

This document sets out the **Risk Assessment** for the Putney Town Regatta to be conducted on Saturday 17 May 2008. It has been prepared in accordance with the ARA Water Safety Code section 2.7.3 to identify potential safety hazards and to ensure that each is properly understood, identify existing safeguards and emergency plans, and identify whether additional action is required to reduce risks to a tolerable level. Risk in this context arises from the likelihood of an accident occurring causing injury as a result of a hazard. Risk reduces in direct proportion to the precautions taken.

For each hazard identified, the planned mechanisms to control (avoid) this hazard, and to mitigate (reduce its impact if it occurs), are listed. The **residual** risk is defined in terms of severity (“S”) and likelihood (“L”) on a scale of 1-3, with their product being the overall residual risk (“R”) factor, where:

- CONTROL = The preventative mechanisms planned to avoid this hazard
- LIKELIHOOD = The residual likelihood of this occurring, even after controls are in place { L1: Highly unlikely; L2: Unlikely; L3: Likely }
- MITIGATION = The reactive emergency mechanisms planned to reduce the impact of this hazard if it occurs
- SEVERITY = The residual impact of the risk occurring, even after mitigation is in place { S1: Slightly harmful; S2: Harmful; S3: Extremely harmful }
- RESIDUAL RISK { R1: Trivial risk; R2: Tolerable risk; R3 or 4: Moderate risk; R6: Substantial risk; R9: Intolerable Risk }

Where hazards were felt to benefit from specific examples, or where they change in likelihood over time (e.g. at different stages of tide), this information is shown in *italics*.

	HAZARD	CONTROL	L	MITIGATION	S	R
<b>COLLISION</b>						
A	Unfamiliarity or incompetence with Tideway navigation and/or conditions	<ul style="list-style-type: none"> <li>Regatta instructions, rules, circulation maps, safety plan, and ARA notice “To all clubs competing on the tideway” to be provided to all competing clubs with the results of the draw during the week before the event. In addition, each crew will receive reminder instructions and circulation maps with their race number upon registration. All competitors are expected to adhere to these instructions.</li> <li>Coxswains and steerspersons are the masters of their vessels. As such, they are expected to be familiar and competent with Tideway navigation (COLREGS, NTM U15 2006, The Code of Practice for Rowing on the Tidal Thames above Putney, “the Code”) and the range of Tideway conditions (e.g. waves, wind, debris, etc). Competitors are expected to be experienced in Tideway rowing and racing, comply with ARA Water Safety Code, the Code, Regatta Rules, heed all warnings, and have read their instructions. Masters of vessels whatever their age are responsible for navigation and coaches and clubs are advised only to enter competent persons as steerspersons. All masters of vessels must comply with the Col Regs Rule 5 (keep a good look out) at all times</li> <li>Non-Tideway-based crews in the draw will be identified by regatta organisers during registration to ensure they have understood the guidance for rowing safely on the Tideway.</li> </ul>	2		2	4

	HAZARD	CONTROL	L	MITIGATION	S	R
B	Collision of competitors during racing	<ul style="list-style-type: none"> <li>• See "A" above. The circulation maps identify the circulation pattern of competitors. Crews are expected to be competent.</li> <li>• Regatta Rules, Regatta Circulation Maps, Safety Plan, and ARA notice "To all clubs competing on the tideway" to be provided to all competing clubs</li> <li>• Since 1 April 2006 the Rules of Racing require clubs to distribute such information to individual crews.</li> <li>• Regatta Rules and circulation maps to be handed to each crew upon registration</li> <li>• Competitors are expected to be experienced in Tideway rowing and racing, comply with ARA Water Safety Code, Regatta Rules, heed all warnings, and have read their instructions. Masters of vessels (steersmen) whatever their age are responsible for navigation and coaches and clubs are advised only to enter competent persons as steerspersons.</li> <li>• Races are to be row-overs (one boat), two abreast or three abreast.</li> <li>• Umpires are to maintain strict control over crews, using their experience and judgement to determine when crews may safely deviate from following strictly the 'starboard hand rule'.</li> <li>• Umpires to be instructed to position their launches in the centre of the racing channel (when safe to do so) particularly when officiating over a three boat race.</li> <li>• Three abreast racing to be restricted by category of competitor and class of boat, as follows (all for both men and women): <ul style="list-style-type: none"> <li>○ Senior 2 in 4-, 4+ and 8o</li> <li>○ Senior 3 in 4+ and 8o</li> <li>○ Senior 4 in 4+ and 8o</li> </ul> </li> </ul>	1	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> <li>• Suitably experienced Umpires to officiate over all races, particularly those involving three crews</li> </ul>	2	2

	HAZARD	CONTROL	L	MITIGATION	S	R
C	Collision with other river traffic (e.g. non-competing crews, powered vessels, sailboats) during racing	<p><i>Examples of risks of collision with other river traffic include:</i></p> <ul style="list-style-type: none"> <li>• <i>Pleasure cruisers, Class V and powered vessels: these craft will be transiting through the regatta area. In theory, if they are “with the stream” they will either follow or go ahead of racing crews; if they are travelling “against the stream” they will pass oncoming racing crews port to port. However, the vessels may or may not know about the regatta, and they may or may not navigate or react properly. Also, as per PLA regulations, regatta personnel may not give navigational instructions to these craft, but can inform them of the regatta. These craft may be particularly prevalent on fair weather days, and may increase in frequency with the height of the tide</i></li> <li>• <i>Non-competing crews: rowers from local clubs will be out training during the day, and will need to use the Surrey bank, the Fairway, and may turn at almost any point. Also, they may, or may not, be aware of the regatta; and they may, or may not, navigate or react properly.</i></li> <li>• <i>Sailing boats: sailors may take to the river, and their navigation course usually takes them in zig-zag patterns across the river.</i></li> <li>• <i>Start &amp; end of ebb: Non-competing crews coming from Hammersmith towards Putney may mistakenly believe they are on a flood tide, in which case they will be rowing along the Surrey shore head-on towards marshalling racing crews. Similarly, if some are returning from Wandsworth, they plan (incorrectly) to continue in the fairway, when they ought to cross the river towards the Putney Embankment.</i></li> <li>• <i>End of ebb: the river is narrow, so crews racing downstream may find large craft opposing them going upstream but (incorrectly) on the Surrey side of the fairway, where the racing lanes are, as these craft seek deeper water.</i></li> <li>• <i>Ebb: non-competing crews returning to Putney from Wandsworth are expected to go through both bridges towards Middlesex then cross over towards the Putney Embankment via the gap between pier and moored boat. However this area may be crowded, and there is also the risk of collision with crews winding down at the end of a race.</i></li> <li>• <i>Start of flood: large craft heading towards Hammersmith but (incorrectly) on the Surrey side seeking deeper water may cause problems for other large craft or non-competing rowers that think the river is still on the ebb. This is not unique to the regatta, but may cause confusion, congestion and risk of collision if races are underway at the same time. Large craft heading towards Wandsworth should not present a problem, as they should happily be on the Surrey side of the channel, and umpires have a fair amount of room to starboard (Middlesex) to move racing crews if necessary</i></li> <li>• <i>Start/end of flood: other rowing craft may mistakenly think the river is on the ebb. If the</i></li> </ul>	1	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	3	3

	HAZARD	CONTROL	L	MITIGATION	S	R
		<p><i>craft meet below Putney Bridge, this should not be a problem, as all crews are expected to use right-hand-rule, regardless of tide, in that area. However, for crews coming towards Putney from Hammersmith Bridge, they may mistakenly come down the fairway, head-on into racing crews. Crews coming from Wandsworth thinking the river is on the ebb may attempt to cross after Putney Bridge towards the pier and embankment.</i></p> <ul style="list-style-type: none"> <li>• See “A” above. The circulation maps identify the circulation pattern of competitors and other river users. Crews are expected to be competent.</li> <li>• One lookout shall be posted near each end of the regatta course to identify any approaching craft. They must be located such that they can see craft in sufficient time to take appropriate action before the craft reach the marshalling areas, and must be competent to operate the regatta radio system. Upon spotting oncoming craft, lookouts will alert Regatta Control via radio, and if possible, inform the oncoming craft of the regatta and its course.</li> <li>• Umpires will positively confirm the course is clear before starting races, will delay races to allow the course to be clear, and will halt or redirect races as appropriate to avoid collision.</li> <li>• Timetables of the main scheduled vessels and the operator of Putney Pier (Livett’s) will be obtained and provided to the umpires.</li> <li>• Umpires to be given reminder of the COLREG “Sound Signals”</li> <li>• All Tideway rowing clubs will be notified of regatta via the TRRC website, Divisional Representatives, and e-mail from the PLA River Manager.</li> <li>• All Putney-based rowing and sailing clubs will be notified via one flyer each to their premises, addressed to the Captain and the Club Water Safety Adviser.</li> <li>• The Marine Channel (VHF Channel 14) will be monitored continuously throughout the event (e.g. emergency river traffic). Also, the start and finish of each session of racing will be announced via the Marine Channel.</li> <li>• All river users will be notified of the regatta via a Notice to Mariners (NTM U9 of 2008).</li> <li>• Competitors are required to adhere to COLREGS, PLA NTM U15 of 2006 and the Code, staying to the starboard station of the fairway, and follow umpire’s instructions.</li> <li>• Umpires to be instructed to position their launches in the centre of the racing channel (when safe to do so) particularly when officiating over a three boat race.</li> <li>• Particular vigilance and instruction will be required from the Umpire during a three boat race to ensure that the crews do not impede the channel.</li> </ul>	1	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	2

	HAZARD	CONTROL	L	MITIGATION	S	R
D	Collision with stationary items or obstructions during racing (e.g. moored boats)	<ul style="list-style-type: none"> <li>• See “A” above. The circulation maps identify key hazards. Crews are expected to be competent.</li> <li>• Racing will take place on the starboard station of the fairway, as described in instructions and circulation maps. Umpires will attempt to warn of any hazard, and competitors are expected to respond.</li> <li>• <i>For races on Ebb tide, a marshal’s boat will be positioned to identify and warn crews approaching the moored boats / Black Buoy</i></li> <li>• <i>Regatta organisers to avoid racing coxless sweep (2-, 4-) and coxless quad (4x) races on ebb tide, where possible</i></li> <li>• Umpires to review the wind/current conditions prior to and during a race, and adjust the competitors’ course or stop the race accordingly</li> <li>• If regatta organisers deploy a moored boat (e.g. as a start marshall near Harrod’s for ebb tide racing), it must be out of the fairway to comply with PLA regulations and be out of the way of powered vessels, but may be unexpected by non-competing crews. Thus, it should be manned and a lookout maintained, if possible, even while the tide is turning and/or it is not being used.</li> </ul>	1	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	3	3
E	Collision with stationary items or obstructions during marshalling (e.g. moored boats, Putney Pier, Putney Bridge piers)	<ul style="list-style-type: none"> <li>• See “A” above. The circulation maps identify key hazards.</li> <li>• Marshalling to take place in the “inshore zones” (the “slacks”), as described in instructions and circulation maps, where river speed is slower and obstacles are well known and marked on circulation maps. Marshals will attempt to warn of any impending collision. Competitors expected to adhere to these instructions and respond promptly to marshals.</li> <li>• <i>Regatta organisers will avoid racing vulnerable (e.g. J12/J13, non-Tideway) crews on flood tide, where possible</i></li> <li>• <i>At the turn of the tides, crews returning late from racing, or those boating early for warm-ups or marshalling, may find the moored boats are misaligned, turned sideways in the river, causing congestion, and possibly confusing rowers as to the correct navigation pattern.</i></li> </ul>	2	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	4

	HAZARD	CONTROL	L	MITIGATION	S	R
F	Collision with other craft during marshalling	<ul style="list-style-type: none"> <li>• See “A” above. The circulation maps identify the circulation pattern of racing and non-racing crews and other vessels.</li> <li>• Marshalling to take place in the “inshore zones” (the “slacks”), as described in instructions and circulation maps, where traffic is unidirectional and generally slower. Marshals will attempt to warn of any impending collision. Competitors expected to adhere to these instructions and respond promptly to marshals.</li> <li>• All Tideway rowing clubs will be notified of regatta via TRRC website, Div Reps, and e-mail from the PLA River Manager, requesting that non-competing crews are aware and conscientious of racing crews. Similarly, all Putney-based rowing clubs will be notified via flyer to their premises.</li> <li>• All river users will be notified of the regatta via a Notice to Mariners (NTM U9 of 2008).</li> <li>• <i>Regatta organisers will avoid racing vulnerable (e.g. J12/J13, non-Tideway) crews on flood tide, where possible</i></li> </ul>	2	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	1	2
G	Collision with other craft, stationary items or obstructions during turn towards shore after racing	<ul style="list-style-type: none"> <li>• <i>Risk increases towards the end of the ebb tide, as crews finishing races will find the gap between the pier and last moored boat and the shoreline to be quite narrow and shallow, and the moored boats may start to come out of alignment, making collision with shore, pier, moored boats, other competitors, and other craft more likely. Also, as this gap becomes difficult to negotiate, the risk of congestion increases, which may cause finishing crews to spill towards the bridges, raising risk of collision with the bridge piers.</i></li> <li>• <i>Similarly, towards the end of the flood tide, crews returning to Putney may find the moored boats have partially turned.</i></li> <li>• See “A” above</li> <li>• Umpires will escort vulnerable crews while they turn and head back to the Putney Hard</li> </ul>	2	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	1	2
H	Collision with other craft during warm-up or warm-down	<ul style="list-style-type: none"> <li>• See “A” above</li> </ul>	2	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	4
I	Collision with debris	<ul style="list-style-type: none"> <li>• Lookouts at either end of the regatta course will alert regatta control if they spot any large debris heading towards the course.</li> <li>• If large debris is spotted by any official, it will be reported via radio, and appropriate action taken (manoeuvre racing crews, abort race, pause in starting additional races, removal of debris, etc.)</li> </ul>	1	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	2

	HAZARD	CONTROL	L	MITIGATION	S	R
<b>SWAMPING / OVERTURNING / CAPSIZE</b>						
A	Drowning, hypothermia or other injuries due to swamping, overturning, or capsizing of competitors craft	<ul style="list-style-type: none"> <li>• Risk may be increase as the tide rises, which often increases swell, waves, etc.</li> <li>• All competitors must carry out their own risk assessment on their craft for the conditions seen.</li> <li>• Most competitors are expected to be experienced at rowing and racing on the Tideway</li> <li>• ARA notice "To all clubs competing on the Tideway" to be mailed out with draw to all competing clubs, reminding clubs of the expectations</li> <li>• Clubs expected to adhere to instructions sent out with draw and handed to them upon registration, which demand that clubs do not enter unsuitable crews.</li> <li>• Wake caused by regatta officials to be minimised as best as possible, using high speed only in an emergency</li> <li>• Umpires to review course for wake from other craft before and during each race, adjusting course, delaying or stopping the race as necessary.</li> <li>• Coxswains must wear ARA-approved buoyancy devices</li> <li>• All competitors are required to be in good health and able to swim as per ARA Safety Code section 2.5.2</li> <li>• Clubs must enter only craft that comply with ARA Water Safety Code section 1.11 (bow balls, heel restraints, buoyancy etc), as reminded to clubs in the ARA notice "To all clubs competing on the Tideway" to be mailed out with draw to all competing clubs.</li> <li>• Rescue, umpire and marshalling craft to carry appropriate first aid kits including thermal/foil blankets</li> </ul>	1	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	2
B	Drowning, hypothermia or other injuries due to swamping, overturning, or capsizing of rescue, umpires' or marshals' craft during retrieval of persons from the water	<ul style="list-style-type: none"> <li>• Rescue craft to have enough free board/buoyancy to prevent swamping/overturning during rescue.</li> <li>• Umpire and marshalling personnel to be competent in providing initial assistance prior to rescue/safety craft arriving.</li> <li>• Rescue, umpire and marshalling craft to carry appropriate first aid kits including thermal/foil blankets</li> <li>• Minimum 2 rescue personnel per rescue craft</li> <li>• Regatta personnel involved with the water elements of the event must wear a buoyancy device and be able to swim.</li> </ul>	1	<ul style="list-style-type: none"> <li>• Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	3	3

	HAZARD	CONTROL	L	MITIGATION	S	R
<b>OTHER INJURIES</b>						
A	Hypothermia due to exposure of regatta personnel to cold weather	<ul style="list-style-type: none"> <li>All regatta personnel are required by the ARA Water Safety Code to carry out a personal risk assessment and thereafter to wear adequate, suitable, layered and warm clothing</li> </ul>	1	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	2
B	Other hazards causing injury to regatta personnel, competitors, spectators.	<ul style="list-style-type: none"> <li>Reliance on competency of individuals</li> </ul>	2	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	1	2
<b>ADVERSE WEATHER</b>						
A	Unanticipated adverse weather conditions	<ul style="list-style-type: none"> <li>Regatta Control to check the weather conditions and forecast the evening before the regatta, one hour before the regatta start, and at mid-day. Should the conditions put the competitors at risk, the Race Committee will take the appropriate action (e.g. delaying the start, shortening or adjusting the course, suspending and/or cancelling the regatta).</li> </ul>	1	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	2
B	Wind against tide, high winds, poor visibility and major waterborne events	<ul style="list-style-type: none"> <li>Should the conditions put the competitors at risk, the Race Committee will take the appropriate action (e.g. delaying the start, shortening or adjusting the course, suspending and/or cancelling the regatta).</li> </ul>	2	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	4
C	Lightning	<ul style="list-style-type: none"> <li>In the event of lightning, Regatta Control will monitor the gap between the visible lightning strike and the sound of thunder from the strike: <ul style="list-style-type: none"> <li>If this gap drops below 30 seconds, the regatta is to be suspended immediately, and water-based regatta personnel to be recalled gradually, as crews return safely to the Putney Hard. Non-regatta personnel will be advised to take cover in boathouses or in cars.</li> <li>Once gap has been maintained at over 30 seconds for at least 10 minutes, an 'all clear' signal is to be given, and the regatta may re-commence, if all other conditions permit.</li> </ul> </li> </ul>	2	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	4
<b>FAILURE OF COMMUNICATIONS</b>						
A	Failure of race communications during the event	<ul style="list-style-type: none"> <li>All radios to be tested the day before use and on the day prior to the start of racing. Spare batteries to be checked for output and available for all radios. Base station to be at the Regatta HQ. Regatta Control has radio channel priority at all times.</li> <li>Safety Plan includes procedure to be adopted if there is a communication failure.</li> </ul>	2	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	4

	HAZARD	CONTROL	L	MITIGATION	S	R
<b>LAND BASED HAZARDS</b>						
A	Delay for emergency service/first aiders reaching casualty	<ul style="list-style-type: none"> <li>Parking is the responsibility of individuals and clubs and must conform to local restrictions. Access to all rowing and sailing clubs must be left clear. Police patrols are to be expected. Metropolitan Police have been informed of the regatta, and given copies of this Risk Assessment and Safety Plan</li> <li>Crews are expected to keep themselves, trestles, boats, trailers and cars clear from the road, as advised in instructions. Where possible, Regatta Control will monitor and intervene where traffic is blocking the road.</li> </ul>	2	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	4
B	Fall hazard while unloading boats	<ul style="list-style-type: none"> <li>Reliance on competency of crews</li> <li>Crews expected to comply with ARA guidance on trailers and towing</li> </ul>	1	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	2
C	Collision hazard due to trailers, boats and cars	<ul style="list-style-type: none"> <li>Reliance on awareness of activity, traffic and traffic laws</li> </ul>	2	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	4
D	Collision hazard on road and path due to pedestrians and cycles	<ul style="list-style-type: none"> <li>Reliance on awareness of activity</li> <li>Instructions to competitors includes warning to coaches and spectators about being careful while cycling on road and towpath</li> </ul>	2	<p><i>N.B. Safety Plan does not cover all of this area</i></p> <ul style="list-style-type: none"> <li><i>For the covered area,</i> rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	4
E	Injuries due to glass and debris on foreshore	<ul style="list-style-type: none"> <li>Competitors are expected to be aware and wear shoes or boots when boating. Reminder in the instructions to competitors.</li> </ul>	1	<ul style="list-style-type: none"> <li>Rapid response of Rescue, Umpires &amp; Marshals as per Safety Plan</li> </ul>	2	2