations

58. The purpose of my remarks in this section is to assist the Commission in deciding (in the context of this incident) whether the present safety regime for local passenger vessels is adequate.

D.2 General safety requirements for the ferry operator

D.2.1 Implement safety management systems

59. As mentioned in paragraphs 22 and 23 above, the main problem that I see is the absence of a domestic requirement for ferry operators to implement safety management systems in Hong Kong. There may sometimes be exemptions granted by the administration to very small operators with very basic operations for reasons of strategic transport provision. Whilst I understand the reason for such exemptions, I firmly believe that the passenger needs to be told which ferries are fully safety compliant and which are not. If nothing else, it will encourage those small operators to aim at the highest standard. Compliance could be publicly shown by exhibiting a Mardep Document of Compliance on board.

¹⁵⁷ http://www.mardep.gov.hk/en/publication/mai_st2011.html, Appendix XXI.

¹⁵⁸ http://www.mardep.gov.hk/en/publication/mai_st2012.html, Appendix XXI.

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60. In my view, all operators of launches and ferry vessels carrying more than 100 passengers should be required to implement a safety management system based on the ISM Code to perform the functional requirements of paragraph 1.4 of the ISM Code, which I set out in full below :-

“1.4 Functional requirements for a safety-management system

Every Company should develop, implement and maintain a safety-management system which includes the following functional requirements:

- .1 a safety and environmental-protection policy;*
- .2 instructions and procedures to ensure safe operations of ships and protection of the environment in compliance with relevant international and flag State legislation;*
- .3 defined levels of authority and lines of communication between, and amongst, shore and shipboard personnel;*
- .4 procedures for reporting accidents and non-conformities within the provisions of this Code;*
- .5 procedures to prepare for and respond to emergency situations; and*
- .6 procedures for internal audits and management reviews.”¹⁵⁹*

61. In the Witness Statement of Leung Wing Fai¹⁶⁰, he makes the point that the smaller ferry operators will not be able to cope with the implementation of the ISM Code¹⁶¹. I do not believe at all that there is a requirement to create a significant bureaucratic requirement which is sometimes associated with the implementation of the ISM Code in Ocean Going Vessels. In the UK, for example, the administration has introduced the “*Domestic Safety Management Code*” for smaller operations¹⁶². Mr Leung also states that the setting up of a company structure to run a safety management system would drive some operators into

¹⁵⁹ Marine Bundle 12, Item 75b, p.4670.

¹⁶⁰ Witness Statement of Leung Wing Fai, Marine Bundle 12, Item 75a, pp.4661-4667.

¹⁶¹ Paras.16-21 of Witness Statement of Leung Wing Fai, Marine Bundle 12, Item 75a, pp.4665-4666.

¹⁶² S.3 of The Merchant Shipping (Domestic Passenger Ships) (Safety Management Code) Regulations 2001 (UK), Appendix VI.

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bankruptcy¹⁶³. That is of course not the aim. If dealing with a one man operation or a family run business, then it must be clear who bears the safety responsibility and that safety has the highest possible priority, as evidenced by a policy for safe operation.

62. I believe that the survey aspects will be addressed in Dr. Armstrong's Expert Report.

D.2.2 Navigation equipment

63. In light of the present requirements of navigation equipment on local passenger vessels¹⁶⁴, I would suggest that all local ferries or launches carrying more than 12 passengers should carry VHF radio, so that they may contact the VTC directly in case of emergency, and that VTC may contact all local passenger vessels to give urgent safety advice. I would further suggest that all local ferries or launches carrying more than 100 passengers should also be fitted with AIS and collision avoidance radar. It should be noted that it is dangerous to use AIS equipment for collision avoidance without proper training.

64. It is only common sense that all ferries of any size should be fitted with radar if they are going to operate in poor visibility. All Class 1 passenger vessels should routinely use radar to assist with collision avoidance in any conditions. In this case, the coxswain of "Lamma IV" had no proper radar training¹⁶⁵. The coxswain of "Sea Smooth" who had a radar licence chose to use visual lookout and neglected to use his radar¹⁶⁶.

¹⁶³ Para.19 of Witness Statement of Leung Wing Fai, Marine Bundle 12, Item 75a, pp.4665-4666.

¹⁶⁴ Paragraphs 24 to 25 above.

¹⁶⁵ Evidence of Chow Chi Wai, Transcript Day 36, p.23.

¹⁶⁶ Evidence of Lai Sai Ming, Transcript Day 42, p.16.

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D.2.3 Life-saving appliances

65. I believe that all vessels carrying more than 12 passengers should be required to carry liferafts sufficient to accommodate all persons on board if the voyage extends beyond Victoria Harbour. This is not just because of lifesaving in the event of collision or grounding but also in the event of fire. I realise that there is currently no such requirement in Hong Kong legislation¹⁶⁷. **Photograph 1** below shows two local high speed ferry vessels (which are very similar to “Sea Smooth”) I managed the introduction of in 1986 on the route from Portsmouth Harbour to Ryde Isle of Wight.



Photograph 1 of “Our Lady Patricia” and “Our Lady Pamela”
which I introduced in 1986.

66. In my view, in line with “*the evolution of the regime concerning life-saving appliances for local vessels*”¹⁶⁸, consideration should be given to the provision of liferafts for all persons on board in respect of longer voyages. **Photograph 2** shows the liferafts used in the mass evacuation exercise of “Our Lady Patricia”.

¹⁶⁷ Liferafts are required for Class II vessels operating within the river trade limits and Class III vessels (fishing vessels) plying in Hong Kong waters, but not Class I vessels are not so required; see paras.87-88 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4188; see also Part 2 of Schedule 3 to the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation (Cap.548G), Legislation Bundle, Item 15, pp.32-36.

¹⁶⁸ Paras.6-8 of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4163.

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Photograph 2 of liferafts used during evacuation of “Our Lady Patricia”.

67. In respect of the type of adult lifejackets required, I understand from Mardep that they must accept any SOLAS 1974 standard jacket approved by the main International Classification Societies¹⁶⁹ as long as it has a certificate and is seen to be adequate¹⁷⁰. I have been told that there is no possibility of Mardep insisting on any one particular design¹⁷¹.
68. In respect of children’s lifejackets, I understand that Mardep is considering a requirement that, not only must there be 5 percent of additional lifejackets on board for children, but also there must always be enough children’s lifejackets on

¹⁶⁹ Classification societies as recognized by the Director of Marine under s.8 of the Merchant Shipping (Safety) Ordinance (Cap.369), Legislation Bundle, Item 5, p.4; see also definition of “classification societies” in para.3.1 to Chapter I of the 2006 Code, Marine Bundle 11, Item 29, p.3435.

¹⁷⁰ Para.12(1) of Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 11, Item 40b, p.3953-8; see also Interview with Mr Leung Wing Fai, Appendix III.

¹⁷¹ Interview with Mr Leung Wing Fai, Appendix III.

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board a Class I vessel for every child on board¹⁷². This is a sensible approach insofar as children are concerned.

D.2.4 Minimum manning levels

69. Regarding the minimum manning levels of local passenger vessels ¹⁷³, I understand a review is taking place in respect of crew numbers on Class I ferries¹⁷⁴. Reference should be made to the *Principles of Safe Manning* adopted by the IMO¹⁷⁵. In particular, Mardep should ensure that the minimum safe manning level of a ship “contains the number and grades/capacities of personnel to fulfil the tasks, duties and responsibilities required for the safe operation of the ship, for protection of the marine environment and for dealing with emergency situations” (emphasis added)¹⁷⁶. In my lifetime of experience in the ferry operating business, it is always the emergency muster list requirement that governs the number of crew required to be carried on passenger ferries. This aligns with my view that there should be a muster list for all local passenger vessels carrying more than 100 passengers detailing the emergency and evacuation duties of each crew member¹⁷⁷.

D.2.5 Competency requirements of crew

70. I am surprised that it is possible to qualify as a coxswain of a class 1 passenger vessel without having a basic level of literacy¹⁷⁸. A coxswain has to read information on a chart. He has to be able to read MD Notices, the Rule of the

¹⁷² Para.102(4) of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4193.

¹⁷³ Paragraph 33 above.

¹⁷⁴ Para.41(3) of 2nd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 71a, p.4174.

¹⁷⁵ Resolution A.1047(27), *Principles of Safe Manning*, 20 December 2011 (IMO), Appendix XII.

¹⁷⁶ Para.2.1.1 of Annex 3 “*Responsibilities in the Application of Principles of Safe Manning*” to Resolution A.1047(27), *Principles of Safe Manning*, 20 December 2011 (IMO), Appendix XII.

¹⁷⁷ See paragraph 76 below.

¹⁷⁸ Coxswain Lai said he can read “a lot” of Chinese but can only write a little Chinese, and cannot understand English, see Transcript Day 42, p.60.

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Road, etc. He needs to be able to write up his log and various reports to company management and Mardep. I understand that the Marine Department is reviewing the qualification requirements¹⁷⁹, I also note that the training of the coxswain of “Sea Smooth” is not much different from that of “Lamma IV”¹⁸⁰, and I would comment on the apparent lack of awareness of the need to use radar for collision avoidance¹⁸¹. I would add that, because of the frequency of collisions in this very busy harbour, and the extreme hazard associated with high speed collisions, Mardep should consider the mandating of a high speed radar simulator course for all coxswains of high speed craft (built before and after 2007).

D.2.6 Crew fitness for duty

71. The medical standards for coxswains and crew¹⁸² are not stated. In London¹⁸³ and Sydney¹⁸⁴, a medical certificate is routinely required for crew members on local ferries. In my opinion, all coxswains should have a basic medical examination and eyesight test at intervals not exceeding 5 years and that all seamen required to keep a lookout should have an eyesight test.
72. Thought should also be given to a policy on drug and alcohol testing of seafarers operating within Hong Kong waters. During interview with Mr Leung Wing-fai, it was agreed that there should be monitoring of the working hours of coxswains

¹⁷⁹ Paras.20-21 of Witness Statement of Lai Ying Keung, Marine Bundle 12, Item 76a, pp.4686-4687.

¹⁸⁰ See para.24 of Witness Statement of Ng Siu Yuen, HFW Bundle 1, Item 1, pp.5-6; para.3 of Witness Statement of Chow Chi Wai, RSRB Bundle 3, Item 51, p.1548; para.16 of Witness Statement of Tang Wan On, RSRB Bundle 1, Item 7, p.263.

¹⁸¹ See, for example, para.30 of Witness Statement of Lai Sai Ming, HFW Bundle 1, Item 3, pp.127-128; para.50 of Witness Statement of Chow Chi Wai, RSRB Bundle 3, Item 51, p.1578.

¹⁸² Paragraph 31 above.

¹⁸³ See ss.8 & 12 of *The Merchant Shipping (Inland Waterway and Limited Coastal Operations) (Boatmasters' Qualifications and Hours of Work) Regulations 2006* (UK), Appendix XXII; and s.6 of *The Merchant Shipping (Maritime Labour Convention) (Medical Certification) Regulations 2010* (UK), Appendix XXIII.

¹⁸⁴ See ss.39, 54 & 55 of *Marine Safety (Commercial Vessels) Regulation 2010* (NSW), Appendix XXIV.

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and crew in order to avoid fatigue and associated risk of accidents¹⁸⁵. Random drug and alcohol tests are carried out by some of the larger operators of local passenger ferries in New York and Sydney¹⁸⁶. In UK, it is an offence for a professional master, pilot and seaman to have his ability to carry out his duties impaired because of drink or drugs¹⁸⁷. In Sydney harbour, random drug and alcohol tests are also carried out by New South Wales Maritime and Water Police¹⁸⁸. Testing is always carried out after an incident¹⁸⁹.

D.3 General safety requirements in service

D.3.1 Navigational safety on the bridge

73. In the UK, two officers are required to be on the bridge of local high speed ferries¹⁹⁰. In the case of high speed ferries in Hong Kong, I believe that a lookout should be on the bridge with the coxswain at all times. In 1986 when I introduced “Our Lady Patricia”, there were always two officers on the bridge, as shown in **Photograph 3** below. In my view, all conventional ferries/launches carrying more than 100 passengers should have a lookout on the bridge in addition to the coxswain during the hours of darkness, during periods of reduced visibility and at any other time that the coxswain needs assistance.

¹⁸⁵ Interview with Mr Leung Wing Fai, Appendix III.

¹⁸⁶ P.7 of *Sydney Ferries Proactive Release of Information, September 2010*, available at <http://www.transport.nsw.gov.au/sites/default/file/access-info/Sydney-Ferries-Proactive-Release-Sep2010.pdf>, Appendix XXV; <http://www.dailymail.co.uk/news/article-2259587/New-York-ferry-crash-Was-mechanical-failure-blame-Manhattan-boat-accident-injured-74.html>, Appendix XXVI.

¹⁸⁷ Ss.78 & 79 of *Railways and Transport Safety Act 2003* (UK), Appendix XXVII.

¹⁸⁸ See s.4 of *Passenger Transport (Drug and Alcohol Testing) Regulation 2010* (NSW), Appendix XXIII; see also http://www.maritime.nsw.gov.au/publications/1011_annual-report/boating-safety-3.html, Appendix XXIX.

¹⁸⁹ See for example, paras.1.25 & 2.9 of *Marine Safety Investigation Report of Collision between Sydney Ferries' Harboursat Pam Burridge and Motor Launch Merinda*, Sydney Harbour, 28 March 2007, Office of Transport Safety Investigations, Appendix XXX.

¹⁹⁰ Para.18.1.3.6 of Chapter 18 of the *International Code of Safety for High-Speed Craft* (2000), 2008 Edition, Appendix XIV.

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Photograph 3 showing the bridge of “Our Lady Patricia”
which has 2 operating seats, 2 radar sets and 2 VHF sets.

74. In vessels carrying more than 100 passengers, appropriate use must be made of VHF radio, radar, AIS and any other navigation equipment provided. All such vessels must ensure that radar operators are properly trained. For coxswains of local high speed craft, I would suggest a requirement for a high speed radar simulator course¹⁹¹.

D.3.2 Dissemination of safety information to passengers

75. The requirement to give a safety briefing to passengers at the commencement of each voyage is noted¹⁹². This is appropriate to all passenger vessels of any size. Specific advice on the content should be provided by Mardep and should include the emergency signal and the abandon ship signal.

¹⁹¹ See paragraph 70 above.

¹⁹² See paragraph 35 above.

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76. In my opinion, all ferries/launches carrying more than 100 passengers are required to have a muster list and each crew member must be aware of his duties.

D.4 General requirements for Port Control

D.4.1 Review of the fog light/visits of coxswains to VTC

77. With respect to the issue of the fog light's effect on navigational safety¹⁹³, I understand from Mr Chung Siu Man that the fog light will be reviewed by the Port Control Division¹⁹⁴. At a meeting with Mr Chung Siu Man, the idea of visits to the VTC for the Coxswains of all vessels carrying more than 100 passengers was discussed¹⁹⁵. I believe it is appropriate to extend the current practice which includes pilots and HSC masters to Coxswains of passenger vessels.

D.4.2 Extension of VTS to local passenger vessels

78. I understand the limited capacity of the VTS system¹⁹⁶. At a meeting with Mr Chung Siu Man, he advised me that there would be sufficient capacity in the VTS system to cope with the increase in AIS signals if the requirement was for vessels carrying over 100 passengers¹⁹⁷.

D.4.3 Extension of VHF Channel 14

79. Consideration should be given to require all passenger vessels with more than 12 passengers be fitted with VHF radio in order to contact VTS in urgency or emergency situations or for VTS operators to issue advice to all vessels¹⁹⁸. For the benefit of all vessels on routes into Lamma Island, I suggest considering a

¹⁹³ Paragraph 37 above.

¹⁹⁴ Interview with Mr Chung Siu Man, Appendix V, p.10.

¹⁹⁵ Interview with Mr Chung Siu Man, Appendix V, pp.12-13.

¹⁹⁶ Paras.20-23 in Witness Statement of Chung Siu Man, Marine Bundle 12, Item 73a, pp.4621-4623.

¹⁹⁷ Interview with Mr Chung Siu Man, Appendix V, pp.18-19.

¹⁹⁸ See paragraph 63 above.

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slight adjustment to the VTS boundary between VHF coverage of Channel 67 and Channel 14, such that the ferry pier and the typhoon shelter are brought within the Channel 14 area. A simple illustration of such adjustment is shown in **Diagram 1** below. This would avoid the need for vessels running into the Lamma Island berths to change channels at a crucial time.



Diagram 1 showing suggested extension of VHF Channel 14.

D.4.4 New speed limit

80. In my view, consideration should be given to a new speed limit of 15 knots maximum covering the approaches to Lamma Island, as shown in **Diagram 2** below. The boundary might run from the northern end of the coal pier due north until the boundary of the NW Lamma anchorage then due east to the Lamma Island shore. This formal speed limit would guarantee an added degree of safety to the approaches to the ferry piers where there is no formal port control. It would add less than a minute to the passage time of the fast ferries.

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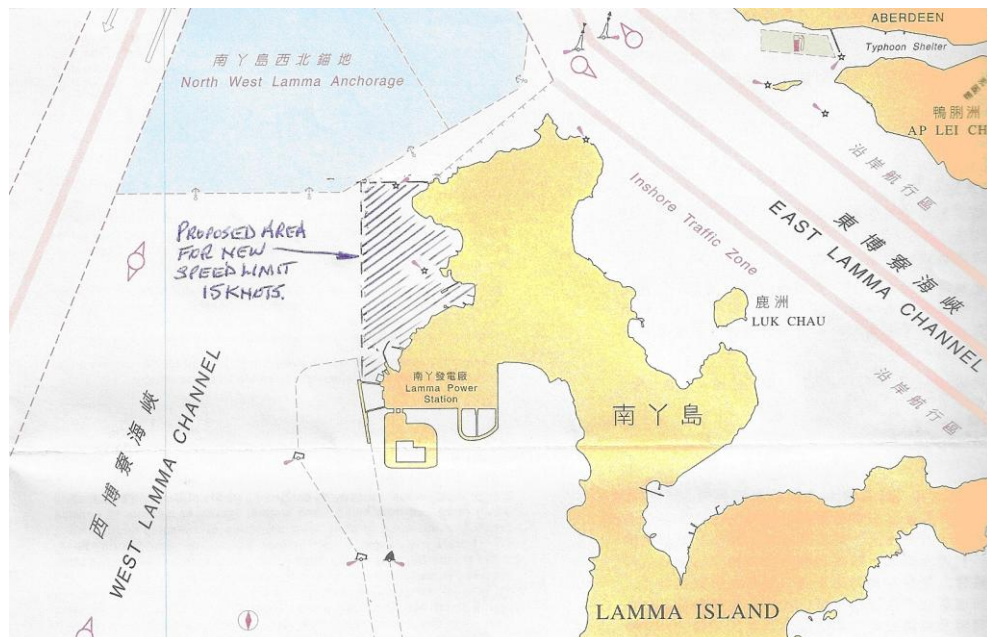


Diagram 2 showing proposed area for new speed limit of 15 knots.

81. A formal route operating manual for all fast ferries would be helpful in highlighting the particular hazards which need to be considered on each specific route.

D.4.5 Marine Department notices

82. I understand that new arrangements are already under consideration for future special events in the harbour¹⁹⁹. Mardep public safety notices should be considered as compulsory and not as optional. There should be a distinction between “Advisory Notices” and “Compulsory Notices”.

¹⁹⁹ Para.12(iii) of *Improvement Measures to Enhance Safety of Local Vessels and Navigational Safety*, Local Vessels Advisory Committee, LVAC Paper No.5/2012, Misc Bundle, Item 10, p.49.

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D.5 General requirements for LVSB

D.5.1 Requirements for High Speed Craft

83. Paragraph 25 above notes that only high speed local ferries are required to have an operating manual, route operating manual, training manual and maintenance manual²⁰⁰. I would suggest a review of the current situation which appears to exempt HSC built before 2007 from the new system of control in the 2006 Code²⁰¹. I fully understand why such vessels should be exempt from new structural requirements, but I completely fail to understand why they would be exempt from the requirement for an operating manual, route operating manual and a training manual²⁰².

D.5.2 Marine investigation

84. The *Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (Casualty Investigation Code)*, MSC.255(84) sets out the international standards and recommended practices for a safety investigation into a marine casualty or marine incident. Chapter 16 of the *Casualty Investigation Code* provides that the investigator carrying out a marine safety investigation should have functional independence from the parties involved in a marine incident and anyone who may take administrative or disciplinary action against an individual or organisation involved in a marine casualty²⁰³. This is strictly speaking not the case with MAISSPB as they are a unit within Mardep²⁰⁴. I note this was also observed in

²⁰⁰ Para.11 of 3rd Supplemental Witness Statement of Wong Wing Chuen, Marine Bundle 12, Item 74a, pp.4640-4641.

²⁰¹ See paragraph 41 above.

²⁰² See paragraph 25 above.

²⁰³ Section 16.1 of the *Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (Casualty Investigation Code)*, MSC.255(84), Appendix XX.

²⁰⁴ See paragraph 53 above.

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an IMO audit of Hong Kong, during which it was remarked that the ‘degree of separation’ between the MAISSPB and the Prosecutions Unit of Mardep “*needs to be very carefully monitored to ensure independence*”²⁰⁵.

85. My understanding currently is that internal investigation of accidents by the ferry operators is patchy²⁰⁶. Also the MAISSPB as the official marine accident investigation branch is firmly established within Mardep²⁰⁷. In other administrations, the official accident investigation branches are completely separated from the safety administration department. In the UK, for example, there is the Marine Accident Investigation Branch (MAIB)²⁰⁸. In Australia, it is the Australian Transport Safety Bureau (ATSB)²⁰⁹, which covers aviation, marine and rail accident investigation. In my view, consideration should be given to how this might be achieved outside the Mardep structure. It is important that such a body is separate from the regulatory body.

D.5.3 Enforcement

86. I have seen a record of fines issued to coxswains of local vessels for breaches of the COLREGs and/or local speed limits²¹⁰. My impression is that generally these fines are quite low²¹¹ and I am unable to judge how effective the current system is.

²⁰⁵ Para.8.3.7 of *Voluntary IMO Member State Audit Scheme, Audit of Hong Kong, China, Final Report*, 8-15 March 2010, available at <http://www.mardep.gov.hk/en/news/pdf/aireport.pdf>, Appendix XIX.

²⁰⁶ Evidence of Tang Wan On, Transcript Day 32, pp.60-77.

²⁰⁷ See paragraph 53 above.

²⁰⁸ See MAIB Information Leaflet, Appendix XXXI.

²⁰⁹ See ATSB Brochure, Appendix XXXII.

²¹⁰ Email of DoJ dated 27 February 2013, Marine Bundle 12, Item 73f, pp.4636-19-4636-21.

²¹¹ Attachment to email of DoJ dated 27 February 2013, Marine Bundle 12, Item 73f, p.4636-21.

PART E CONCLUSION AND SUMMARY OF OPINIONS

E.1 Conclusion

87. Unfortunately it is usually the case that modernisation of safety requirements takes place following accidents. In respect of the LVSB, many improvements are discussed in meetings with the industry²¹², but it is not always clear the status of those recommendations. I note that changes in maritime legislation may take much longer than three years²¹³. The Commission of Inquiry will decide whether any safety legislation needs to be reviewed. In my view, safety regulations for ferries and launches carrying large numbers of passengers should be brought together under the same legislation and survey regime as part of that process.

E.2 Summary of opinions

88. In my view, consideration should be given to the following aspects :-

- (1) Whether safety legislation for ferries and launches carrying more than 100 passengers is made common.
- (2) Whether operators of ferries carrying more than 100 passengers should be required to implement a safety management system. It would be appropriate for Mardep to arrange or specify suitable training courses for owners and coxswains.
- (3) Whether all ferries or launches carrying more than 12 passengers should be fitted with VHF radio. All ferries or launches carrying more than 100 passengers should be fitted with AIS, collision avoidance radar, and VHF radio.

²¹² See for example, the minutes of the meetings of the Working Group for the Safety of Passenger Carrying Vessels, Marine Bundle 12, Item 71t, 4596-4609; 4609-1-4609-14.

²¹³ See Para.8.1.15 of *Voluntary IMO Member State Audit Scheme, Audit of Hong Kong, China, Final Report* (8-15 March 2010), found at <http://www.mardep.gov.hk/en/news/pdf/aireport.pdf>, Appendix XVIII.

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- (4) Whether serious consideration is given to the provision of liferaft capacity for all passengers on longer voyages outside the harbour. It may be considered that this could be implemented over several years.
- (5) Whether sufficient children's lifejackets are carried for every child on board, and whether the statutory requirement for children's lifejackets should be one lifejacket for every child actually on board the vessel.
- (6) Whether all coxswains of vessels carrying more than 100 passengers should have a basic medical examination and eyesight test at intervals not exceeding 5 years, and whether all seamen required to keep a lookout should have an eyesight test.
- (7) Whether legislation should permit the harbour police to randomly test for drug and alcohol consumption.
- (8) Whether all vessels carrying more than 100 passengers should have a lookout on the bridge in addition to the coxswain during the hours of darkness and in reduced visibility, and whether high speed craft should have a lookout on the bridge at all times.
- (9) Whether all passenger vessels carrying more than 100 passengers should have a muster list so that every member of the crew is aware of his duties in the event of emergency.
- (10) Whether a small adjustment should be made to the VTS boundary between the Channel 67 area and Channel 14 area.
- (11) Whether a new speed limit should be introduced in the approaches to Lamma Island. As there is no specific port control for Lamma Island berths a speed limit would be an improvement to the local safety regime. This would have a negligible effect on the passage time of Lamma Island ferries.

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- (12) Whether high speed craft built before 2007 should be required to have a route operating manual and a training manual, and whether Mardep should clarify the issue regarding carriage of a quick flashing amber light by High Speed Craft. Evidence has been given that “Sea Smooth” was not required to display this light, however it would appear that there might be a general impression that having the light gives right of way over other vessels.
- (13) Given the frequency of collisions in this very busy harbour and the extreme hazard associated with high speed collisions, whether Mardep should consider the mandating of a high speed radar simulator course for all coxswains of high speed craft (built before and after 2007).
- (14) Whether consideration should be given be to removing MAISSPB from the Mardep organisation in accordance with the *Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (Casualty Investigation Code)*, IMO resolution MSC.255(84).

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Expert's Declaration

I, CAPTAIN NIGEL R PRYKE, DECLARE THAT :-

1. I declare and confirm that I have read the Code of Conduct for Expert Witnesses as set out in Appendix D to the Rules of High Court, Cap. 4A and agree to be bound by it. I understand that my duty in providing this written report and giving evidence is to assist the Commission. I confirm that I have complied and will continue to comply with my duty.
2. I know of no conflict of interests of any kind, other than any which I have disclosed in my report.
3. I do not consider that any interest which I have disclosed affects my suitability as an expert witness on any issues on which I have given evidence.
4. I will advise the Commission if, between the date of my report and the hearing of the Commission, there is any change in circumstances which affect my opinion above.
5. I have been shown the sources of all information I have used in Appendix I.
6. I have exercised reasonable care and skill in order to be accurate and complete in preparing this report.
7. I have endeavoured to include in my report those matters, of which I have knowledge or of which I have been made aware, that might adversely affect the validity of my opinion. I have clearly stated any qualifications to my opinion.
8. I have not, without forming an independent view, included or excluded anything which has been suggested to me by others, including my instructing solicitors.
9. I will notify those instructing me immediately and confirm in writing if, for any reason, my existing report requires any correction or qualification.

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10. I understand that :-

- (a) my report will form the evidence to be given under oath or affirmation;
- (b) questions may be put to me in writing for the purposes of clarifying my report and that my answers shall be treated as part of my report and covered by my statement of truth;
- (c) the Commission may at any stage direct a discussion to take place between the experts for the purpose of identifying and discussing the issues to be investigated under the Terms of Reference, where possible reaching an agreed opinion on those issues and identifying what action, if any, may be taken to resolve any of the outstanding issues between the parties;
- (d) the Commission may direct that following a discussion between the experts that a statement should be prepared showing those issues which are agreed, and those issues which are not agreed, together with a summary of the reasons for disagreeing;
- (e) I may be required to attend the hearing of the Commission to be cross-examined on my report by Counsel of other party/parties;
- (f) I am likely to be the subject of public adverse criticism by the Chairman and Commissioners of the Commission if the Commission concludes that I have not taken reasonable care in trying to meet the standards set out above.

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Statement of Truth

I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. I believe that the opinions expressed in this report are honestly held.

A handwritten signature in black ink, appearing to be 'N R Pryke', written over a horizontal line.

Captain Nigel R Pryke

3 RD MARCH 2013