

PART V CONCLUSIONS

18. FINDINGS

The Inquiry carried out by the inspectors has covered great detail. It includes events immediately prior to the collision, the collision itself and the search and rescue operation. The inspectors also carried out detailed research into events and actions which took place some years prior to this tragic incident which have a bearing upon it.

It is inevitable in an accident such as this, when one of the main witnesses sadly loses his life, that a certain amount of supposition must be taken into account. However, the supposition followed is based on proven theories and the wide experience of those carrying out the inquiry and investigation. I consider that the findings given in this section of the report are a true reflection of the actual events which occurred on that night.

The investigation followed every possible avenue and the inspectors' findings are consistent with good, unbiased investigatory work. Their findings clearly identify not only the immediate cause of the casualty but a number of factors which were contributory to that immediate cause.

The inspectors' final finding that there was no wilful misconduct in either vessel contributing to the collision, foundering or the loss of life is fully borne out by the preceding sections of this report, and I make no recommendations for any disciplinary action to be taken.

The findings of the inspectors who carried out the Inspector's Inquiry are as follows:-

- 18.1 The loss of the lives of the Skipper and 50 passengers from the MARCHIONESS was a direct result of her foundering, and her foundering was a direct result of collision with mv BOWBELLE.
- 18.2 The collision took place within a few seconds of 0146 hrs BST on 20 August 1989, just above Cannon Street Railway Bridge and near the middle of the river.
- 18.3 The collision occurred because neither vessel observed the other until too late. The salient point which stands out from the evidence is that no one in either vessel was aware of the other's presence until very shortly before the collision. No one on the bridge of BOWBELLE was aware of MARCHIONESS until the collision occurred.

The immediate cause of the casualty was therefore failure of look-out in each vessel.

18.4 The principal contributory factors were that:-

visibility from the wheelhouse of each vessel was seriously restricted;
both vessels were using the middle part of the fairway and the centre arches of the bridges across the river;
clear instructions were not given to the forward look-out in BOWBELLE.

18.5 Further probable contributory factors were:-

the strength of the tide;
the phenomenon of hydro dynamic interaction.

18.6 Further possible contributory factors were:-

insufficiently conspicuous navigation lights on each vessel;
noise from the disco party on board MARCHIONESS;
tiredness of MARCHIONESS's Skipper.

18.7 In each vessel, the restricted visibility was caused by the position and design of the wheelhouse and stemmed from inadequate consideration of the needs of the navigator, at the design stage in BOWBELLE and at the time of conversion in MARCHIONESS.

18.8 Despite the difficulties, it was possible in each vessel for look-out to be maintained if sufficient positive steps were taken. Some steps were taken but they were not sufficient to provide for a fully adequate look-out in either vessel.

18.9 BOWBELLE was using the centre arches because by the standards of the River she is a large ship, and it was normal and proper for her to do so. MARCHIONESS probably used centre arches initially because she was overtaking HURLINGHAM, another passenger launch bound downriver; despite the Collision Regulations, by common practice in the River there was no bar to her using the centre arches if the fairway was clear, as her Skipper evidently thought it was.

18.10 Until shortly before the collision, the two vessels were heading on parallel courses which, had they been continued, would have led to BOWBELLE overtaking MARCHIONESS close but safely. Within about half a minute before impact, however, their courses began to converge. The reasons for this cannot be fully established with certainty, but the convergence was most probably initiated when MARCHIONESS had cleared Southwark Bridge and BOWBELLE was passing through it. At this stage, as BOWBELLE's bow emerged from the bridge, she made a small alteration of course to starboard in order to accommodate a planned alteration to port so as to line up for transit of Cannon Street and London Bridges. The vessels were then about 50 metres apart (BOWBELLE's bow to MARCHIONESS's quarter) and at the same time MARCHIONESS's heading altered to port; this may have been because of the first effects of interaction between the two vessels or possibly as an indirect result of tidal eddy, or a combination of both.

- 18.11 This yaw to port could have been rectified; but it is most probable, taking account of the slight bend in the River, that MARCHIONESS's Skipper saw the centre arches of Cannon Street and London Bridges in line ahead and steadied on the new course to pass through them. It appears clear from the evidence that at this stage he was still unaware of BOWBELLE's presence.
- 18.12 On their now converging courses, the vessels came so close that in MARCHIONESS control was lost due to interaction and the vessel sheared strongly to port across the tide which set her on to BOWBELLE's bow. There was probably an initial relatively light impact on her port quarter, and she pivoted so that she came roughly broadside on to the path of the larger ship. In this position a second, heavy, impact was inevitable, which rolled the launch over on to and beyond her beam ends. As a result she flooded rapidly overall and sank, probably within about a minute of impact.
- 18.13 The alarm was raised immediately by the HURLINGHAM and a Search and Rescue operation was begun at once, and was carried out with commendable efficiency under the direction of Thames Division of the Metropolitan Police. 80 people survived, the majority being picked up by the HURLINGHAM and by Police launches.
- 18.14 When MARCHIONESS was first noticed by the look-out in BOWBELLE he made no report, for his instructions were to report vessels only if he considered that hazard existed and at that stage, even though the vessels were already close, their courses had not begun to converge and therefore no hazard was evident. When he did recognise danger and shouted a warning he was not heard, because of the noise of the disco party in progress on board MARCHIONESS.
- 18.15 It is probable that MARCHIONESS had been seen from BOWBELLE at a relatively early stage but not recognised for what she was, perhaps because of the proliferation of other lights. It is unlikely that this is relevant to the collision as she was probably only visible from the fo'c'sle and the look-out on duty there, in accordance with his instructions referred to in the preceding paragraph, would only have reported her if he had considered that hazard existed. It is possible that BOWBELLE was seen at a distance but not noticed, also because of the background of other lights; and not seen when close at hand because her navigation lights were insufficiently visible, due to their placing and her construction. However, she would have been visible to a careful and searching look. There is no suggestion that either vessel was not showing the lights as required.
- 18.16 Proper information was broadcast by BOWBELLE about her passage downriver, and broadcasts were also made by Woolwich Radio; a total of five broadcasts in all, though only two of them were made while MARCHIONESS was on passage. It is possible that the messages were not heard by MARCHIONESS because of the noise made by the disco party.
- 18.17 It is possible that MARCHIONESS's Skipper was less alert than usual because he had already undertaken one disco cruise that night. His concentration may also have been affected by the noise of the disco.
- 18.18 Both vessels were properly certificated, in sound condition, and manned in accordance with the appropriate requirements. In both vessels the bridge or wheelhouse was properly manned.

18.19 Both vessels were proceeding at a speed which was consistent with the requirements of the Collision Regulations and PLA Bye-laws.

18.20 There was no wilful misconduct in either vessel contributing to the collision, the foundering or the loss of life. In as much as personal fault was responsible for the accident, that fault lies jointly with those in direct charge of the two vessels at the time and with those responsible for both the perpetration and the acceptance of their faulty design. It is neither practicable nor desirable to identify every individual concerned as the faults go back over a period of 25 years.

19. RECOMMENDATIONS

Based on the Inquiry into the accident and the findings of the inspectors, the following recommendations are made which, if implemented, will prevent recurrence of such an accident and generally improve the safety of life at sea.

Almost immediately after the accident, steps were taken to require launch skippers to report the number of passengers on board at the time of sailing and to make a safety announcement describing emergency procedures; and the Department and PLA increased respectively their inspections of passenger launches and their patrols of the River.

This action was later followed by the publication of six recommendations which were forthcoming from the Interim Report issued in September 1989. Those recommendations have been somewhat revised to take account of the completed investigation and are included in this section in their revised form and marked with a #.

A number of the recommendations are also considered to be most urgent, in the context of the accident; these are marked with an *.

Finally, some matters considered in the course of the investigation call for attention and have therefore led to recommendations even though, upon examination, they did not prove to bear upon the accident. It follows that the list below must not be read in isolation as an indication of causative factors.

The name in brackets which follows each recommendation is the organisation to whom that recommendation is addressed.

- # * 1. In all vessels of more than 40 metres in length with wheelhouse aft navigating in the River Thames above the Thames Barrier, a look-out should be stationed forward at all times. He should be instructed to report all sightings and should have communication with the wheelhouse, preferably by telephone or if no telephone is fitted by UHF/RT. (The Department and PLA)
- # * 2. All vessels of more than 40 metres in length navigating in the River Thames above Cherry Garden Pier by night, should carry a light suspended over the bow or, alternatively, a light on each side illuminating the bow but shielded so as not to impair visibility. This should be in addition to the lights at present required. (The Department and PLA)
- # * 3. Those in charge of Thames passenger launches should be strongly reminded of the vital need to look frequently astern and to keep continuous radio watch on VHF Channel 14. Routine traffic messages broadcast by TNS Woolwich should be monitored while the launch is alongside, prior to departure. (PLA and Launch Operators Association)
- # * 4. The existing guide-lines on navigational bridge visibility for sea-going ships should be enforced if necessary by Regulations. While in the long term the aim should be to develop requirements which apply internationally, action in respect

of United Kingdom ships should not await international agreement: provided that the requirements are set out clearly so that they can be taken into account at the design stage, they should not penalise domestic owners. (The Department)

- * 5. Regulations should be introduced requiring minimum standards of visibility from the steering position of passenger launches. (The Department)
6. The Report submitted by the consultant "The MARCHIONESS Inquiry - Relevant Human Factors" will be submitted to Marine Directorate of the Department of Transport, and its recommendations should be examined; a submission to the International Maritime Organization should be considered when the examination is complete. (The Department)
7. Trials should be carried out to test various possibilities for improving stern lights. (The Department)
- * 8. Means should be adopted to ensure that in small passenger vessels the sound level in the wheelhouse does not exceed 75 dBA, even when a disco party is in progress. Where a noise limiting device is necessary, it should be a surveyable item, and the need for it to be kept in operation at all times should be most strongly impressed upon Skippers. (The Department, PLA, Launch Operators Association and Port Health Authority)
- * 9. In vessels on board which disco parties are held, provision should be made for all disco sound to be cut out when safety announcements are to be made. (The Department, PLA, Launch Operators Association and Port Health Authority)
- * 10. Navigational broadcasts made by Port Authority radio stations should be preceded by an alerting tone. (The Department, PLA and British Ports Federation)
11. The investigation now in progress of VHF reception in the Thames should be actively pursued with the aim of ensuring that reception is satisfactory in all vessels regularly using the upper tidal reaches. (PLA, Launch Operators Association and Company of Waterman and Lightermen)
- * 12. In addition to their minimum operational crew, passenger launches should be required to carry persons trained in emergency procedures, the number required to be linked to the number of passengers actually carried at the given time. These additional persons could be bar or catering staff. (The Department)
13. All launches on the tidal Thames when carrying passengers should be commanded by a man who is, at least, fully qualified as a Waterman. (The Department and PLA)
14. Minimum medical standards for Thames Watermen should be drawn up, especially with respect to sight and hearing. (The Department and PLA)
15. For small passenger vessels elsewhere, the Boatman's Licence should be given statutory status and made the minimum requirement for the Skipper, and its syllabus should be revised. (The Department)

16. Consideration should be given to extending the London Pilotage area to include all parts of the River used by sea-going ships. Exemption Certificates should only be granted under strict conditions. (The Department and PLA)
17. The development by the Department of Regulations to cover permissible hours of work should be pursued and should cover persons operating river craft as well as sea-farers. Pending the development of requirements, passenger launch operators should ensure that crews do not undertake two successive cruises on the same night. (The Department, PLA and Launch Operators Association)
- # * 18. Vessels in the Thames should keep as far as possible to the starboard side of the fairway, even when the fairway is thought to be clear. Rule 9 of the Collision Regulations should be strictly enforced in the River. (PLA)
- * 19. A signalling system to control traffic through Thames bridges should be developed and brought into operation as soon as possible. (The Department and PLA)
20. A full review should be carried out of the requirements for Class V vessels relating to stability and construction. Particular attention should be paid to ensuring adequate escape arrangements. (The Department)
21. Provision should be made for military helicopters engaged in rescue operations to be able to communicate directly with Police. (The Department and MOD)
- * 22. Military helicopters designated for SAR work should carry infra-red heat-seeking equipment. (The Department and MOD)
23. Revision of the Port of London Emergency Plan POLACAP, which is now in progress, should ensure that its application to craft in the upper tidal reaches is made clear. (PLA)
24. A further review of life-saving appliance requirements for Class V vessels should be made before the draft regulations are submitted for consultation. (The Department)
25. South Coast Shipping Ltd should appoint a specific senior person ashore to have responsibility for technical and safety aspects of the operation of their ships, as recommended in Merchant Shipping Notice M.1188. (South Coast Shipping Ltd)
26. The Department of Transport should make every effort within their power to ensure that compatibility with good operational practice is the first consideration in the design of ships and the provision of their equipment; and should use their influence to foster this approach throughout the maritime community, both in the United Kingdom and at IMO. (The Department)
- # 27. These recommendations should be transmitted to Port Authorities in the United Kingdom generally for their consideration, as a number of those which at present are directed towards the River Thames may also be relevant to other areas. (The Department and British Ports Federation)