

14. CONCLUSIONS

i. Establish the value and credibility of PLA Notice to Mariners U6 of 2002 (the Rowing Rules) and whether, as drafted and applied, they:

- § **constitute an effective regulatory framework; and**
- § **as a risk control, contribute effectively to reducing the identified risk to As Low As Reasonably Practicable.**

14.1 The value and credibility of PLA Notice to Mariners U6 of 2002 (the Rowing Rules) is reduced greatly by both apparent conflict between its requirements and those of the Collision Regulations and by its drafting, presentation and promulgation. Notice U6 of 2002 sits within an interwoven regulatory framework of Notices, Directions, Byelaws, Acts and guidance whose fragmented nature and presentation severely reduces the effectiveness of promulgation and understanding amongst river users.

14.2 The regulatory basis of the Rowing Rules is severely weakened by apparent conflict between them and the Collision Regulations over positioning of vessels on the river. This conflict with opposing streams of traffic on the same side and place on the river increases the risk of collision to a level above that acceptable. The regulatory basis is also weakened by inherent conflict within the Rowing Rules: positioning of opposing traffic streams on the same side of the river (as drafted) and ambiguity at the change of tide leading to direct conflict. They are hard to justify in on a regulatory basis.

14.3 The Rowing Rules are not applied as drafted, with most rowers proceeding with the stream following the centre line rather than the starboard side of the fairway. This mitigates the inherent risk amongst rowers and is not enforced by PLA launch service personnel for this reason.

14.4 The perception of conflict between the COLREGS and Rowing Rules is increased by ambiguity within the Regulations and by confusion in application, with regards actions taken where risk of collision exists, especially a head on situation. There is no actual conflict between the two sets of regulation on this aspect.

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- 14.5 The apparent regulatory conflict over position and direction on the river, between rowers and other vessels may be reduced or removed dependent on the definition of the channel and whether rowing vessels are able to navigate outside the channel. This is not possible at some locations, particularly the river past Syon crossing, at the permanent pinch points and would be tidally constrained at others.
- 14.6 As a risk control measure the applied Rowing Rules increase the risk of collision between rowers and other craft. This is particularly so at pinch points but can occur anywhere; this is exacerbated by loose application by rowers with regards position on the river.
- 14.7 The Rowing Rules do reduce the risks to rowers from identified physical hazards on the sides not currently rowed, predominantly the Middlesex bank.
- ii. **Determine how well the present PLA Rowing Rules and ARA Safety Rules are understood and applied by:**
- **Rowing Clubs, their Safety Representatives and Coaches;**
 - **Practicing rowers on the water;**
 - **Class V passenger vessel operators in the area;**
 - **Other leisure craft – both powered and non-powered;**
 - **PLA employees working in the area.**
- 14.8 The level of understanding of the Rowing Rules varies amongst user groups. Interviewed Rowing Club representatives and coaches were found to have a generally high level of understanding of the positioning and crossing points within the Rowing Rules, with the exception that several instances were found where the use of the centre line was advocated instead of the starboard side as drafted for rowers going with the stream. It was also found that knowledge could be very localised with failure appreciate changes to the Rowing Rules where they affected stretches other than those most often rowed.
- 14.9 PLA employees working on the river were fully aware of the Rowing Rule requirements and of the discrepancies in practice. Similarly, Class V operators demonstrated an excellent knowledge of the required tracks, crossing points and general requirements.

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- 14.10 Other user groups had less and in some cases no knowledge of the Rowing Rules even when attention had been drawn to them by this study. This was accompanied by general confusion and increased apprehension as to actions of encountered rowers, both through ignorance of the Rowing Rules and inappropriate action by rowers to avoid collision. Visitors and casual users, both rowers and powered, were held to have less awareness of the Regulations or appreciation of the needs of the other users or the characteristics and hazards of the river. Generally the user groups were most familiar with the Rules specific to them; i.e. power vessel operators with the COLREGS and rowers with aspects of the Rowing Rules. Poor promulgation of the Rules was recurrent theme.
- 14.11 Levels of application of the Rowing Rules and wider COLREGS varied much more. Whilst there were many examples of rowers acting in accordance with the Rowing Rules we have noted exceptions to most requirements both of the Rowing Rules and the wider regulations. It is generally acknowledged that there has been a dip in standards on the river both of knowledge and application of the Rules and general river knowledge. Within the rowing community loss of the traditional knowledge base and user profile appear contributory. There was an identified groundswell amongst the rowing bodies to acknowledge and address this failing, but this has yet to fully materialise amongst the rowers. This also needs to encompass a culture change to address issues such as foul language and balking, representative of a polarisation amongst some parties.
- 14.12 We have considered application of the wider COLREGS by all river users. As well as inappropriate action to avoid collision (under the COLREGS) another recurrent theme both during interviews and review of accident records is the keeping of a proper lookout. Whilst recommended practice varies the level of knowledge appears higher than practice. This issue is fundamental and is felt causative of many incidents irrespective of the rules being followed. The rowers do not sufficiently compensate for the inherent weakness of rowing boat design in this respect; particularly on the dynamic river environment.
- 14.13 Poor promulgation and presentation are held as contributory to the present levels of knowledge.
- 14.14 Whilst knowledge by the PLA staff of the Rules and Regulations was high enforcement had lowered. This was partly symptomatic of weakness of the Rowing Rules as a risk control as drafted and a lack of belief in their regulatory strength. This has probably been contributory to the apparent lowering of standards on the river.

- iii **Determine whether the overall safety of navigation for all river users between Putney and Teddington is better achieved by continuing with some form of Rowing Rules, including the modification to Rule 9 (a), or by withdrawing the Rules and reverting to the International Regulations for Preventing Collisions at Sea (1972).**
- 14.15 This finding depends very much on the understanding and limits of the channel being considered and on the status of any Rowing Rules. The study identified that the present Rowing Rules as understood and applied increased the risk of collision and could not be supported as Regulation in their present form. Doing nothing is not a suitable option.
- 14.16 The assessed level of risk posed by identified physical hazards is dependent on distance from them. Differing interpretations of the requirement to be “as close to the starboard side of the channel / fairway as practicable” appear at least in part responsible for differing risk assessments if reversion to the COLREGS is considered. The different interpretation is exacerbated by lack of definition of the narrow channel or marking of its limits the river. Rowers with a shallower draft will tend to be closer to the bank than most other river users if required to be on the edge of the channel. Some form of mitigation is required for the risks introduced to rowers by physical hazards avoided under the present Rowing Rules. The avoidance of physical hazards is the only justification for special rules for rowers.
- 14.17 By definition Rule 9 of the COLREGS applies to vessels following a narrow channel (whilst also imposing control over vessels intending to cross and of certain type / length using the channel). As long as they do not impede traffic constrained to such a channel vessels are able to operate outside the channel as best suits whilst in compliance with the wider COLREGS.
- 14.18 It is concluded that the best method of achieving overall safety of all river users will be to have the COLREGS in place as PLA Regulation for a defined narrow channel. Notice to Mariners U6 should be repealed. Alongside this guidance in the form of a Code of Practice for rowers should be established that within limits would permit but control the practice of “rowing the slacks”.

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- 14.19 The other option appears to be reversion to the right hand rule over the full width of the river. Pure physical mitigation of the hazards is as an option open to consideration. Options include permanent marking at the extremities of banks. This would probably reduce the hazard from the bank, but may present a further obstruction to be hit (by rowers in particular) and may constrain the passage of rowers. The practical application of whatever Rules are in place must also be considered. From all the evidence we believe that it will be extremely difficult to prevent rowers from operating some form of “working the slacks”. Without much increased and rigid enforcement it is assessed the rowers will continue to operate in this manner. This must be considered. It is therefore concluded that some form of instruction on navigation of rowers is required in order to control this practice rather than have it wholly un-regulated, for the safety of all users.
- 14.20 Apart from the navigational safety factors, the probable negative impact on the sport of rowing of constraining rowers purely to the starboard side of the river or within a narrow channel, should be considered.
- iv. If it is recommended that the Rowing Rules should remain part of the PLA’s regulatory framework, identify any changes to the Rowing Rules, which could be made to improve the effectiveness of the Rules, whilst being acceptable to all river users.**
- 14.21 If taken as not being the full width of the river the limits of the narrow channel should be specified. If the smoothed 1m contour is taken, as seen on PLA charts, the channel is a maximum of three vessels wide and passes through the main / central arch of all bridges, reducing to two vessels wide past the Syon crossing. If all vessels were required to follow this channel it is felt that there would be a negative impact on congestion of all traffic, with possible (though not evaluated) increased risk from overtaking situations to lessen the benefit from the right hand rule.
- 14.22 Rowing vessels keeping to the present defined routes would be able to keep outside such a channel at (most) states of tide, other than at pinch points, i.e. without conflict with the COLREGS, provided positioning is better adhered to and overall application increased (lookout in particular).

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Under bridges where the main channel has to be used there are a number of options:

- Define and mark the channel limit on the bridge.
- Where there is sufficient width for multiple passage including outside the channel passage remains as above.
- Rowing vessels are made to use the starboard side – this would increase crossing of the channel, and risk during crossing.
- Rowing vessels proceed with caution (area indicated on the bank) and avoid impeding the passage of any vessel following the channel – i.e. wait until clear.

14.23 Improved understanding and application of actions to avoid collision. Particular emphasis is needed on the actions in head-on situations to ensure all “power driven vessels” alter to starboard.

v. **In any event, identify any changes to other established risk control measures, or any new risk control measures, which could be applied to reduce further, the identified risks to life and navigation.**

14.24 The study identified shortcomings in several aspects including promulgation, interaction and cross-awareness of river users. This included the failure of effective user groups including the Teddington/Tower River User Amenity Group. Lack of identification of boats on the tideway was felt to be an issue, though amongst the ARA/TRRC this now appears to be in hand. The education of users, control of coaching boats and the standardisation and level of training of coaches were also identified as areas for improvement. The navigation lighting of boats was also found to be of concern, though whilst apparently improved over the recent term it is in need of better understanding and standardisation in practice. Recommendations have been made against all these subjects.

14.25 Awareness of physical hazards and of the location of crossing points was also hampered by lack of marking. Marking within the channel itself may be of benefit from one aspect but may introduce hazards to rowers (partly through lack of good lookout). Outside the safety aspect but worthy of consideration and would probably be is the impact on the sport.

- 14.26 Risks at crossing points may be mitigated by better promulgation regarding the location of these areas and advanced warning notices, including marking the actual crossing points on the adjacent banks. By ensuring rowers proceeding against the stream remain adjacent the bank, they will be outside the position of PDVS for a substantial section of the area reviewed. This must be achieved through better education and enforcement. Where risk of collision does exist action of both vessels in accordance with the COLREGS (and specified in the amended Rowing Rules) would resolve the head on issue in most cases. Better education amongst all parties is the key to this issue, supported by enforcement. Improved enforcement both from the PLA and within the user groups is also required.
- vi. **Advise on how any revised Rules or new regulations could be more effectively promulgated to improve understanding and compliance from all parties. Suggest the most effective form the regulations should take.**
- 14.27 The study identified failings in the promulgation of the current Rowing Rules. The study process itself has increased awareness amongst users both of the present rules and shortfalls. This awareness must be built upon to ensure knowledge of whichever options are chosen.
- 14.28 Effective promulgation must start with a roll-out programme by the PLA of the final rules and regulations and continue through better access from PLA sources, including the website, physical entry points to the river system and wider environment. To this end a number of recommendations are provided including the use of leaflets, signage along the river and at key locations.
- 14.29 Suitable promulgation will not be achieved by the PLA in isolation, though. Disengagement of the various interests and polarisation of the user groups has contributed to the present situation. Recommendations are provided covering formation of a suitable river user group focussing on navigational safety issues, co-operation with the rowing organisations and other authorities both in the presentation of the rules/regulation and in production of joint or mutually supportive documentation. Improved coverage can also be achieved by measures including linking with associated web-sites, together with improving the PLA's own site, ease of use and visibility to leisure / non-commercial users. A number of recommendations are made.

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- 14.30 A Code of Practice has been recommended for control of navigation by rowers in addition to the COLREGS. A format similar to the MCA M-Notices would probably assist, with summary of the main points supplementing the detailed contents.
- 14.31 It is also felt that a (separate) single document should be produced that would incorporate all navigational requirements i.e. the navigational Byelaws incorporating the COLREGS and the Code of Practice. It is outside this remit but any streamlining of the Byelaws to address each topic area sequentially and prevent cross-referencing is recommended. An example is the EA rules for navigation document.
- 14.32 A streamlined “glossy” version should be provided, to include a diagram / map highlighting the main physical aspects and areas of operation for ease of use by leisure users.
- vii. If it is established that those parts of the ARA Safety Code relevant to navigating are not being heeded by a significant majority of rowers, make recommendations to the ARA, Thames Rowing Council and PLA as to how better compliance could be achieved.**
- 14.33 Promulgation of the ARA Water Safety Code was generally good. Understanding amongst senior members of the Rowing Community was also appropriate. The ARA Water Safety Code itself does not directly address the issues of prime concern, identified above. Recommendations are included in the promulgation of the rules or guidance.
- viii. Determine the effect the height of tide and tidal stream has on the application of the Rowing Rules (especially at busy periods at LW around Hammersmith).**
- 14.34 The state of tide affects the application of the Rowing Rules. The tidal height changes the nature of the physical hazards, increasing risk from flats and debris and introduces pinch points at Low Water. At low tide conditions the width of navigable water make an increase of collision likely through increased interaction of vessel types. At high tidal conditions, wash is increased and subsequent risks to rowing vessels in particular. At change over times, ambiguity results in the track to be followed and risk of collision increases. In practical terms this is generally mitigated by application of good practice.

ix. Establish if the wash normally created by power driven vessels between Putney and Teddington is greater than one would normally expect in a tideway with a speed limit of 8 knots.

14.35 Wash has not been found to be higher than expected with a speed limit of 8 knots. Failures across all user groups to appreciate the effects of wash or to respond appropriately appear to be the cause of several incidents and of general unease in this respect.

x. Determine if rowers are adequately prepared for the prevailing conditions (tidal stream, wave height, wash and weather).

14.36 Rowing craft have not been found to have substantially reduced in their river worthiness. The craft, particularly single and double (skull) are inherently liable to capsize periodically. Recommendations exist and are supported for enhancements to rowing vessel buoyancy. A number of other recommendations have also been made with regards physical safety.

14.37 Wash is a problem amongst the rowing community, resulting in swamping and occasional boat damage. The effects can be mitigated through more effective education and actions by rowers and non-rowers alike. Better situational awareness and consideration by all users is required.

14.38 Accident records show that a number of incidents occur because the rowers were not prepared or were caught out by the tidal stream and carried onto an obstruction. Whilst queries have been raised about suitability of certain boats / levels of experience the problem continues, including during this report period. This matter should be addressed to reduce the frequency of such incidences to as low as possible.

14.39 Full implementation of the risk-based approach promulgated amongst the rowing community is recommended and should enhance safety with regards the craft type and suitable use.

14.40 Night time rowing appears to have reduced but still features along with lack of or inappropriate navigation lighting. A number of ARA recommendations are in place already with regards lighting, personal safety of rowers and boat safety. These are shown in attachment H. This drive needs to continue.