

UHBC Bumps 2024 Risk assessment

This assessment is designed to cover foreseeable risks in the conduct of the UH Bumps. This event is usually held in the middle of the Summer term. Boating for this event occurs mainly from University of London boathouse (ULBH), but one club boats from Tideway Scullers School boathouse (TSSBH). Invitational clubs may boat from ULBH or elsewhere. Racing will be on the ebb tide.

The event will be held in accordance with the principles set out in the Tideway Code(TC) published by the PLA at <https://boatingonthames.co.uk/the-tideway-code-boating-on-the-thames/> . It will also be held in accordance with the principles set out in the TRRC code of practice for Tideway head races. The PLA publishes information about the event in the PLA events calendar¹ and this refers to crews taking the racing line when appropriate and to permit overtaking within the Kew restricted zones (where safe).

Crews will proceed to the marshalling area following the Tideway Code until reaching their marshalling position. The marshalling area is shown at appendix 6, and is between Kew Gardens and Syon Park.

Following a successful trial in 2023, the marshalling period will have two distinct phases. In the first phase, all oared boats will continue to comply with TC at all times. In the second phase, boats will turn simultaneously into the ebb stream but will be held by their shore party throughout. At this point, there is a temporary change in the navigation of all oared boats against the ebb stream between opposite Brentford Lock and the Syon Crossing, with a temporary crossing at Brentford Lock rather than Syon Crossing. Col Regs will apply in the marshalling area throughout this phase.

The race will be held in several divisions, from approximately Syon crossing and finishing at the MAA Boathouse. Distance approximately 3200 yards.

There will be officials placed along the course to maintain a constant line of sight of the course. There will be officials placed on the western end of both restricted zones at Kew to monitor the progress of powered vessels against the stream and assess the need for 'line astern' navigation through the Kew area.

Event history

1991 – Collision involving an VIII from the Royal Free; severe injury to one crew member leading to helicopter evacuation and emergency thoracotomy. This accident occurred due to lack of organisation of boat flow in the marshalling area. Subsequent to this, the current chief umpire has largely been responsible for instituting the current marshalling system, reinforced by the PLA (Notice to Mariners).

1992 – 1996: no serious accidents but no accurate records;

(1997 – date: these races have been supervised by the current chief umpire.)

1997: no accidents;

1998: collision between two VIIIs in the marshalling area – failure of cox to keep adequate lookout – no injury;

1999: no accidents;

2000: near miss where VIII from another club ignored clear warnings and proceeded to cross the river against advice at about 30 seconds before the start;

2001: no accidents;

2002: no accidents;

2003: VIII steered into the PLA moorings as a result of bump; superficial injury to thorax in bow oarswoman; initially appeared more sinister and therefore evacuated by LAS from ULBH. Minor injury only. Need to

¹ <http://www.pla.co.uk/Events/Annual-Events-Calendar> - see 'description'

highlight that losing cox must instruct his crew to pull away from bumps promptly particularly where river narrowed by obstruction or natural feature (PLA moorings, Brentford Ait, Oliver's Eyot)

2004: near miss where cox steered boat in front of oncoming motor vessel (slow moving); to highlight need not to cross in front of any motor boat at 2005 coxswains' meeting.

2005: Incident UH05-1; Coxswain sustained back injury (blunt musculo-skeletal) as a result of failing to acknowledge an inevitable bump; need to acknowledge early and avoid any physical contact to be stressed at 2006 races. Ongoing need to ensure adequacy of bowballs. Incident UH05-02; ladies' crews drifted too far onto the Surrey side when stationary just after the finish. Need to ensure finish marshalling clearly identified to coxes in 2006 races, ensure launch 6 on correct station to ensure adherence to rules.

2006: no accidents - incident UH06-1 - marshalling launch overturned doing tight circle in shallow water - no injury and all equipment retrieved safely.

2007: Incident UH07-3 – BL1 staker hit in the back by a backstay of the following RUMS boat. Going into the water further than the waist will be discouraged. UH07-2 – Bow section of boat damaged following an early bump. Emphasis made on aiming for an off-centre target on the boat ahead. Incident UH07-4 – Near miss when crew went across the course of the pleasure cruiser. It has been made clear that this wasn't appropriate and is potentially very dangerous.

2008: Incident UH08-3 – GKT staker hit by blade, minor injury.

2009: No incidents.

2010: Incident between RVC VIII and MV Henley during marshalling. A RVC VIII proceeded upriver in the Surrey inshore zone up to Kew Pier on the Surrey side of MV Henley. The boat stopped, and then the cox believed that the master of MV Henley had indicated by a hand gesture that the RVC VIII should proceed through the gap between MV Henley and the pier. As the RVC VIII pulled into the gap, the stream pushed the RVC VIII against the hull of MV Henley such that the blade tips scraped against MV Henley. The RVC VIII managed to pull away and there was no damage to either boat. British Rowing Incident Report ID 5309. In the coxes briefing in future it will be advised that coxes should not attempt to manoeuvre between class V vessels and Kew Pier under any circumstances, coxes should WAIT and proceed around the class V vessel on the fairway side, and anticipate that this manoeuvre may well pull the oared boat well into the stream. In order to reduce the impact of this pull round, coxes need to start the overtaking manoeuvre well in advance of the pier (i.e. they need to stop well downstream of it). In the marshals meeting it will be made clear that waterborne marshal 6 need to maintain vigilance and give explicit instructions to stop crews well in advance of the pier.

2011: No incidents

2012: No incidents

2013: No incidents

2014: Incident following racing where a rower struck his hand on the side of the boat and had a piercing injury to the palm from one of the bolts on the rigger. Safety launch got rower back to shore for first aid treatment. He made his way to hospital and there was no need for follow-up.

2015: Concerns regarding apparent late concession of bump between first two boats in Ladies' division just after Kew Road Bridge and some minor boat damage. Need for early concession highlighted in instructions – emphasis on 'two canvas' rule – a bump is inevitable if there is overlap of more than a canvas through the stroke cycle and there is less than a canvas width between the two boats.

2016: No incidents

2017: No incidents

2018: No incidents

2019: No incidents (note low flow conditions)

2020: No race (coronavirus pandemic)

2021: No incidents (single day of racing due to impact of coronavirus pandemic).

2022: Near miss with a single sculler proceeding downriver on the Surrey inshore zone side of the Lots Ait Buoy with two competing eights coming upriver in the ISZ. Standard navigation in accordance with the TC applies below the Lots Ait Buoy. The sculler was not in the correct position (TC) for the ebb stream, although the sculler's navigation may have been influenced by the presence of crews on the Middlesex side above Brentford. This highlights the need for adequate officials in the Brentford area once UH crews appear in the vicinity (which was present).

2023: No incidents (note trial of revised marshalling arrangements).

Key risks and mitigation process

The following table outlines the key risks:

Key risk (reference)	Measured variable	Risk level	Risk rating	Mitigation	Responsibility
Increased fluvial flow (8)	PLA fluvial flow flag	Black flag	Black	Consider impact of delay in establishing ebb stream and early change to flood	CORC (CU)
		Green flag	Green	Nil	Nil
		Yellow flag	Amber	Consider: 1. exclusion of novice crews 2. change in time of racing if possible to later in ebb or after low water	CORC (CU) (aim for decision > 24 hours prior to race time)
		Red flag	Red	1. Cancel or defer race to another date 2. Consider change in time of marshalling and racing if possible to follow low water; only senior and intermediate crews	CORC (CU) (aim for decision > 24 hours prior to race time)
High wind speeds (9)	Forecasted wind direction and speed	Forecast Mean < 15mph or Gusts < 25mph	Green	Course inspection by CU prior to race	CU
		Forecast Mean 16-20mph or Gusts 25-35mph (especially easterly at Brentford Lock or southerly alongside Isleworth Ait)	Amber	Decision may need to be made on race day following high water and may need to be based on course inspection and review of actual wind speeds Consider: 1. Cancel or defer race to another date 2. Shortening of course to finish at ULBH (if strong SE gusts) 3. Shortening of course to start alongside	CORC (CU) (decision may need to be made on race day)

				Brentford Ait (if strong easterly gusts) 4. Combination of the above (see appendix 11)	
		Forecast Mean > 20mph or Gusts > 35mph	Red	Decision may need to be made on race day following high water and may need to be based on course inspection and review of actual wind direction and speeds (note that forecast may > actual gust speeds) Consider: Cancel or defer race to another date Other options shown in 'amber' risk rating but only if actual gust speed appears < 35mph and stable direction	CORC (CU) (decision may need to be made on race day)
Transmission of coronavirus infection ²	Illness due to coronavirus infection transmission associated with the competition	UK Coronavirus alert level BR rowing level	Yellow	Follow British Rowing guidelines Adhere to UK Government legislation	CORC (CU)

Table of risks and control measures

Risk Assessment Matrix (Row Safe 2008 v1 section 1.2)

² And similar virus infections

	Most likely severity of harm		
Likelihood of harm	Slight harm	Moderate harm	Extreme harm
Very unlikely	Very low risk 1	Low risk 2	Low risk 3
Unlikely	Low risk 4	Medium risk 5	Medium risk 6
Likely	Medium risk 7	Medium risk 8	High risk 9
Very likely	Medium risk 10	High risk 11	Very high risk 12

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	Risk	Issues	Probability of accident	Likely severity	Risk estimation	Control measures
1	Risk of collision with other oared boat, powered vessel or fixed obstruction	<p>Novice and inexperienced coxes. Coxswains fail to attend coxswains' pre-race meeting Lack of adherence to marshalling instructions</p> <p>Risk of meeting powered vessels coming upriver during race (river not closed); especially in Kew restricted zones.</p>	Likely	Slight Harm	Medium 7	<p>i. Annual assessment of all coxes boating from ULBH by ULBH safety advisor (similar process at other boathouses)</p> <p>ii. Emphasis on responsibilities of individual club captains at UH committee meeting and elsewhere to ensure compliance with marshalling instructions and attendance at coxswains' meeting.</p> <p>iii. Coxswains' meeting – emphasise the need to adhere to the TC and the specific variations agreed with the PLA (relating to following the navigation line and navigation through the Kew RZ's if and when it is safe to do so)</p> <p>iv. Emphasise need at briefing for officials' launches to be in designated position throughout marshalling and race.</p> <p>v. Race officials monitor powered vessel activity (in conjunction with downriver 'spotter', specific role for officials 5 and 6 to monitor Kew RZs and provide instruction to competitors during race. Event needs to ensure that there is appropriate tasking for these roles.</p> <p>vi. Sanction on crews for significant contravention of TC via standard BR/PLA reporting process.</p>
2	Radio communication failure	<p>Immersion of handset/ severe rain Handset battery failure Handset failure. Length of course.</p>	Unlikely	Slightly harmful	Low 4	<p>i. Use of recognised supplier for radio system</p> <p>ii. Move to 4G operating system to Improve reliability</p> <p>iii. Mobile phones as back-up;</p> <p>iv. Consider suspension of event in case of total radio system failure</p>

3	Use of inexperienced race officials	Use of relatively junior personnel (student based) Limited availability of licenced umpires	Likely	Slight harm	Medium 7	<ul style="list-style-type: none"> i. Invitation of other licenced umpires by CU ii. Role allocation by CU (high risk area – Kew RZs) iii. Briefing by chief umpire iv. Overall control by chief umpire waterborne in start area v. Adherence to radio code
4	Launch engine failure	Borrowed launches; Engine failure during event; but other launches in action; Launch failure prior to event, with no available spare	Likely	Slight Harm	Medium 7	<ul style="list-style-type: none"> i. The event will not commence without sufficient fully functioning launches. ii. If a launch failure occurs during the event, then control will take immediate steps to identify a reserve launch. If one is not available, then the control/CU will review whether suspension of racing is appropriate. It may be possible to transfer several race monitors to the single. iii. Launch drivers need to be aware of the risk of grounding up river towards Syon.
5	Inadequate launch safety equipment	Borrowed equipment (responsibility rests with the individual club captains)	Unlikely	Moderate Harm	Medium 5	<ul style="list-style-type: none"> i. UHBC will not allow the event to start without fully equipped launches ii. If a reserve launch is brought into action then control to check launch. iii. UHBC identifies responsibility of individual club captains at UHBC committee meetings and elsewhere to provide equipment in line with British Rowing 'Row safe'.
6	Immersion in the Tideway	Risk of immersion, hypothermia and drowning.	Unlikely	Moderate harm	Medium 5	<ul style="list-style-type: none"> i. All private matches based at ULBH will have appropriate rescue boat provision from recognised provider. ii. The event cannot commence without adequate safety boat cover. iii. Back up via RNLI if needed. iv. All coxes will wear buoyancy aids/lifejackets in line with BR Row safe v. Rowers will need to satisfy individual clubs regarding competence to swim; if not competent then they must wear an appropriate buoyancy aid or lifejacket. vi. If rowers are competent to swim then they will not wear specific buoyancy aids in line with national standards for rowing as set out in BR Row Safe

7	Medical evacuation	Evacuation route via ULBH (primary) Use of LAS ambulance.	Unlikely	Extreme Harm	Medium 6	<ul style="list-style-type: none"> i. A number of officials and competitors will have BLS (or higher) given the nature of this event ii. Emphasis in pre-race briefing on need for effective team leadership for medical emergencies iii. Designated primary evacuation route via ULBH adjacent to race control.
8	Fast ebb stream conditions (high fluvial flow)	Monitor using PLA 'flag' system	Likely	Moderate harm	Medium 8	<ul style="list-style-type: none"> i. CU and organising committee to review ebb flow rates over previous few days, and aim for early notification (>24 hours) to competitors about changes to the planned events. ii. If 'red' flag then event will not proceed iii. If 'yellow' flag then sufficiently experienced crews may boat on the ebb and the CU and organising committee may sanction senior crews to race in this period provided that there is a direct assessment of conditions immediately prior to such racing. It may be possible for the CU and organising committee to sanction intermediate and novice eights to race if there has been a direct assessment of conditions immediately prior to such racing.
9	Poor weather conditions	High wind speeds Heavy rain Limited visibility Fog	Likely	Extreme harm	High risk 9	<ul style="list-style-type: none"> i. CU and organising committee to review weather forecasts over previous few days and aim for early notification (>24 hours) to competitors about adverse weather conditions. ii. If gusts are forecast >35mph in a direction parallel to the river and against the stream then there is a high likelihood of unrowable conditions especially near high water (e.g. at Brentford on the ebb with a north easterly wind). iii. However the Mortlake reach is relatively sheltered from the prevailing southwest wind direction and it may not be possible to accurately predict the impact of high wind speed on the water conditions until the time of the event. iv. If there is doubt then the organising committee will instruct a delay in boating from ULBH and TSSC until there has been a course inspection by the CU. v. The CU and organising committee may determine that it is possible to achieve safe racing conditions by curtailing the course (finishing at ULBC) vi. Heavy rain or other climatic conditions may temporarily reduce

						visibility and the CU will monitor the situations during the event. vii. If the visibility is reduced such that the railway bridge cannot be seen clearly across the width of the river from the balcony of ULBH then the event should be suspended.
10	Navigation of powered vessels in regatta area	Navigation of other vessels must not be impeded Main issue with navigation upriver especially in Kew area Adequate look-out by coxes, marshals, umpires	Very likely	Moderate harm	High risk 11	i. Event timing late in the ebb tide which tends to reduce potential for conflict with other river users ii. Event advertised on PLA event calendar iii. Effective use of bank marshal (spotter) downriver of race finish to advise of oncoming vessels; to liaise with start. iv. Starter will not start the race if there is significant risk of conflict in the Kew area. v. Experience of race starter/officials in assessing impact of several powered boat movements at the same time vi. Use of experienced race officials who will direct competitors appropriately
11	Watermanship of competitors and other oared boats proceeding to marshalling area	<ul style="list-style-type: none"> • Failure of cox to keep adequate look-out. • Failure to adhere to PLA byelaws & TC • Revised crossing arrangements at Brentford Lock (for all oared boats)³ • Depth of water behind PLA moorings at Brentford & position of wooden post. 	Likely	Moderate harm	Medium 8	i. See 1 above; ii. Supervision by officials of TC rules in inshore zone iii. Officials to be on station promptly and monitor crossing points. Launch 4 to control revised Brentford crossing point, launch 7 opposite UL. iv. Pre-race information to coxes, only experienced coxes permitted to race; emphasise care to be taken when proceeding to the marshalling zone to avoid other crews proceeding in the opposite direction on the flood (especially at the crossing points (upstream of ULBH and at revised Brentford crossing)). v. Port-hand buoys helps control risk by identifying correct navigation channel. vi. Provision of crossing indication at the revised Brentford crossing point during second phase of marshalling (UHBC tin fish with sign anchored to riverbed) – emphasis on crews proceeding around the crossing sign on

³ Local rules are advertised by the PLA at <http://www.pla.co.uk/Events/Annual-Events-Calendar>

						<p>Surrey and then taking the crossing rather than crossing before the sign.</p> <p>vii. PLA mooring supervision by launch 2 (wooden post);</p> <p>viii. Pre-race information to coxes about wooden post;</p> <p>ix. PLA notice to mariners;</p> <p>x. UHBC written/e-mail notification to other local clubs;</p> <p>xi. Warning to those deliberately ignoring instructions that report will be made to PLA/TRRC/own club</p>
12	Supervision of marshalling areas	<ul style="list-style-type: none"> • Failure to adhere to temporary navigation rules set out in PLA calendar • Crews rowing at firm pressure in congested area • Too many boats in marshalling area between crossing and PLA moorings • Navigation behind PLA moorings (note wooden post) 	Likely	Slight harm	Medium 7	<ul style="list-style-type: none"> • 3 launches in marshalling area; • Pre-race instruction to coxes; • Risk of collision reduced by implementation of revised marshalling arrangements (2023/4) with normal navigation until the end of phase 1 and reduced number of competitors above marshalling area. • Launch 2 to check depth for navigation behind PLA moorings if necessary and assess impact of wooden post (sufficient room between post and mooring for an VIII); • No firm pressure / racing starts in marshalling area; • Launch 4 to hold crews below crossing if excess congestion.
13	<p>Turning of competitors onto the stream (traditional marshalling pattern)</p> <p>Unsafe river conditions immediately prior to race</p>	<ul style="list-style-type: none"> • Novice coxes • Failure of cox to keep adequate look-out • Failure of cox to get boat into correct in-shore area as a result of the turn • Failure of marshalling launch to supervise turning • Unobserved obstruction on course • Motor vessel against stream 	Likely	Slight harm	Low risk 2 (updated 2024)	<p>i. This risk is significantly reduced by revised marshalling arrangements 2023/4, with normal navigation in accordance with TC and effectively no free turning at the start.</p> <p>ii. Adequate supervision by marshalling launches 1 & 2;</p> <p>iii. Pre-race information to coxes;</p> <p>iv. Club captains to ensure proficiency of novice coxes</p> <p>v. Adequacy of experience of race officials;</p> <p>vi. Area under direct supervision of CU during racing periods</p>

		<ul style="list-style-type: none"> on course (especially at Kew RZ) Non-compliant external crew 				
14	Landing at the start (traditional marshalling pattern)	<ul style="list-style-type: none"> Landing with the stream Coxes miss their stake and fail to land properly 	Very likely	Slight harm	Low risk 2 (updated 2024)	<ul style="list-style-type: none"> This risk is significantly reduced by revised marshalling arrangements 2023/4, with normal navigation in accordance with TC and effectively no landing with the stream at the start. pre-race information to coxes Encourage coxes to practice passive turning at the stake Launches 1 & 2 to supervise turning
15	Problem in start sequence	<ul style="list-style-type: none"> Class V or other motor vessel coming upriver on course Class V vessel moving off Kew Pier unexpectedly Delay whilst waiting for powered vessels coming upriver Non-compliant external crew 	Unlikely	Moderate harm	Medium 5	<ul style="list-style-type: none"> Chief umpire in charge of start sequence; wait or abort start up to last few seconds if necessary if powered vessel/pleasure cruiser or non-compliant external crew moving upriver on course; Chief umpire to visually check whole of marshalling area and radio check prior to starting sequence;
16	Injury to stakers	<ul style="list-style-type: none"> From blades of own boat or next boat Inattention just after start May go too deep into water 	Unlikely	Moderate harm	Medium 5	<ul style="list-style-type: none"> Stakers to go no further in than waist height; emphasis at coxes and marshals meetings. Note no incidents since 2011. Stakers must stand back and keep a good lookout.
17	Race start and course	<ul style="list-style-type: none"> Coxes' attention drawn away from proper watermanship Failure to keep adequate look-out Failure to adhere promptly to TC Conflict with motor vessels Difficulty in communication 	Likely	Moderate harm	Medium 8	<ul style="list-style-type: none"> Pre-race information to coxes; Ensure all coxes have key minimum competencies as assessed by club captains; specific requirement on all club captains to disclose problems with competency at previous UHBC committee meeting CU will delay race start to avoid possible conflict in Kew RZs with oncoming powered vessels Launch 4 to monitor activity at Team Keane boating area and advise crews as needed

		<p>between marshals and coxes</p> <ul style="list-style-type: none"> • Potential impact of Team Keane boating area on Middlesex side adjacent to Brentford Lock - possibility of conflict with TK crews crossing without an adequate lookout. 				<ul style="list-style-type: none"> • Launch 8 to provide initial escort powered vessels upriver • Launches equipped with adequate megaphone and flags.
18	Navigation in Kew Restricted Zone	<ul style="list-style-type: none"> • Variation of standard rules set out in TC by local rules are advertised by the PLA at http://www.pla.co.uk/Events/Annual-Events-Calendar • – failure of coxes to adhere to changed rules • Potential narrowing of channel in RZ's by oncoming powered vessels 	Likely	Slight harm	Medium 7	<ul style="list-style-type: none"> • Overtaking in Kew RZs only when safe (coxes' meeting) • Umpires 5 & 6 (led by U5) have power to enforce 'line astern' racing if conditions not safe (e.g. oncoming powered vessel) • Launch 8 to provide initial escort of powered vessel upriver
19	Bumping	<ul style="list-style-type: none"> • Physical contact possible • Possibility of personal injury - Inadequate bowball and/or foot restraints • Despondency in losing crew; failure to keep an adequate lookout; • Difficulty where channel narrowed (PLA 	Likely	Slight harm (based on UHBC experience; although possibility of equipment damage)	Medium 7	<ul style="list-style-type: none"> • Encourage early acknowledgement of bump to avoid physical contact of any sort – 'two canvas' rule (coxes' meeting); • Officials to inspect bowballs and adequacy of foot restraints of boats rowing in event (British Rowing rules of racing) • Officials to target narrow channel areas (especially PLA moorings - launches 2 & 3); • Specific terms of NTM to permit overtaking in Kew RZs • Other rules of RZs not varied – to emphasise at coxes' and officials meetings

		moorings, Brentford Ait, Oliver's Eyot) <ul style="list-style-type: none"> • Effect of PLA Restricted Zones at Kew (TC) • Failure of crews to disengage promptly and likelihood of obstruction of fairway (especially in Kew RZs) 				<ul style="list-style-type: none"> • Possible need for umpires 5 & 6 to order 'line astern'; revised bumping rules in this case in the Kew RZs (no overtaking, no technical bumps etc) – coxes' meeting; • Losing (leading) cox must always move first to disentangle the bump – especially in the Kew RZs; • Crews must only stop in two designated areas on Surrey side of fairway (before and after Kew RZs), without obstructing either the fairway or the Surrey inshore zone (emphasis at coxes' meeting) – umpires 4, 5,6 & 7
20	Race finish and turning	<ul style="list-style-type: none"> • Failure to keep an adequate lookout • Failure to comply with TC • Potential obstruction of Surrey inshore zone • Failure to comply with requirements of Chiswick Bridge RZ (TC) 	Likely	Slight harm	Medium 7	<ul style="list-style-type: none"> • Launches 7 & 8 to ensure boats able to turn safely away from bridges and RZs; • Procedure for turning in pre-race information to coxes (coxes' meeting); including discussion about Chiswick Bridge RZ (general issue, relevant to crews returning to TSS.
21	Watermanship of returning crews	<ul style="list-style-type: none"> • Failure to adhere to CPRT, especially in Surrey in-shore zone (general point); • Failure to give way to vessels on fairway when crossing back to ULBH 	Unlikely	Slight harm	Low 4	<ul style="list-style-type: none"> • Navigation back to ULBH in coxes' meeting, umpire 7 to supervise crossing of crews back to ULBH (assisted by other launches as available) at water outfall.