



PUTNEY TOWN

ROWING CLUB

RISK ASSESSMENT



PUTNEY TOWN ROWING CLUB

RISK ASSESSMENT

Declaration

Putney Town Rowing Club is committed to promoting the safety of members when engaged in rowing or training activities, on and off the water, in line with recommendations set out in the BR Safety Code. It is a condition of membership that all members comply with the club safety procedures and the BR Safety Code.

To help meet this commitment we endeavour to produce clearly communicated safety advice, an induction programme for new members that incorporates safety, and a Steering Certificate programme (SteerCert) to inform and assess rowing safety competence, river navigation and safety knowledge. Successfully passing both the written and practical parts of the SteerCert programme is a pre-requisite for taking charge of boats as coxes or steers-persons on the river.

The aim of this document is to support and educate the club in the Risk factors affecting the club and its members. This document provides written description, illustration and/or data, that should help anyone make an informed decision regarding activities at the club.

The ideal would be to consider this as a working document. With a yearly review, adding or amending as the circumstances change or as questions and queries are put to the club. It may not be all encompassing but I hope over time, the quality of information provided will improve.

Camilla Lister
Club Water Safety Adviser

October 2018

PUTNEY TOWN ROWING CLUB

Kew Meadows Path, Townmead Road Kew, Richmond, Surrey TW9 4EN

020 8878 8236

safety@putneytownrc.co.uk

Uploaded to BR Safety Audit

<https://www.britishrowing.org/knowledge/club-support/managing-your-club/safety/club-safety-audit/>

PTRC SAFETY REGULATIONS

(Please see separate Safety Plan for Comprehensive Details)

Many of these rules are legal requirements – failure to comply may be subject to disciplinary action.

Life Jackets:

No coxswains are allowed on the water without a life jacket;

Any launch driver or passengers in launches are not permitted on the river without a life jacket; Only manually inflating life jackets are to be worn by coxes in bow loading vessels;. PTRC purchased new self inflating and auto inflating lifejackets in the summer of 2018 which fulfil the following BR advice:

BR advise wearing the following:

“You should wear an inflatable lifejacket, minimum 150N buoyancy, fitted with crotch straps and, if you go afloat in the dark, a light. Coxes in bow-loaded boats should wear a manual inflation lifejacket, and so should coastal coxes who may get very wet during launch and recovery. If possible, everyone else should wear an automatic inflation lifejacket. You will need a lifejacket with a higher buoyancy rating (275N or 290N) if you wear a flotation suit or jacket, or warm winter clothes. This will ensure that you float at the correct angle and that your face is out of the water”.

Restrictions on Boating:

Boating is restricted to daylight hours (unless specifically cleared by the club captain and arranged in advance as part of a coached programme);

Only club members may take charge of club boats unless specifically permitted by club captain;

The club captains, committee or safety adviser may prohibit boating from the club due to extreme weather or strong wind and tide conditions;

The PLA may put restrictions on boating or access to specific areas of the river at any time.

The PLA Ebb Tide Flag warning system must be closely observed, and the Captain and CSO may take specific action to impose certain levels of paddling on an ebb tide, depending on ability, depending on the colour of the flag

Safety Launches & Safety Equipment:

Launch drivers must assume overall responsibility for passengers and the safety and conduct of any crews under their supervision;

Launch drivers must use safety cut-outs or kill cords;

All launch drivers must have successfully completed the SteerCert programme and be club members OR must be BR members and have captain's permission; OR hold the RYA PB2 certificate.

Launches can only be manned by drivers over the age of 16;

All launches must carry throw lines, sealed first aid kits and thermal blankets.

Under low-light conditions or after sunset, only launches with lighting rigs may be used;

One launch per crew after dark with lighting rig attached (subject to special clearance as per boating restrictions).

Rowing and Sculling Boats and Equipment:

ALL members crewing each boat are responsible for their own safety and for checking boat and equipment prior to boating from the club.

Adults:

Only members that have successfully completed the SteerCert programme may boat unattended unless accompanied by a coach. Coaches supervising in this capacity that are not in a launch, should keep their charges in the locality of the club (between Kew Rail and Chiswick bridges).

Juniors:

Whilst we do not have Junior members at PTRC the following applies to visiting Juniors during school or university holidays or children of members

Juniors are any person under the age of 18;

Juniors must always be supervised by an authorised adult on the river with them. Juniors who have not successfully completed the SteerCert programme and are steering a boat must be accompanied by the

supervisor in a safety launch;

Launches should not cover more than one non SteerCert steered boat at a time;

Juniors must complete a junior registration form, signed by a parent or guardian before participating.

Weather and Conditions:

Before boating, each member should make a considered assessment of tide and stream in addition to the weather. Any doubt as to whether the conditions are safely navigable for the crew or scullers concerned should result in a decision NOT TO GO OUT on the water. Members must keep in mind that conditions can change quickly on the tideway and should be prepared to cut short outings or head for safety should conditions become unrowable. All members going out on the river, whether rowing, sculling, coxing or in a launch, are reminded that, especially during the winter months, the risk of cold shock and hypothermia from cold water immersion is a REAL DANGER. Extra precautions should be taken as detailed on p7 and any immersion should be treated as a potential life threatening situation. In hot weather members should also take care not to dehydrate. Water or sports drinks taken in the boat should be kept clear of river water to avoid ingestion of polluted river water.

PTRC SAFETY – EQUIPMENT

The following safety equipment is available at the club. If any safety equipment is missing or broken, please detail in the PTRC Boat Damage Log book and inform the safety advisor.

Defibrillators

The club has two defibrillators:

1. Located downstairs inside the boat house by the signing out book, next to the hose pipe.
2. Mounted in the main hall, inside the double doors on the wall at right angles to the cox box cupboard..

Life Jackets

There is a rack at the back of the boathouse with a supply of NEW (Summer 2018) auto inflatable and manual inflatable life jackets for use by coxes and launch crews. Please ensure that Life jackets are returned to the rack after use.

First Aid locations There is a central First Aid station on the wall of the boathouse by the riverside doors (Chiswick bridge side). This contains spare first aid kits, throw lines and emergency blankets. Smaller First Aid boxes are kept in the weights area and in the kitchen. Every launch should carry a sealed First Aid kit, a throw line and a thermal blanket.

NOTE: Any use of First Aid equipment should be noted in the incident book along with details of the incident. Any injury constitutes a reportable incident.

Incident log book and Boat Damage log book Both log books are stored in plain view hanging from the shelves over the maintenance bench at the back of the boathouse and contain the following instructions.



Putney Town Rowing Club

P.T.R.C. INCIDENT LOG

25 Jan 2009

Legal implications & obligations

PLA Under the provisions of River byelaw 7 we are legally required to inform the PLA of any incident that has occurred involving our club that resulted in injury or damage of greater than £500 to any party.

ARA We are also obliged to inform the ARA of any incidents as reported to the PLA above, but also where there has been a risk of injury or damage.

TRRC The TRRC have a reporting system for navigational incidents and misdemeanours. Currently we only report serious infringements of the rowing guidelines, where ignorance or stupidity has been serious enough that it could cause an accident if remaining unchecked, or if the other party was abusive or antagonistic about being corrected where they were at fault.

Incident reporting

Please use this incident log book to record ALL incidents involving anyone boating from this club.

This includes minor accidents, capsizes, near misses, swampings and equipment failures. It is intended as a useful log of events and not a means for assigning blame. The most important aspect of this is that we can highlight repeated problems and areas of greatest potential risk to members. With this we can act to help to reduce risks and make our activities safer. All members using club equipment must be aware of this log and should use it without worry of reporting anything seemingly trivial.

Examples of incident types to report (as listed by the ARA)

Capsize or falling out of boat through: inexperience, contact with another rowing boat or object, or equipment failure
Collision through: contact with static object, moving object, navigation issue, poor visibility or lighting
Swamping through: rough water, collision with other rowing boat, collision with other object, wash
Health related: manual handling, respiratory, hypothermia, heat stress, water-borne disease
Equipment failure: boat buoyancy, riggers, gates, seats/feet, steering equipment, bow ball, blades/sculls, safety/coaching/rescue launch, PFD's, throw lines, racking
Land training due to: weight training, circuit training, running, cycling, indoor rowing, slips/trips
Behaviour: vandalism/violence

steercert@putneytownrc.co.uk

Anatole Beams, James Davey, Amanda Birkinshaw

Kew Meadows Path, London TW9 4EN



Putney Town Rowing Club

P.T.R.C. BOAT DAMAGE LOG

25 Jan 2009

Damage reporting

Please use this log book to record ALL damage to club boats and equipment. It should be used only for damage – all incidents should be reported in the incident log in addition to damage reported here if both are applicable.

It can also be used for damage to other club equipment (particularly weights & rowing machines)

This includes minor damage: bumps and scrapes to shells and any items of suspicion that may be about to fail.

Repairs should also be logged against the damage report.

As with the Incident report log, this intended as a useful log of repairs and not a means for assigning blame. The most important aspect of this is that we can highlight repetitive problems and areas of where improvement or replacement may be desirable.

Examples of damage types to report

Damage to boat shell or canvas during handling or racking
Shell or fin damage due to grounding or collision
Sheared metalwork through repeated use
Rigger bent through collision, gate wear or breakage
Footstretcher or mounting failure, shoe or heel restraint strap failure
Seat breakage, runner or wheel problems
Steering wires, mechanism or rudder breakage
Blade or oar damage, loom or handle breakage

steercert@putneytownrc.co.uk

Anatole Beams, James Davey, Amanda Birkinshaw

Kew Meadows Path, London TW9 4EN

PTRC SAFETY ADVICE

As club members we are responsible for our own safety and are required to show a duty of care to all other members and river users in the course of our normal activities.

Life Saving: Discovery of any person in distress needs prompt action to preserve life. If the subject is incapacitated, check for vital signs, ensure they are safe and raise the alarm – GET HELP. Then follow basic First Aid ABC checks: **A – Airway** Check airway for obstructions. Clear or move to recovery position and drain if required. **B – Breathing** Check for signs of breathing. If positive, move to recovery position and keep subject warm. **C – Circulation** Perform CPR if required, until help arrives. Whilst one person performs CPR, another should retrieve a Defibrillator and use if needed. CPR should always be the number one priority in a case where someone is not breathing.

Rescue from Water: Any person falling in the water in the river should be treated as a being in a potential life threatening situation. They should be recovered from the water as quickly as possible, wrapped in a thermal blanket and kept quiet and horizontal until they can be taken indoors and warmed up. Swift recovery is essential as the body loses heat and becomes exhausted quickly. The rule of thumb that suggests that rescue needs to be within 1 minute for every degree of water temperature, should be treated as a bare minimum.

Cold Water Immersion: Cold water (below 15°C) is deadly. The risk of cold shock and hypothermia from cold water immersion is a REAL DANGER and can even present itself after the person has been recovered. Sudden immersion in cold water may be such a shock as to prevent a healthy individual from being able to help themselves. It can immediately impair breathing, make swimming difficult or impossible and even holding on to anything may be a problem. It can quickly induce panic and result in drowning.

Hypothermia: The shock of immersion in cold water passes in minutes, after which the body tries to preserve heat to essential organs and the core. The subject should be warmed up as soon as possible, kept quiet and horizontal for a little while until fully recovered. If the subject is disorientated, incoherent or irrational then they should be taken to hospital accident and emergency for a check up.

Capsize Drill: It is recommended for all new members that they undertake a capsize drill in controlled conditions. This usually involves rolling a single scull in a swimming pool to introduce the rower to the disorientation, process of escape from an upturned boat, and the subsequent recovery procedure.

RISK ASSESSMENT – GUIDELINES

Hazards on the River

These are covered sequentially from the launching steps in two different directions: **A** – towards Richmond (upstream) and **B** – towards Putney (downstream). For each hazard there is guidance on Precautions and Actions to be taken. The degree of risk has been assessed assuming that the precautions have been taken by the boat crew or steers person.

Who is at Risk?

Unless stated otherwise, the persons at risk are PTRC crew members and members of other rowing clubs on the river.

Who should give instructions?

Each crew must decide who should give the instructions in an emergency (the 'Crew Captain') and this should be clearly understood by all crew members before boating. Normally the cox or steers person should continue to give instructions if he/she is experienced. If not, then the 'Crew Captain' must take charge. For Junior crews the responsible adult on the bank or in an accompanying boat or launch should give the instructions.

Risk Level Estimating Table

Probability of Accident	Severity of Outcome		
	Slightly Harmful	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate Risk	Substantial Risk	Intolerable Risk

Risk Based Control Plan

Risk Level	Action and Time-scale
1. Trivial	No action required
2. Tolerable	No additional controls are required. Consideration may be given to a more effective solution or improvement.
3. Moderate	Efforts should be made to reduce the risk. Risk reduction measures should be implemented within a defined time period. Where the moderate risk is associated with harmful/serious consequences further assessment may be necessary to establish more precisely the likelihood of harm as a basis for determining the need for improved control measures.
4. Substantial	The activity should not be started until the risk has been reduced. Considerable resources may have to be allocated to reduce the risk. Where the risk involves activity already in progress, urgent action should be taken.
5. Intolerable	Activity should not be started or continued until the risk has been reduced. If it is not possible to reduce risk even with unlimited resources, activity has to remain prohibited.

References: BR website

EXTERIOR AND GENERAL ACCESS

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Car Park	Unlikely	Trivial	1	Car park partially tarmac and rough gravel. Uneven surface.
Clubhouse compound	Unlikely (Likely)	Trivial (Moderate)	1 (2)	Gravel surface with uneven sections and racking for boats. Access steps to boathouse first floor and doors to ground floor. Occasional use to store loaded trailers – trailers have protruding bars at knee and head height easily snagged by people squeezing past to access the club, particularly after dark (risk level 2).
Access steps to club 1st floor	Unlikely	Tolerable	1	Galvanised Metal steps with tread pattern. Can be slippery when wet.
Petrol store (far side of compound)	Unlikely	Substantial	2	Metal locker for storing petrol cans for launch fuel. This locker should be padlocked at all times. Petrol should not be left in the boathouse at any time.
Engine Storage Lock Up (added 2017)	Unlikely	Tolerable	1	Big blue metal lock up box for storing motor engines. This lock up is padlocked for the majority of time. There is a step up into it which could pose a slight risk when lifting an engine in or out of the lock up



Main access stair Car park towards club



Looking into the club compound Compound looking out to car park

Looking into the club compound from the River side, focusing on the Blue Lock-up for storing Motor Engines and safety equipment



Trailers & Transportation

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Injury caused when loading boat trailers such as minor injuries (soft tissue) or broken bones or boat damage.	Minor Injury – unlikely Boat damage – highly likely	Tolerable	2	<p>Move boats slowly with sufficient manpower and ensure clear communications between loaders. One person in charge of protocol.</p> <p>Drivers to have read BR towing handbook</p> <p>https://www.britishrowing.org/upload/files/RowSafe/FurtherGuidance/DriversHandbookV3.pdf</p>
Collision when driving boats causing driver injury, or boat damage	Unlikely (Likely)	Tolerable	2	<p>Drivers suitably able and experienced to tow trailer or truck stacked with boats</p> <p>Drivers to carry mobile phones and be aware of European 999 number if abroad</p> <p>Drivers to carry emergency contact details in easy to reach place</p> <p>Drivers to be suitably insured.</p> <p>Driver to have passenger on journey as additional look out at pinch points.</p> <p>Drivers to have read BR towing guidance handbook</p> <p>https://www.britishrowing.org/upload/files/RowSafe/FurtherGuidance/DriversHandbookV3.pdf</p>

PTRC CLUBHOUSE – INTERNAL



Gym showing access to kitchen and bar

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Hallway	Unlikely	Trivial	1	Can be slippery when wet. Door mat for wet weather.
Gents changing rooms & shower	Unlikely	Trivial	1	Slippery when wet. Shoes and boots often left on floor.
Women's changing room & shower	Unlikely	Tolerable	1	Slippery when wet. Shoes and boots often left on floor.
Gymnasium	Likely	Substantial	2	Ergometers and exercise equipment. Hazardous if incorrectly used or left lying about – note chairs in front of doors, gym mats - trip hazard.
Kitchen	Unlikely	Moderate	2	Gas cooker, kitchen equipment and utensils. Cleaning fluids. Hazardous if used carelessly. Refer to hygiene audit.
Bar	Likely	Moderate	2	Dangerous liquids (alcoholic and cleaning), available in large quantities. Room tends to fill to capacity on regular occasions.
Balcony	Unlikely	Substantial	2	Glass sliding doors to access from bar. Danger of falling from height, protected by clad railing on all sides.
Kitchen/Bar Store	Unlikely	Trivial	1	Cleaning equipment & central heating boiler.

RISK ASSESSMENT – BOATHOUSE



Boathouse doors to riverside: Left bay Middle bay Right bay

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Boat racks	Likely	Substantial	2	Damage and/or injury resulting from handling boats, moving heavy, awkward equipment on and off racks to trestles outside. Sometimes requiring use of beer crates and/or steps to access high racks. Hazard from protruding riggers at head height.
Blade racks	Unlikely	Tolerable	1	Horizontal racks of sweep blades and vertical hangers for sculling oars. Possible to knock oars from high racks.
Launch trailers	Unlikely	Moderate	2	Trailers have to be rolled in and out of aisles through double doors to allow access to boat rack aisles. Heavy and awkward, but easy to handle by more than one person.
Waterside doors	Unlikely	Trivial	1	Waterside double doors give access to the river for boats and launches. They should be clipped open when in use to prevent them swinging in the wind.
Boat trestles	Likely	Moderate	1	Different styles of trestles suitable for different sized boats - need to be used correctly to fit purpose. Nylon strap trestles not always stable when supporting large boats upside down. Trestle failure also a possibility with hand-built wooden trestles. Boats should not be left on trestles in windy conditions or on towpath where they are hazardous to passing pedestrians and cyclists.
Clutter at doors - buckets, hose, coffee mugs, water bottles & trestles.	Likely	Moderate	1	Trip hazard from items of clutter frequently left around boathouse doors impeding access to signing out log, water tap and getting around end of aisle.



Sculling blade rack Rowing blade rack

CLUB EXTERIOR AND ACCESS TO RIVER

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Concrete hard standing outside club on riverside	Unlikely	Tolerable	1	Sloping concrete ramp from clubhouse doors up to riverside towpath. Rough but even surface. Dangerous in icy/snow conditions.
Grass & Mud area outside club on riverside (the swamp)	Likely	Tolerable	1	Flat grassy area – cared for – well drained. Used for propping up singles and doubles mainly at weekend
Riverside towpath	Unlikely	Tolerable	1	Tarmac path along river bank – refurbished during construction and in good condition. Shared space with general public – pedestrians, cyclists, runners, prams.
Towpath, across to steps and stepped ramp				
Putney Town new boating stepped ramp	Likely	Moderate	2	Concrete steps leading from towpath down to stepped ramp section, which leads to the foreshore. Steps inundated every tide and occasionally covered in silt and mud. Can be very dangerous in icy conditions. Can be very dangerous when covered in greasy mud at low tide. Steps even in length. The steps have been treated with groves and a section with timber batons – wearing non slip wellingtons and other correct foot wear is safe to an extent. Members are prohibited from wearing flipflops on the steps at any time and constantly reminded of the poor condition of the steps. A high pressure jet wash has been purchased and once a month or more often the steps are jet washed. Steps after a high tide are washed down at the start of any outing session before usage by members. Notices have been erected on the path by the steps to highlight members of the public as to the potential hazard from the steep steps. Members carrying boats are frequently reminded of instruction into how to carry a boat safely down the steps.
Steps, looking east to Chiswick bridge Steps looking west to Kew				
River foreshore	Likely	Tolerable	1	Gently sloping gravel foreshore, exposed only at low water. Some larger rocks/cobbles hazardous to boat hulls and tripping feet. At very low water - foreshore shelves steeply at waterline into river. Members are forbidden from wearing flipflops on the beach to prevent slips and trips.

HAZARD POINTS ON THE RIVER

Before boating

Before launching all members of crew should have considered the tide and prevailing weather conditions. They should be aware of any potential increased risk and should take extra precautions or cancel the outing in extreme conditions. Beginners and novices without SteerCert should request safety cover. Inexperienced rowers with SteerCert should go out in groups and/or seek safety cover if conditions are not ideal – work locally (UL to Chiswick). They should also select low tide conditions as a preference as it provides safe landings at most sections of the river and easy launch and landings.

GENERAL HAZARDS ON THE RIVER

Hazard	Probability	Severity	Risk Level	Precautions & Actions
Powered craft and barges under way.	Likely	Substantial	2	Powered craft should maintain a position on the starboard side of the navigation channel, but may be in unexpected positions when negotiating to land or turn. Large craft should be given a wide berth as they may be difficult to handle in river currents and have little room in the channel. Passenger vessels in particular cannot jeopardise the safety of their passengers to avoid a rower, so STAY WELL CLEAR.
Wash from powered craft on the river	Likely	Tolerable	2	Wash can inundate rowing craft, in worst cases causing the boat to sink and crew having to swim. Hazard presented by sudden immersion in cold water for crew and coxwain. Sunken boat has to be recovered to bank and emptied out before being rowable again or recovered back to clubhouse by rescue launch.
RNLI lifeboat and Fire Rescue boat	Likely	Tolerable	2	Wash hazard as above. RNLI lifeboat sometimes scrambled for emergencies and moves at high speed with a large wash. Rowers should stop rowing and prepare for wash in stable position, with boat parallel with oncoming wash.
				
Floating debris in river	Unlikely	Moderate	1	Floating debris can be hard to spot when just below the surface and may be very damaging in collision. Large blocks of wood, sleepers and pallets are the worst, but also large branches and other discarded objects (TV's, fridges etc). High tide can be particularly hazardous
				

HAZARD POINTS ON THE RIVER TOWARDS RICHMOND (upstream)

Hazard Risks marked with * are heightened by one level for strong current conditions (most common in winter months).

Hazard Point	Probability	Severity	Risk Level	Precautions & Actions
Mortlake Steps PTRC boats launching & landing	Likely	Moderate	1	Check for traffic on launching – can be partially blind to other river users around Chiswick bridge. Be on the lookout for wash from motor launches that can sweep boats onto the steps and get you wet.
Mortlake boathouses	Unlikely	Moderate	2	Rowing crews boating from MAABC, Quintin, Westminster University and TSS boathouses crossing from Middlesex to Surrey bank on outgoing tide.
Putney Town Shoal / Scullers Snag	Likely	Moderate	2*	Shoal exposed at low water. Navigational hazard at low tide conditions, plus strong stream pushes boats out of inshore zone into navigation channel. Members are repeatedly made aware of the risk associated with the snag and an ebbing low tide.



Red buoy (Barker's Rails)	Likely	Moderate	1	Navigational hazard. Unwary crews can collide with buoy, potential cause for capsizing singles, doubles and pairs.
University of London boathouse	Unlikely	Moderate	2	University crews boating from UL boathouse, commonly turning midstream or crossing from Middlesex to Surrey bank on outgoing tide.
Red buoy (UL)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
Kew Railway shoal Unlikely Old petrol pier and mooring piles.	Likely	Tolerable	2*	Shoal exposed at low water. Navigational hazard at low tide conditions plus current hazard that can make it difficult to negotiate the inside arch of Kew rail bridge safely.

Hazard Point	Probability	Severity	Risk Level	Precautions & Actions
--------------	-------------	----------	------------	-----------------------

Kew Railway bridge	Unlikely	Substantial	2*	Serious collision hazard. Only Surrey arch and Surrey middle arch (navigation channel) should be used. Extra care should be taken rowing downstream with outgoing tide to maintain starboard side of channel and avoid central pier. Strong currents often develop powerful rotors. Paired bridge piers not set quite parallel with river. Extra care on low tides, lack of water can force traffic through middle arch in both directions.
--------------------	----------	-------------	-----------	---



Kew sailing club	Unlikely	Moderate	2	Sailing crews boating from Kew sailing club. Potential hazards as they tack across river. Approach slowly with constant look out. Give way to any sailing crew approaching
Middlesex Side of Eyot	Likely	Tolerable	1	Potential navigational hazard at mid-low tides from old pilings. Often completely dry at low tide. Rowers should not be here. Navigational channel runs close to Surrey bank of Eyot which has steep walls and fast currents. ⌢
Red buoy (Oliver's Eyot)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles & pairs.
Shoals Unlikely Strand on the green Oliver's Eyot	Likely	Substantial	2*	Shoals exposed at low water. Navigational hazard at low tide conditions, plus strong stream pushes boats out of inshore zone into navigation channel.
Stop/Turning Zone	Likely	Substantial	2*	Rowers commonly turn midstream or pausing on Surrey inshore zone. Strong stream, limited river width and poor visibility through Kew bridge plus proximity to Kew pier make this spot a dangerous zone. All rowers should make extra efforts to clear zone promptly or stay very close to bank.
⌢ Red buoy (Harbour master)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles & pairs.
PLA moorings	Unlikely	Moderate	2	Moorings on Middlesex side of river. Rowers coming downstream with tide and current, should take care not to drift over into this area after the bend at Kew bridge.

Hazard Point	Probability	Severity	Risk Level	Precautions & Actions
Kew Pier & Barges	Unlikely	Substantial	2*	Serious collision hazard. Tourist boats, often in pairs negotiate landing at pier. Frequently turning midstream with minimal clearance. Rowers should STAY WELL CLEAR of any moving vessel and WAIT if necessary for the boats to complete their manoeuvres. Listen out for any sound signals given by Tourist boats.

Kew canoe club	Unlikely	Tolerable	1	Canoeists boating from Kew canoe club. Potential hazards as they rarely observe river navigation rules.
Kew Bridge	Likely	Substantial	3*	Serious collision hazard. Only Surrey arch and middle arch should be used dependent on rowing rules. Extra care should be taken rowing downstream with outgoing tide to maintain starboard side of channel and avoid Middlesex pier. Strong currents and fast water. Poor visibility through bridge and round bend. Rowers should make allowance for possible tourist boats turning at pier. Industrial rubbish, submerged boats and shopping trolleys often found in and around moorings and bridge – collision/grounding hazards.



Kew marine moorings and barges	Unlikely	Substantial	2*	Serious collision hazard. Unwary rowers can collide with pilings, pontoon or moored boats. Boats using inshore zone through bridge take extra care to negotiate barges close to bridge.
☉ Red buoy (Brentford Eyot)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles & pairs.
Brentford Eyot - multiple islands, vertical walls, overhanging trees.	Unlikely	Moderate	2*	Middlesex side of Eyot - potential navigational hazard at mid-low tides from old pilings. Often completely dry at low tide. Rowers should not be here. Navigational channel runs close to Surrey bank of Eyot which has vertical walls and fast currents.
Steep walled embankment	Unlikely	Tolerable	2	Middlesex bank has steep walls. No landing possible between Kew bridge and Syon crossing except at low water. Escape up bank restricted – only a few access ladders along its length.
☉ Red buoy Hog Hole	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles & pairs.

Hazard Point	Probability	Severity	Risk Level	Precautions & Actions
☉ Red buoy (Lots Eyot) Likely	Moderate	1		Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles & pairs.
Brentford lock - busy Grand Union canal entrance.	Unlikely	Substantial	2	Barges & cruisers entering river from Brentford lock (grand union canal). Drivers may be crossing river and unaware of rowers privileges (rowing the slacks).
Driftwood buoys, 4 metal buoys, barge mooring & et. raft	Unlikely	Substantial	2*	Serious collision hazard. Buoys can swing sideways on their mooring chains with currents. Unwary crews may collide with buoy with disastrous results. Rowers should take care to maintain starboard side of navigational channel - away from buoys.

Red buoy (Syon Reach)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles & pairs.
Syon crossing	Likely	Substantial	2	Rowers crossing from inshore zone on incoming tide should take extra care when crossing navigational channel. Give way to any craft in the channel at all times. Normal river rules apply upstream (COLLEGS). Rowing rules apply downstream.
Syon shoals	Unlikely	Tolerable	1	Shoals exposed at low water. Navigational hazard at low tide conditions.
Pink house shoals & piles. Syon summer passenger ferry, turning point	Unlikely	Tolerable	1	Middlesex side of river by Pink house - potential navigational hazard at low tides from old pilings. Large shoal outside London Apprentice pub, completely dry at low tide.



Syon Eyot - walled eyot. 6 x underwater sewage outflows. Landing/mooring at Richmond end.	Unlikely	Tolerable	1	Middlesex side of Eyot - potential navigational hazard at mid-low tides, moored craft and narrow channel. Rowers should not be here. Navigational channel runs close to Surrey bank of Eyot which has vertical walls and fast currents. Rotors from sewage outflows, usually indicated by flocks of seagulls.
---	----------	-----------	---	---

Hazard Point	Probability	Severity	Risk Level	Precautions & Actions
Richmond barge moorings plus mooring buoys and underwater chains	Likely	Substantial	2*	Navigational hazard. Unwary crews can collide with barges. Rowers in navigational channel near barges, should be aware that river currents flow underneath barges and can draw rowers towards barges.
Richmond turning point - outflow from Richmond meadows.	Unlikely	Tolerable	1	Rowers turning and resting. Give way to any craft in the channel at all times. When barrier gates are raised across river, barge and cruisers will be negotiating lock entrance or turning here too.
Richmond Lock rip-currents, lock entrance, submerged gates. PLA office	Unlikely	Moderate	2*	Observe navigation signals on bridge arches. Use central arch only (observing river rules). Note Surrey arch is banned to all craft at all times. Triangle of 3 red lights = NO ENTRY.



A316 Road bridge	Unlikely	Moderate	2*	Second bridge close to Lock. Use central arch only.
Richmond railway bridge	Unlikely	Moderate	2*	Use central arch only.
Richmond eyot, houseboat moorings on Middlesex bank	Unlikely	Tolerable	1	Navigational hazard. Unwary crews can collide with eyot. Take extra care to stay in channel and keep a good lookout.
White swan slipway and tourist boats	Likely	Moderate	2	Rowing boat hire - boaters may be unaware of navigational rules and not keeping a look out. STAY WELL CLEAR
Richmond bridge and rowing boat hire, poor visibility beyond.	Likely	Moderate	2*	Very narrow arch. Use central arch only. Very limited visibility - proceed slowly keeping a good lookout. Give way to oncoming craft.

HAZARD POINTS ON THE RIVER TOWARDS PUTNEY (downstream)

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Mortlake Steps	Likely	Moderate	1	Check for traffic on launching - can be partially blind to other river users around Chiswick bridge. Be on the lookout for wash from motor launches that can sweep boats onto the steps and get you wet.
Chiswick Bridge - drainage channels	Highly Unlikely	Trivial	1	Low water grounding hazard - beware of concrete culverts leading from drains in bank.
Chiswick Bridge	Likely	Substantial	2*	Serious collision hazard. Only central and Surrey arches should be used (except for landing at Mortlake/TSS). Bridge set on river bend - extra care should be taken rowing downstream with outgoing tide to maintain starboard side of channel but avoid Surrey pier.



Tideway Scullers School boathouse	Unlikely	Tolerable	2	Rowing crews boating and turning to land at TSS boathouse and MAABC, Quintin and Westminster school.
University boat race finish pole	Unlikely	Trivial	1	White marked piling on Surrey side of river. End of boat race. Rowers should not be here unless landing at TSS on outgoing tide.
The Ship shoal and slipway	Likely	Moderate	1	Shoal exposed at low water on Surrey side. Navigational hazard at low tide conditions. Slipway here also used by small launches and canoeists.
Red buoy (Ship Inn)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
Chiswick crossing	Likely	Moderate	2	Rowers crossing navigational channel from inshore zones by The Ship pub on Surrey side across to Dukes Meadows on Middlesex on incoming tide (or in reverse on outgoing tide as according to rowing rules). Give way to any craft in the channel at all times.
Brewery piles	Unlikely	Moderate	1	Navigational hazard. Piling on Middlesex bank. Rowers should not be here.

Hazard Point & Risk	Probability Severity	Risk Level	Precautions	
---------------------	----------------------	------------	-------------	--

			& Actions	
Green buoy (Bull's Alley)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
Shoals	Likely	Moderate	1	Shoals exposed at low water on Middlesex side. Navigational hazard at low tide conditions.
Green buoy (Tradesmen's)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
White Stag temporary mooring	Highly Unlikely	Tolerable	1	Surrey side, mooring used for small craft
Thames Tradesman boathouse	Unlikely	Tolerable	2	Rowing crews boating and turning to land at Thames Tradesman boathouse. ⤴
Barnes railway bridge - angled bridge on bend - current hazard.	Likely	Substantial	2*	Serious collision hazard. Only Middlesex arch and Surrey arch should be used. Extra care should be taken rowing downstream with outgoing tide to maintain starboard side of channel and avoid piers. Bridge not set perpendicular to river at bend (turn before bridge). Can be very fast water in strong current conditions through Middlesex arch.



Emmanuels, Cygnet, Barnes Bridge Ladies' boathouses	Unlikely	Tolerable	2	Rowing crews boating and turning to land at Emmanuels, Cygnet and BBL boathouses. Large shoal exposed at low water on Middlesex side. Navigational hazard at low tide conditions, to boats using inshore zone and negotiating Barnes railway bridge.
Barnes Shoals	Likely	Moderate	1	Surrey Side. Shoals exposed at low water. Navigational hazard at low tide conditions.
Green buoy (Duke's Meadows)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
Green Buoy (LEP)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
--------------------------------	--------------------	-----------------	-------------------	----------------------------------

Chiswick crossing	Unlikely	Moderate	2	Rowers crossing navigational channel from inshore zones by The Ship pub on Middlesex side across to Dukes Meadows on Surrey on incoming tide (or in reverse on outgoing tide as according to rowing rules). Give way to any craft in the channel at all times.
Red buoy (Chiswick Steps)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
Chiswick Pier - barges, RNLI and moorings	Unlikely	Moderate	2	Navigation hazard. Moorings on Middlesex side of river. Rowers coming upstream with tide and current, should take care not to drift over close to these moorings and the pier barges.
Black buoy, barge mooring and moorings	Unlikely	Moderate	2	Navigation hazard. Moorings on Middlesex side of river. Rowers coming upstream with tide and current, should take care not to drift over close to these moorings which are not all in a line.
Shoals & concrete outflow	Unlikely	Tolerable	1	Shoals and concrete culvert exposed at low water on Surrey side. Navigational hazard at low tide conditions. Often a site for build up of river debris.
Chiswick eyot	Unlikely	Tolerable	1	Middlesex side of Eyot - potential navigational hazard at mid-low tides from old pilings. Often completely dry at low tide. Rowers should not be here. Navigational channel runs close to Surrey bank of Eyot which has steep walls and fast currents.
Red buoy (Black Lion)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
Bend	Unlikely	Moderate	2	Wide river on sharp bend. Can be difficult to spot potential distant hazards against bank and judge their river position correctly.
Corinthian sailing club	Unlikely	Tolerable	1	Sailing crews boating from Corinthian sailing club. Potential hazards as they tack across river.
Latimer boathouse	Unlikely	Tolerable	2	Middlesex bank. Rowing crews boating and turning to land at Latimer pontoon.
St. Pauls School boathouse	Likely	Moderate	2	Surrey bank. Crews boating from St. Pauls boathouse. Concrete ramp also presents navigational hazard at middling tides.
Dove moorings & pier	Likely	Substantial	2*	Collision hazard. STAY WELL CLEAR. Site of previous accidents. Rowers in navigational channel near barges, should be aware that dangerous currents flow underneath barges and can draw rowers towards barges.
Furnival pier & pontoon	Unlikely	Tolerable	2	Rowing crews boating and turning to land at Furnival pontoon.
AK & BR pontoon	Unlikely	Tolerable	2	Rowing crews boating and turning to land at Latimer pontoon.

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Hammersmith Shoals	Unlikely	Tolerable	1	Shoals exposed at low water on Middlesex side. Can extend half way across river at low water. Navigational hazard at low tide conditions. Often a site for build up of river debris.
Hammersmith bridge & Middlesex shoal and CSO	Likely	Substantial	2*	Serious collision hazard. Can be very fast water in strong current conditions through Surrey arch. If you can see the base of the buttress, you should take the middle arch (the inner arch dries out at low water). Beware of oncoming traffic in the navigational channel.



⌋ Red buoy (River View) Harrods, mooring	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs. Occasional mooring for small motor craft.
Riverside studios shoals	Unlikely	Tolerable	1	Shoals exposed at low water on Surrey side. Navigational hazard at low tide conditions.
Crabtree slip	Highly Unlikely	Tolerable	1	Rowing crews boating and turning to land at Crabtree slipway.
⌋ Red buoy (Tea Rose)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
⌋ Red buoy (Mile Post)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
Mile post	Highly Unlikely	Trivial	1	Mile post - not in the river at all, so it shouldn't present a problem - even to PT rowers! Often used as a stopping or turning place by local rowing crews.
⌋ Red buoy (Barn Elms)	Likely	Moderate	1	Navigational hazard. Unwary rowers can collide with buoy, potential cause for capsizing singles, doubles and pairs.
Barn Elms & South bank sailing club	Unlikely	Tolerable	1	Sailing crews boating from Barn Elms sailing club. Potential hazards as they cut across river. Site of occasional races with dinghies tacking around temporary buoys.
Fulham flats	Unlikely	Tolerable	1	Extensive shoals exposed at low water on Middlesex side from Crabtree reach to Fulham football club. Navigational hazard at low tide conditions.

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Beverley Brook lock & shoals	Unlikely	Tolerable	1	Shoals exposed at low water on Surrey side. Navigational hazard at low tide conditions and exit for water from river Beveley Brook. Often a site for build up of river debris.
The Black buoy and moorings	Unlikely	Moderate	2	Serious collision hazard. Moorings on Middlesex side of river. Rowers coming downstream with tide and current should take care not to drift over close to these moorings which are not all in a line. Strong current run under moored craft. STAY WELL CLEAR.



Putney embankment, moorings & Chas Newens slipway	Unlikely	Moderate	2	Rowers boating from clubs on Putney embankment. Narrow waterway can get very congested at low water. Moored boats between inshore zone and navigational channel - NEVER pass between boats.
Crossing/turning point	Likely	Substantial	2*	Rowers crossing or turning in navigational channel from inshore zone between end of moorings and Putney Pier on Middlesex side into navigational channel on incoming tide (or in reverse on outgoing tide as according to rowing rules). Give way to any craft in the navigation channel at all times.
Putney Pier	Unlikely	Moderate	2*	Navigation hazard. Pier and barges on Surrey side of river. Rowers negotiating entry/exit from inshore zone should take care not to drift close to these moorings and the pier barges. Strong currents flow under the barges. Awareness of construction works in the location
Putney Road bridge	Unlikely	Substantial	2*	Serious collision hazard. Can be very fast water in strong current conditions. Use central arch only. Beware of oncoming traffic in the navigational channel. Awareness of closure of Arch 5 and how to navigate.

Hazard Point & Risk	Probability	Severity	Risk Level	Precautions & Actions
Tourist barge moorings, Surrey side	Unlikely	Moderate	2	Navigation hazard. Barges moored on Surrey side of river. Rowers should stay clear of inshore zone - normal river rules (COLREGS) apply downstream of Putney bridge.
Central moorings on Middlesex	Unlikely	Moderate	2	Navigation hazard. Moorings on Middlesex side of river. Rowers coming upstream with tide and current should take care not to drift over close to these moorings. Strong current run under moored craft. STAY WELL CLEAR

Putney rail bridge	Unlikely	Substantial	2*	Serious collision hazard. Can be very fast water in strong current conditions. Use central arch only. Beware of oncoming traffic in the navigational channel.
--------------------	----------	-------------	----	---

ABBREVIATED ORGANISATIONS

British Rowing (previously ARA)

<http://www.britishrowing.org>

EA Environment Agency

The administrative body for protecting and improving the environment in England and Wales

<http://www.environment-agency.gov.uk>

http://www.visitthames.co.uk/text/303/information_for_boaters.html

HSA Health & Safety Association

<http://www.hsa.gov.uk>

PLA Pool of London Authority

The administrative body responsible for the tidal Thames, banks and foreshore from Richmond lock to the sea.

<http://www.pla.co.uk>

PTRC Putney Town Rowing Club

<http://www.putneytownrc.co.uk>

TRRC Thames Regional Rowing Council

The regional arm of the ARA

<http://www.thames-rrc.org>

TW Thames Water

Management of London's waste water and suppliers of drinking water.

<http://www.thameswater.co.uk>

GLOSSARY

Navigational Channel	Clearway for all craft. River rules apply.
Rotor	Powerful current swirl - can cause small boats to veer off course.
Shoal	Underwater bank of sand or gravel, sometimes exposed at low water.
Stopper wave	Stationary wave caused by opposing flows of tide and current.

DOCUMENTATION

British Rowing Safety Code

British Rowing RowSafe

RowSafe is set out in thirteen chapters, each dealing with a specific topic

<http://www.britishrowing.org/taking-part/staying-safe/rowsafe>

It can be downloaded from the following link

<https://www.britishrowing.org/wp-content/uploads/2017/04/Row-Safe-April-2017.pdf?41e6e6>

TRRC navigational guidelines for rowers

<http://www.thames-rrc.org/safety/navigation>

PLA rowing on the tideway

https://www.pla.co.uk/assets/THE_ROWING_CODE.pdf