

COMMISSION OF INQUIRY
APPOINTED PURSUANT TO SECTION 2 OF THE COMMISSION OF
INQUIRY ORDINANCE (CHAPTER 86) ON 22 OCTOBER 2012

2ND SUPPLEMENTAL WITNESS STATEMENT OF
WONG WING CHUEN

I, WONG WING CHUEN, Senior Surveyor of Ships, Local Vessels Safety Section, Marine Department, 23/F, Harbour Building, 38 Pier Road, Central, Hong Kong, do say as follows: -

1. I am a Senior Surveyor of Ships in the Local Vessels Safety Section ("LVS"), Shipping Division of the Marine Department ("Mardep"). I am the same Wong Wing Chuen who made the Witness Statement dated 14 January 2013 and the Supplemental Witness Statement dated 23 January 2013.
2. I make this 2nd Supplemental Witness Statement on behalf of the Director of Marine ("Director").
3. The purpose of this 2nd Supplemental Witness Statement is to explain the existing regime of maritime safety concerning local passenger vessels in respect of the construction and survey of local passenger vessels, the personnel monitoring those processes, and the system of monitoring, checking and auditing of the processes and the personnel involved (items (1), (3), (6), (7), (10), (11) and part of (12) in the letter of Messrs. Lo & Lo dated 28 January 2013). I will also address the issue of further improvement to the present system (items (2) and (4) of Lo & Lo's letter).
4. In this 2nd Supplemental Witness Statement I will adopt the definitions and nomenclature in my previous Witness Statements.

5. In this 2nd Supplemental Witness Statement, I will highlight in bold the steps and measures which have been taken, and will continue to be taken, to improve maritime safety and control in relation to local vessels.

A. **Introduction**

6. Under the present regime, the safety of local vessels is addressed by a number of procedural measures, including:-

- (1) Control through the approval process of key drawings of hull construction, machinery installation and equipment of new vessels and existing vessels implementing major modifications;
- (2) Initial survey of new vessels for compliance with the approved drawings and checking of their stability calculations; and
- (3) Periodic survey (annual, biennial and quadrennial, in relation to general and safety equipment, hull and fittings, and machinery and electrical installation) of vessels.

7.

8. Since 2006, they are to be found in the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation, Cap. 548G, and the “Code of Practice – Safety Standards for Classes I, II and III Vessels” (“CoP”), which was issued under section 8 of the Merchant Shipping (Local Vessels) Ordinance, Cap. 548. The CoP was developed by Mardep in consultation with the local maritime industry through representation in relevant working groups and committees.

9. As set out in paragraph 1.3 of the CoP, the primary aim of the CoP is to

“...set standards of safety and protection for all passengers and crew on board. The Code relates especially to the construction of a vessel, its machinery, equipment and stability and to the proper operation of the vessel so that safety standards are maintained”.

10. More specifically, the CoP sets out the requirements concerning survey/inspection, issuance of certificate and plan approval, hull construction, machinery, electrical installations and fittings, freeboard and stability, passenger and crew accommodation, fire protection and fire-fighting apparatus, life-saving appliances and arrangements, lights, shapes and sound signals, tonnage measurement, special requirements for vessels carrying dangerous goods, high speed craft, vessel safe operation and operator requirements. Both new and existing vessels are required to comply with the CoP for the purpose of obtaining certificates of survey which are the prerequisite for the issuance or renewal of their operating licences.
11. In 2010, the LVS implemented the ISO 9001:2008 Quality Management System (“ISO QMS”), which seeks to ensure and enhance LVS’ enforcement of the relevant Hong Kong merchant shipping legislation on (among other things) maritime safety standards concerning locally licensed vessels. With the introduction of the ISO QMS, detailed procedures have been established for the work processes from drawing approval up to certificate issuance, the documentation required on each of these steps, as well as an audit system to monitor compliance with the QMS (see below).

B. The system of plan approval and survey

(B.1) Plan approval procedures

12. By way of historical information, the system prevailing at the time of the construction of Lamma IV is set out in Section B.2 of my Witness Statement.
13. Under the current regime, the drawing submission procedures are set out in LVS-001 of the ISO QMS. This provides for the submission of the necessary form to kick-start the process, compilation of the necessary documentation, logging of the submission into the LVS computer system ("Licensing & Survey of Local Vessels" Computer Information System, "LSLV system") and production of a "workflow" which sets out the steps required to be taken. There is now produced and shown to me marked "WWC-5" a copy of the Quality Manual for Local Vessels Safety Branch Issue No.1101 issued under the ISO QMS.
14. The drawings, plans or documents required to be submitted are set out in paragraph 5 in Chapter II of the CoP.
15. I should point out that the requirements of drawing approval (and the initial survey procedures that follow) apply not only to new vessels but also alterations or modifications to an existing vessel which affect the safety of that vessel (section 76 of Cap. 548G and paragraph 3.4.2(c) in Chapter II of the CoP).
16. Next is the drawing approval stage.
17. Since 2007, the drawing examination team composes of 5 SSIs and 4 SIs from the hull, machinery and electrical disciplines. These officers are equipped with necessary academic qualifications in their discipline (a Diploma or Higher Certificate in mechanical engineering, marine engineering, naval architecture or electrical engineering), have undergone practical training ("Ship New Construction Training" course organized by the China Classification Society or Lloyd's Register, see below) and have had sufficient experience in ship inspection.

18. The chief drawing co-ordinator (one of the 3 SSIs) would consider the LSLV system-generated workflow and liaise with the drawing team leader to assign a SI in the relevant discipline to carry out examination of the drawings, plans or documents received. The SI so assigned would receive the drawings, plans or documents received together with the workflow.
19. The SI then checks the drawings/plans/documents against Mardep's requirements as set out in the CoP applicable to the concerned vessel. In the case of local vessels which do not fall within the definition of "high speed craft", those requirements can be found in Chapters IIIA to IX of the CoP. In the case of local vessels which fall within the meaning of "high speed craft", they have to comply with the additional requirements in Chapter XI of the CoP.
20. The SI has to record his comments on the drawing, plan or document so that his superior (the Ship Surveyor) would be aware of them. He would then recommend and stamp on the drawing, plan or document the appropriate type of endorsement based on the criteria set out in the table in LVS-002 ("WWC-5"). For instance, where he is satisfied that the drawing, plan or document in question complies with the requirements set out in the CoP, he should stamp "Approved" on a conspicuous location on it.
21. The SI would then input the information concerning the drawing, plan or document so checked into the LSLV system and prepare a cover letter to the shipbuilder/ shipowner.
22. He would then submit the LSLV system workflow, the cover letter, and the drawing, plan or document checked by him (with his comments endorsed thereon) to the Ship Surveyor for vetting and approval.

23. The Ship Surveyor would vet the drawing, plan or document, and consider (and where necessary amend or add to) the comments prepared by the SI. If he is satisfied with the comments and the form of endorsement suggested, he would sign on the drawing, plan or document and the cover letter and then verify the LSLV system workflow.
24. A copy of the stamped and signed drawing, plan or document would be returned to the shipbuilder/ shipowner and the other copy would be retained by Mardep for record purposes. The comments arising in the approval process would be recorded on the drawing, plan or document and could be easily identified and referenced by the shipbuilder/ shipowner.
25. I refer to LVW-002 in "WWC-5" which sets out the above procedures.

(B.2) Initial survey procedures

(B.2.1) Current system

26. The initial survey procedures applicable at the time of the construction of Lamma IV are set out in Section B.3 of my Witness Statement.
27. Since the enactment of Cap. 548G and the introduction of the CoP, the matters required to be inspected in an initial survey are set out in Tables 1 and 3 in paragraph 7 in Chapter II of the CoP.
28. The relevant procedures applicable to surveys are set out in LVS-003 and LVS-004 ("WWC-5"). In gist:-
 - (1) LVS maintains a "summary of appointments" for surveys. The shipyard or shipowner would submit an application of arrangement of survey to the LVS to make an appointment and the same would be entered in the "summary of appointments".

- (2) The Chief SI would assign a SI (or where appropriate a Ship Surveyor) of the relevant discipline and expertise to undertake the survey booked in the “summary of appointments”.
 - (3) Prior to conducting the survey, the SI should check the vessel’s file and survey history, and verify and collect all relevant documents relating to the survey from the shipowner or his agent.
 - (4) The SI would carry out survey according to the drawings approved by Mardep.
 - (5) The items required to be inspected are set out in Table 1 in paragraph 7 in Chapter II of the CoP (Table 3 and Table 2, which concern the final inspection and periodical survey and are also applicable, will be dealt with below).
 - (6) Upon completion of the survey, the SI would fill out the “Survey Items List” and forms MO 539 and MO 540 (as appropriate), which would be filed for record purposes.
 - (7) If there are outstanding items in an inspection, they would be noted down and followed up in the subsequent inspection, and it is only where all the outstanding items are satisfactorily resolved and inspected that the vessel could proceed to certification stage.
 - (8) Since 2012, the SI would also have to submit the survey reports/records (i.e. MO 539 and MO 540) to his superiors for vetting.
29. Since the enactment of Cap. 548, it is possible for the shipowner to opt to have part of the plan approval work and survey of low risk local vessels undertaken by “authorized surveyors”, “authorized organizations” or “recognized authorities”. The LVS would still vet all the drawings approved under this route in accordance with the procedures in LVS-

006 of ISO QMS. As for survey, the LVS has a system of audit check as set out in LVS-006; whether further checks on the survey so carried out would be undertaken by LVS would be determined on a case-by-case basis according to the circumstances.

(B.2.2) Review of and improvements to the system

30. The incident on 1 October 2012 shows that there are certain areas of the survey work where there is scope for improvement.
31. First, in the case of Lamma IV, although some of the approved plans indicated that Frame 1/2 should be a watertight bulkhead, it was not clear that the SIs involved in hull inspection had queried or ascertained whether it would be watertight or not, or (assuming Frame 1/2 should have been watertight) specifically inspected it or ascertained with China Classification Society that the necessary inspection had been done.
32. Secondly, it appears that the information or guidance provided to the SIs did not contain sufficient details to draw to their attention particular items (for example watertight bulkheads) which they should focus on in the course of their inspection.
33. Thirdly, the SIs would only signify their acceptance of a category of items (for example "hull scantlings") by putting a tick against that item and would only record outstanding matters which require further attention on the forms. There is no record, in relation to matters considered to have been satisfactorily inspected, of the particulars of the items so inspected (for example the thickness of the hull plating).
34. **Mardep believes that the current system may benefit from the following suggested changes:-**

- (1) Mardep will appoint a classification society to carry out a review of the drawing approval and survey procedures of the LVS and to recommend changes and improvements;
- (2) Mardep will also provide clearer guidance to the SIs responsible for the initial survey (through more detailed manuals and forms used in survey) and improving the records and document trail by adopting the survey manual, procedures and forms used by classification societies. In particular, classification societies would provide, in addition to the "Survey Item List", a survey record or report setting out particulars of the items inspected as well as those which are outstanding. I produced herewith marked "WWC-6" a sample Survey Checklist used by the Lloyd's Register which contains more detailed breakdown of survey item. Mardep believes that a more detailed survey form than is currently used in Hong Kong will serve to minimize cases of omitted or unsatisfactory inspection during the survey process. The choice of guidance, procedures and standard forms to be adopted will be considered upon completion of the review exercise in (1) above;
- (3) In addition to the audit carried out under ISO QMS (see below), the LVS will consider enhancing its internal audit by introducing a separate audit over the drawing approval and survey work of the LVS on a regular basis. This new audit will only target the drawing approval and survey work, and will be undertaken by the head of a different Section (not LVS) to enhance the impartiality of such audit.

(B.3) Stability calculations

(B.3.1) Current system

35. As for stability calculations:-

- (1) The SI assigned would attend the inclining experiment of the vessel and record the data observed during the experiment;
- (2) The same SI would perform the stability checks (intact and damage stability) by inputting the information he obtained from the inclining experiment and set out in the stability calculations submitted (where appropriate) into the LVS' "Autoship" computer system, which would perform the necessary calculations and generate a computer printout result showing whether the necessary criteria have been met; and
- (3) The computer printout would be attached to the stability calculations submitted, submitted to the Ship Surveyor for consideration and approval, and thereafter kept in the drawing file.

(B.3.2) Review of and improvements to the system

36. The Lamma IV incident has revealed shortcomings in the system for checking stability calculations, in that:-

- (1) There should be more effective double-checking of the data obtained from the inclining experiment, and the calculations for intact and damage stability;
- (2) There is little documentation or record evidencing what have in fact been checked by Mardep officers; and
- (3) The current system of endorsing the stability calculations with "Seen" may give rise to uncertainties as to the status of such documents and the role Mardep has in respect of them.

37. Mardep believes that the current system may benefit from the following suggested changes:-

(1) To improve the documentation and record-keeping in respect of stability calculations checking, Mardep proposes to:-

(a) Adopt the “stability declaration” (for intact stability) applicable in respect of Hong Kong registered passenger ships (i.e. ocean-going vessels), which is derived from IMO Resolution A.749(18), which sets out various items of information required to be filled in and provides a record of the Ship Surveyor/ SI’s checking and deliberation process. There are now produced and shown to me marked “WWC-7” copy of the standard form “stability declaration” and “WWC-8” copy of IMO Resolution A.749(18); and

(b) Adopt the declaration used by classification societies for damage stability calculations which again sets out various information required to be filled in and provides a record of the Ship Surveyor/ SI’s checking and deliberation process. There is now produced and shown to me marked “WWC-9” copy of Lloyd’s Register’s Marine Design Appraisal Document.

(2) Mardep proposes to cease using “Seen” as the endorsement for stability calculations (or indeed any of the drawings, plans or documents required to be submitted to Mardep). Instead Mardep would endorse the drawings, plans or documents with “Approved”, “Not Approved” and “For Record Purpose” depending on whether approval of Mardep is required; and

- (3) The new audit proposed in paragraph 34(3) above should also help to identify and address any inadequacies arising on a case-by-case basis.

(B.4) Final inspection (Table 3 items)

(B.4.1) Current system

38. Final inspection is required in respect of each of the initial and periodic survey, and the items required to be checked are set out in Table 3 in paragraph 7 in Chapter II of the CoP and form MO 539.
39. The procedures described in paragraph 28(1)-(3), (5)-(7) above apply.

(B.4.2) Review of and improvements to the system

40. It appears that the following areas may have scope for improvement:-
- (1) The form currently in use (MO 539) may not have a sufficient breakdown of the items or parts of the vessel required to be inspected (for example in relation to safety equipment, no reference to checking of passenger seats) to (i) direct the SSI/SI's attention to those items and (ii) record the SSI/SI's findings on the inspection;
 - (2) Clarification needs to be made with respect to the information to be included in the certificate of survey. It is unclear at present whether the certificate of survey only sets out the statutory minimum requirements which a vessel must comply with, or the actual number of equipment/ apparatus the SSI/SI counted on board;
 - (3) There are problems in relation to the inspection of life-saving appliances (in particular life jackets), which I will address below; and

- (4) There is also uncertainty as to the procedures adopted where the SI/SSI changes the requirement in respect to the items set out in the certificate of survey (for example minimum manning requirement).
41. **Mardep believes that the current system may benefit from the following suggested changes:-**
- (1) **Mardep proposes that henceforth the certificate of survey should only include the statutory minimum requirements for the items set out therein, and confirmation that the equipment/ apparatus on board meet those requirements;**
 - (2) **Mardep will establish a set of procedures governing changes to the items set out in the certificate of survey in final inspections. Specifically there would be requirements concerning the giving of reasons to the ship owner, the need for approval by a superior officer, and the time limit and procedures for objections to be raised;**
 - (3) **Specifically for the minimum manning requirement, Mardep proposes to carry out a study and consultation to establish a uniform, statutory minimum for all Class I ferries and vessels by reference to (among other things) vessel length, number of decks and passenger-carrying capacity. If the SSI/SI conducting the final inspection is not satisfied that the minimum crew on board are sufficient, he can increase (but cannot decrease) the minimum for that vessel following the procedures to be adopted as per (2) above.**
 - (4) **The commissioning of the new LSLV system started in July 2012 and is now underway. The target completion date for this new LSLV system is March 2014. Improvement will be**

made to the existing system which overrides the previous certificates of survey.

(B.5) Periodic inspection (Table 2 items)

(B.5.1) Current system

42. The current system for periodic survey (excluding final inspection) is as follows:-

- (1) The SI would carry out the inspection by reference to the requirements in Table 2 in paragraph 7 in Chapter II of the Co{ and in form MO 540;
- (2) He would follow the procedures described in paragraph 28(1)-(3), (5)-(7) above in conducting the inspection;
- (3) Upon completion of the survey, the SI should record the results in MO 540 (as appropriate), and notify the shipowner or his agent of those results; and
- (4) He would then attach all relevant documents to MO 540 and file the same in the vessel's file.

(B.5.2) Review of and improvements to the system

43. The Lamma IV incident reveals that:-

- (1) The form currently in use (MO 540) may not have a sufficient breakdown of the items or parts of the vessel required to be inspected to (i) direct the SSI/SI's attention to those items and (ii) record the SSI/SI's findings on the inspection; and
- (2) The items in Table 2 may have to be revised to include measurement of hull plate thickness on a regular basis to check the rate of corrosion.

44. **Mardep believes that the problem in the current system in relation to any inadequacies in the forms used may benefit from the proposed adoption (with appropriate variations) of the manuals and forms used by classification societies (as appropriated adapted to local vessels).**

(B.6) Issuance of certificate of survey

45. The SI assigned to undertake the final inspection (Table 3 in paragraph 7 in Chapter II of the CoP) of a vessel is responsible for issuing the certificate of survey for that vessel. Upon satisfactory completion of the final survey, he would input the relevant data into the LSLV system and prepare the new certificate of survey therefrom. I refer to LVS-005 in "WWC-5". A hard copy of the certificate of survey would be kept in the vessel's file since the current capabilities of the LSLV system are such that once a new certificate of survey is issued in respect of the same vessel, it would override and delete the records for the certificate of survey issued in the preceding year.
46. **The changes proposed by Mardep in relation to the content and issuance of the Certificate of Survey are set out in paragraph 41(2)-(3) above.**

(B.7) Spot checks carried out by LVS

47. Even after the issuance of the certificate of survey (which is only valid for one year), the LVS would carry out spot check on local vessels to ensure that their conditions with respect to (among other things) safety are maintained to the required standards after the periodic survey.
48. The procedures for spot check are set out in LVS-007 ("WWC-5"). The LVS would establish the frequency of such spot check by reference to the prevailing circumstances. At present it is fixed at 40 per annum. It would also designate a timetable for different classes and types of local

vessels for spot check to be carried out. The results of these spot checks would be documented (with photographs where appropriate), and reported to the Chief SI and thereafter the Ship Surveyor for consideration and endorsement. If defect or deficiency is observed during the spot check, the ship owner would be required to take corrective measures. There is now produced and shown to me marked “WWC-10” copy of the LVS’ procedures on spot checks.

49. In addition to the spot checks undertaken by the LVS, the Harbour Patrol Section of Mardep (“HPS”) and the Marine Police also carry out spot checks on a regular basis to enforce the applicable maritime legislation and regulations including those governing safety requirements. In relation to the checking of life-saving appliances, HPS’s focus is on whether the quantity/number of the life-saving appliances found on the local vessels conforms to the quantity/number stated on their certificates of survey.
50. **Mardep proposes to refine the LVS spot check procedures by identifying and ranking the key items and areas for which spot checking is required, and to carry out such check by reference to that order of priorities.**

(B.8) Prosecution for infractions

51. Mardep has a Prosecution Unit which is responsible for all cases referred to them by the enforcement units of Mardep (e.g. HPS, LVS etc.) for prosecution. The Prosecution Unit has a set prosecution policy which is a general and comprehensive one not tailored specifically for local vessels. HPS also has a set of prosecution guidelines which was made taking into account the particular features of their cases.
52. **Mardep proposes to strengthen the prosecution function of the LVS. An officer within the LVS will be assigned to assist prosecution**

work, including the collation of evidence for the Prosecution Unit and providing recommendations to the Prosecution Unit for consideration.

(B.9) Audit of LVS work

53. Since the adoption of the ISO QMS, the work of the LVS is subject to the following audits:-

- (1) Internal audit which is carried out at least once every 12 months under the supervision of the General Manager of the Local Vessels Safety Branch (the LVS is a Section under this Branch) in accordance with the audit procedures set out in the ISO QMS. See QAP-L822 on "Internal Audits" in "WWC-5".
- (2) The ISO QMS is audited once a year by the external auditor to ensure its compliance with the quality standards.
- (3) Periodic audit carried out by the Director of Audit.

(B.10) Standards, competence, training and professional development of ship inspectors and surveyors

54. Vessel safety is a professional and highly technical discipline and involves knowledge and expertise in many areas. The LVS organizes itself by reference to 3 broad disciplines (hull, mechanical and electrical) but within each of those broad areas there are many different aspects of professional knowledge and expertise. To ensure that its officers can properly and effectively carry out their duties, Mardep:-

- (1) has established criteria for recruitment of Ship Surveyors and SIs;
- (2) provides familiarization training to its officers when they first join the LVS; and

- (3) provides opportunities for and encourages officers to attend updating or upgrading courses on specified areas within their discipline (subject to availability and operational needs).

(B.10.1) Ship Surveyors

55. The Ship Surveyors employed by or posted to the LVS are fully-qualified and experienced marine engineers or naval architects. They are required to possess a degree in naval architecture, marine/mechanical engineering or electrical engineering. For those qualified in the marine/mechanical discipline, they must have a corporate membership in an engineer institution and possess a Certificate of Competency (Marine Engineer Officer) Class 1. For those qualified in the naval architecture discipline, they must possess at least 4 years' relevant experience after obtaining a corporate membership from a recognized naval architect institution.
56. Upon being posted to the LVS, a Ship Surveyor would have to undergo a 5-day familiarization training before he would be assigned any work. The purpose of the familiarization training is to enable him to understand the function, responsibility and policies of the LVS, to study the relevant legislation and instruments and to familiarize with the plan approval and inspection of local vessels, including:-
 - (1) Studying the Merchant Shipping (Local Vessels) Ordinance and its subsidiary legislation, the Merchant Shipping (Prevention of Air Pollution) Regulation, the CoP, and the ISO QMS relating to LVS;
 - (2) Familiarization with plan approval of various classes of local vessels; and
 - (3) Familiarization with inspection of local vessels at outstations.

57. Mardep has also established a confirmatory training course for the Ship Surveyors since 1990. That course provides training to (among other things) the international conventions (such as SOLAS and the Convention for the Prevention of Pollution from Ships), International Maritime Organization regulations, and merchant shipping regulations in Hong Kong relating to marine safety, pollution, International Safety Management audit, ship security quality assurance, loadline and tonnage.
58. A recent example of the confirmatory training undergone by a Ship Surveyor (with the name of the Ship Surveyor redacted) and the documents evidencing the same are now produced and shown to me marked “WWC-11”.
59. Further, subject to availability of funds and for operational needs, Ship Surveyors are recommended to attend updating or refresher courses on specified subjects (e.g. tanker safety, auditor training on international management system and ship security) organized in-house or by outside parties (local and international) to update and develop their professional knowledge. There is now produced and shown to me marked “WWC-12” copy of the Marine Department Training and Development Plan 2012-2013 for Ship Surveyors.

(B.10.2) Ship Inspectors

60. Ship Inspector (SI) grade officers are grouped into 3 streams in Mardep, the electrical discipline (SI(E)), the machinery discipline (SI(M)) and the hull & deck discipline (SI(H&D)). The bulk of their work fall into 3 categories: (i) undertaking statutory and other related duties, including inspections and certification of local vessels; (ii) preparing drawings and examining design plans/ship calculation works for the Government’s new vessels; and (iii) supervising and inspecting works of vessels under constructions, and ship repair superintendency for government vessels.

61. There is now produced and shown to me marked “WWC-13” copy of a summary of the Guides to Appointments of Assistant Ship Inspector (“ASI”) of the 3 disciplines, which set out the basic standards of SIs at entry level.
62. When an ASI joins Mardep, he will normally be posted to the Marine Industrial Safety Section first to acquire some basic knowledge of marine industrial safety and to promote his safety awareness at work. He will then be posted to the LVS for further on the job training on local vessel safety.
63. There are broadly speaking 3 types of training for the SI.
64. The first is the familiarization/induction training given to a SI when he first joins the LVS. He will undergo a 2-week familiarization training before he commences work on local vessels. This enables the SI to familiarize himself with the duties which the LVS has to discharge, and to acquaint himself with the technical knowledge and procedures to carry out the plan approval and inspection work in the inspection stations, shipyards and workshops. Such familiarization training includes:-
 - (1) Study of the following documents under the guidance of the Chief SI or SSI: (i) Merchant Shipping (Local Vessels) Ordinance and its subsidiary legislation; (ii) Merchant Shipping (Prevention of Air Pollution) Regulation; (iii) the CoP; (iv) relevant Marine Department Notices and instructions to ship inspectors; and (v) the ISO QMS relating to the LVS; and
 - (2) Accompany the SSIs or SIs to (i) familiarize with the procedures in carrying out final inspection of local vessels at Yamati inspection station and other outstations; (ii) learn to use the LVLS system in checking and updating of vessels data/record;

(iii) prepare the relevant certificates and declarations of fitness;
and (vi) familiarize with the procedures in carrying out other
periodical survey (other than the final inspection) of local vessels
in local shipyards and engine workshops

There are now produced and shown to me marked “WWC-14” copies of
the familiarization training programmes for the different Sections within
Mardep, including that for the LVS.

65. The second is mandatory training required by individual Sections or
Units, in cases where the SIs are required to receive certain training for
complying with the statutory requirements to discharge their duties. For
instance, SIs involved in overseeing ship repair or breaking works are
required by sections 18 and 19 of the Merchant Shipping (Local
Vessels) (Works) Regulation to have obtained qualification under a Ship
Repairing and Ship Breaking Works Supervisor Safety Course. There is
now produced and shown to me marked “WWC-15” a table
summarizing such mandatory training.
66. Thirdly, training is arranged by the Sections to meet their own
operational needs. Each Section or Division has funds allocated for
training its officers to meet their operation needs and for career
development. The programme of such training is reviewed each year by
the Section or Division in question and can be broadly classified as
follows:-
- (1) Training to enrich technical knowledge – there is now produced
and shown to me marked “WWC-16” copy of a table setting this
type of training offered to different Sections in Mardep;
 - (2) Training to enrich knowledge on contract management,
environment and Occupational Health and Safety related issues –
there is now produced and shown to me marked “WWC-17”

copy of a table setting this type of training offered to different Sections in Mardep;

- (3) Training for management skill and enhancing personal effectiveness – there is now produced and shown to me marked “WWC-18” copy of a table setting this type of training offered to different Sections in Mardep; and
- (4) Training for using specialist computer programme – there is now produced and shown to me marked “WWC-19” copy of a table setting this type of training offered to different Sections in Mardep.

67. Specifically for the LVS’s operational needs, the training offered to the SIs include the following:-

- (1) Statutory Regulation Training with Lloyd’s Register;
- (2) Visual Welding Inspection with the Technical Welding Institute;
- (3) Ship Fabrication Training with Lloyd’s Register;
- (4) Hull Inspection – Damage and Repair with Lloyd’s Register;
- (5) Ship New Construction Training with Lloyd’s Register;
- (6) Corrosion with Australian Coating Association;
- (7) Training on Inspection of Tank Coating/ Protective Coating Quality Control with Australia Coating Association;
- (8) Ship Survey with the China Classification Society;
- (9) Shaft Alignment Training with Lloyd’s Register; and
- (10) Non-Destructive Test with China Classification Society.

68. Mardep has implemented a checking system by means of audit check to monitor the performance of the SIs. Under that system, each SI will be audited by his senior twice a year by way of assessment during the inspections carried out by the SIs. An audit check report or record would be compiled and filed.
69. Further, the SI's performance would also be checked during the internal audit of the LVS described above.
70. As for the professional development of the SIs:-
- (1) Career postings – the Grade Management arranges career postings, in which ASIs, SIs and SSIs will change posts every 2-4 years, 3-5 years and 4-6 years respectively.
 - (2) Promotion – subject to availability of vacancies, the most suitable ASI with sufficient experience/knowledge and good conduct/leadership will be promoted to SI; thereafter to SSI; and then Chief SI.
 - (3) Further advance to Ship Surveyor/ Shipping Safety Officer – Mardep provides training assistance in form of reimbursement of tuition fees to its officers for career development. Outstanding SIs, who put in extra effort in achieving the academic qualifications required, would be advanced to the Ship Surveyor/Shipping Safety Officer grades.

C. Life-saving appliances

71.

72.

(C.1) Evolution of the regime concerning life-saving appliances for local vessels

73. Prior to the enactment and coming into force of the Merchant Shipping (Local Vessels) Ordinance (Cap.548) and its subsidiary legislation Merchant Shipping (Local Vessels) (Safety and Survey) Regulation (Cap. 548G) in 2007, the criteria for life-saving appliances on local vessels were established by the Director on the basis of the then prevailing local conditions. Those requirements were mainly set out in Chapter VI of the Blue Book [Marine8/1/1782-1784] and the 1995 Instructions [Marine8/2/1854-1856] respectively.
74. Passenger safety being one of the foremost concerns of Mardep, the adequacy of the life-saving appliances on board local vessels was reviewed from time to time, cumulating in the enactment of Cap.548G which, together with the promulgation of the CoP thereunder, updated and tightened the local vessel regime.

(C.2) Main features of Cap. 548G/ CoP concerning life-saving appliances

75. Section 32(1) of Cap. 548G sets out the general principle that all life-saving appliances on board a local vessel shall be:-
- (1) sufficient to ensure safety of persons on board the vessel;
 - (2) properly maintained;
 - (3) regularly inspected;
 - (4) fit for the function intended; and

- (5) in good and serviceable condition.
76. Section 32(2) prescribes, through Schedule 3, specific requirements for different classes of local vessels. Since Lamma IV is a Class I vessel, the “General Requirements” in Part 1 of Schedule 3, as well as the “Specific Requirements” in Tables 1 and 2 in Part 2 of Schedule 3, apply to it.
77. Although Class I vessels include (amongst others) (a) launches (the category which Lamma IV belongs to); (b) ferry vessels as defined in section 2 and licensed by the Commissioner of Transport under section 28 of the Ferry Services Ordinance (Cap.104) (which Sea Smooth belongs to), and (c) Class I vessels which satisfy the definition of “high speed craft” in section 2(1) of the Merchant Shipping (Safety) (High Speed Craft) Regulation (Cap.369AW) (incorporated through section 9 of the Merchant Shipping (Local Vessels) (General) Regulation (Cap.548F)), there is no distinction between these 3 types of local vessels in terms of requirements for life-saving appliances.
78. The key requirements prescribed by Part 1 of Schedule 3 are that:-
- (1) Every life-saving appliance on board must be (i) in working order; (ii) ready for immediate use; and (iii) placed in a position readily accessible (reproduced in paragraph 4.1 in Chapter VII of the CoP);
 - (2) Each life-saving appliance must be replaced before its expiry date (if applicable); and
 - (3) Information concerning the general arrangement of the vessel, the seating arrangements and escape routes, the types and dispositions of (among other things) life-saving appliances, and the instructions to be followed in case of an emergency should be displayed in conspicuous places on board.

79. Tables 1 and 2 in Part 2 of Schedule 3 set out the quantity of life-saving appliances on board. These requirements are similar to those prescribed in the International Life-Saving Appliances Code adopted by the International Maritime Organization by resolution MSC. 48(66) (“LSA Code”).

80. I will now consider the specific types of life-saving appliances.

(C.2.1) Lifejackets

81.

82.

(C.2.2) Lifebuoys

83. Table 2 in Part 2 of Schedule 3 to Cap. 548G prescribes the minimum number of lifebuoys for a Class I vessel whose length (for such purpose one refers to the length) exceeds 24 meters (i.e. Lamma IV) to be 12. This in fact is a higher minimum requirement than that stipulated in paragraph 1.1 of Regulation 22 in Chapter III of the International Convention for the Safety of Life at Sea (“SOLAS”), which applies to ocean-going vessels on international voyages.

84. Mardep has only ever accepted lifebuoys which satisfy the requirements of SOLAS. Such lifebuoys would be clearly marked with “CCS inspected in accordance with SOLAS” or “UK DTI accepted” which could easily be identified during inspection.
85. Paragraph 9.1 in Chapter VII of the CoP provides that lifebuoys shall be so distributed as to be readily available on both sides of the vessel and as far as practicable on all open decks extending to the vessel’s side, and that at least one lifebuoy shall be placed in the vicinity of the stern. Paragraph 9.2 further provides that lifebuoys shall be so stowed as to be capable of being rapidly cast loose and not permanently secured in any way so they can be allowed to float free.
86. Table 1 in Part 2 of Schedule 3 to Cap. 548G also requires that a Class I vessel within length in excess of 12 meters (such as Lamma IV) has to be fitted with 2 buoyant lifeline, and paragraph 2.6 in Chapter VII of the CoP sets out that they should be attached to lifebuoys and placed in locations in the proximity of the sides of the vessel.

(C.2.3) Life rafts

87. Under Part 2 of Schedule 3 to Cap. 548G, a Class I vessel like Lamma IV is not required to have a life raft on board. That requirement is only stipulated for Class II vessels operating within the river trade limits and Class III vessels (fishing vessel) plying in Hong Kong waters.
88. Where life rafts are required to be installed on board, the requirements in paragraphs 4 to 8 in Chapter VII of the CoP would apply.

(C.2.4) Tools to break open windows

89. There is no requirement in Cap. 548G for local vessels to be equipped with tools or instruments to break open sealed window. Indeed, there is no such requirement under Chapter III of SOLAS either since breaking

open sealed windows is not considered to be appropriate for ocean going vessel from a safety point of view as an open window would enable or facilitate water ingress which may increase the risk of progress sinking.

(C.3) Enforcement of life-saving appliances requirements

90. The requirements for life-saving appliances are enforced in accordance with Cap. 548G and the 2006 Code through the final inspection which has to be undertaken every year.
91. Further, even after the issuance of the certificate of survey the LVS and HPS would carry out random spot checks from time to time to ensure that the vessels continue to comply with the stipulated requirements. Failure to comply may result in prosecution against the owner, his agent and the coxswain under section 32(3) of Cap. 548G.
 - (1) For spot checks carried out by the LVS, see above.
 - (2) The HPS is an operational unit of the Mardep for maritime legislation enforcement, traffic regulation and maritime emergency response within Hong Kong waters, as well as monitoring of marine works and handling of complaints. The HPS carries out inspections on vessels on a regular basis and takes prosecution actions against detected offences. In 2012 HPS carried out 16,000 inspections (of which 8,959 involved local vessels and within that 701* involved Class I passenger vessels). Five cases of offence relating to life-saving appliances were detected by the HPS in 2012 (3 of which involved Class 1 vessels) and prosecution actions are underway.[* - *Within 701 inspections on Class I vessels, 304(6) were made from January to September and 397(147) from October to December. The surge of inspection on Class I vessels from October to December was due to the request made by Shipping Division following the*

Lamma IV incident. The numbers in bracket indicates inspection covered counting of LSAs.]".

92. In the case of lifejackets, although paragraph 9(1) in Schedule 8 to Cap. 548G provides that the new requirements (100% adult plus 5% children) should come into force in January 2008, Mardep has not strictly enforced that requirement in the case of Class I vessels since a substantial number of their operators are small-scale operators (one-man or two-men operations) and they have lobbied very hard that the proposed change would impose a very heavy financial burden on them (since it is not a merely matter of buying more lifejackets but the arrangement on board would have to be changed too to accommodate the increased number) and might drive many of them out of business altogether. Having regard to the practical reality in relation to a substantial number of operators, for existing vessels Mardep did not insist on full compliance with the new requirement on the number of lifejackets, and instead encouraged the owners to gradually increase the numbers to meet the requirement.
93. Since the incident on 1 October 2012, Mardep has in meetings with the trade unions and operators impressed upon them the need to strictly comply with the lifejacket requirement. To date all Class I ferries have complied with the new requirement. As for the other Class I vessels, Mardep has been following and reviewing the situation closely to ensure that the requirement would be complied with.

(C.4) Safety procedures broadcast

94. The requirements for safety briefing for passengers are set out in Annex U-5 of the CoP [Marine11/3663].
95. Paragraph 1 of Annex U-5 requires 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 case of emergency.

(C.5) Emergency and evacuation procedures

96. Paragraph 5 in Chapter II of the CoP requires (amongst other things) the submission of a safety plan showing the arrangement of life-saving appliances, fire-fighting appliances, light and sound signals, means of escape, escape installation and arrangement.
97. Every Class I vessel carrying more than 100 passengers is required, under paragraph 6.2 in Chapter II of the CoP, to exhibit its safety plan in conspicuous places on board.
98. In some cases (though it is not mandatory for Class I vessels), the safety plan would also include a muster list indicating the emergency procedures covering man overboard, fire and the abandon of ship, and the duties of the individual members of crew during the emergency.
99. All Class I vessels are required, under Table 3 in paragraph 7 in Chapter II of the CoP, to carry out fire drill and abandon ship drill as part of their annual final survey, which has to be carried out to the satisfaction of the attending SI.

(C.6) Review of the current system since the Lamma Island collision incident

100. Since this collision incident, Mardep has decided to review the current system in place for life-saving appliances and procedures on board local vessels.
101. In relation to lifejackets, Mardep believes there are areas on which improvement are called for:-

- (1) The format of the certificate of survey in relation to lifejackets is confusing, since it is not apparent whether it states the statutory minimum required or the actual number on board, and the use of “*” to designate compliance also generates confusion;
 - (2) It appears that not all lifejackets on board a vessel are printed with the name of that vessel, which increases the possibility that lifejackets may be moved between different vessels owned by the same company and that at any one time all of the vessels may not have all the lifejackets on board as required by Cap. 548G;
 - (3) The current practice of moving the lifejackets to a central location for easy counting during final inspection may facilitate moving of lifejackets between different vessels owned by the same company.
102. Four meetings have been set up with the stakeholders (trade unions and operators) to discuss issues relating to safety requirements for local vessels. The review is still under-way, but so far the following areas of improvement have been identified and new requirements or steps are suggested to or have already been put in place:-
- (1) **Revising the format of the certificate of survey to make clear that it only states the statutory minimum required and will substitute the use of “*” with numbers.**
 - (2) **Requiring ship owners to print the name of the vessel on each of the lifejackets on board.**
 - (3) **Revising the practice for checking of lifejacket stowage in final inspection so that the lifejackets will be inspected by SIs in situ to ensure that they are properly stowed in easily accessible locations and that the lifejackets are actually on**

board and not moved from some other location or another vessel.

- (4) Increasing the number of children's lifejackets on board (in addition to the 5% required in Cap. 548G), and so far those increases range from an additional 3% to 5% (i.e. making it 8% to 10% respectively). Mardep is considering introducing a requirement that in addition to the minimum of 5%, Class I vessels should be required to ensure that the quantity of children's lifejackets on board every voyage should match the actual number of children carried on board.
- (5) Requesting ship owners to provide more signs designating the location of lifejackets on board.
- (6) Standardizing emergency signage on board by adopting the IMO signs, which Mardep would circulate to vessel operators for adoption.
- (7) Requiring all the ferry vessel operators to install hammers in the passenger cabin for breaking the fixed windows in case of emergency.
- (8) In relation to safety demonstration:-
 - (a) Requiring demonstration, either by crew personally or through graphic display on printed materials, of how lifejackets are donned on board all local vessels and, possibly, also requiring installation of video facilities on board local vessels for safety briefing and demonstration purposes and a personal demonstration by crew as part of the requirements in the annual final survey of local vessels; and

- (b) Requiring all piers to broadcast via video (where the pier is fitted with such facilities) or put up posters (where the pier has no video facilities) demonstrating the donning of lifejackets.

(9) In terms of emergency procedures:-

- (a) Mardep is considering the requirement that Class I vessels should be required to devise muster lists and to designate crew to undertake specific emergency duties in accordance with pre-set emergency procedures; and
- (b) Mardep will require operators to increase the frequency of training of the crew to conduct emergency drills to a bi-monthly basis.

- (10) Seats on board, which may pose danger to passengers in case of accidents, are requested to be properly secured and installed.

103. There are now produced and shown to me marked “WWC-20” copies of the minutes of meeting held on 11 October 2012, 19 October 2012, 21 November 2012 and 19 December 2012.

D. Other changes under review to improve passenger safety on board

104. In addition to the above, Mardep proposes to consider and implement the following steps towards improving maritime safety.

105. First, Mardep proposes to strengthen its communication channels with the industry to facilitate and enhance safety issues promotion and enforcement. It proposes to enlarge the membership of the Sub-committee on Survey Works of Local Vessels by inviting more stakeholders as observers and expert advisors to participate therein. It also proposes to organize an annual visit to the safety equipment

manufacturers in the Mainland with the trade to help enhance their knowledge and know-how on the latest products and technologies.

106. Secondly, Mardep proposes to introduce further training and refresher courses for coxswains operating local ferries, launches and kaitos. This will be addressed in the Witness Statement of Lai Ying Keung.
107. Thirdly, Mardep has since introduced requirements during fireworks displays and other major events (any event at sea or sea-front which requires the closure of a portion of the waters and will draw a large number of vessels to view the event itself, such as fireworks displays, pyrotechnic displays or of a similar nature) in Hong Kong waters that (i) all children age 12 years or below on board any vessel being engaged in viewing the event are required to don lifejackets at all times, and (ii) before the start of the voyage for the event, a passenger list containing the names of all passengers and crew onboard should be maintained and kept by the masters/coxswains for emergency purposes.
108. I confirm the contents of this 2nd Supplemental Witness Statement to be true to the best of my knowledge, information and belief.

Dated this 8th day of February 2013.



WONG WING CHUEN

COMMISSION OF INQUIRY
APPOINTED PURSUANT TO SECTION 2
OF THE COMMISSION OF INQUIRY
ORDINANCE (CHAPTER 86) ON 22
OCTOBER 2012

**2ND SUPPLEMENTAL WITNESS STATEMENT OF
WONG WING CHUEN**

Dated the 8th day of February 2013

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