

Tudor Sailing Club

General Marine Safety Risk Assessment for all Club Organised Dinghy Races and Cruises
(excludes Langstone Harbour Race Weekend which is Risk Assessed Separately)

Marine Safety Risk Assessment

1. Introduction

Events covered by this risk assessment are all races and cruises published in the Tudor Sailing Calendar (available on tudorsailing.org.uk) excluding the Langstone Harbour Race Weekend, any night races and Cadet races, which are risk assessed separately. Dinghies racing are likely to include (but not be limited to) Laser, Vago, Enterprise, Wayfarer, Wanderer, Topper, RS Quba, RS Feva, RS Tera etc.

Club Patrol Boats will accompany the fleet. Most events will be covered by a single Patrol Boat but higher risk events such as those leaving the harbour or where high volumes of competitors are expected, will be covered by multiple Patrol Boats.

A club trained Race Officer will officiate races.

An experience cruise leader will officiate cruises.

2. Starts

Races will be either club line start or committee boat starts with single starts encompassing all classes racing.

Club line starts are managed from the shoreside race box with briefing shoreside.

Committee boat starts are started normally in the vicinity of Russells Lake or further South, depending on the tides. Some races have a shoreside briefing and most will have courses set once the committee boat is in position.

Cruises start from the slipway with a safety briefing prior to going afloat.

3. Racing Area

The racing area is defined during the briefing with any danger areas being highlighted to those less experienced sailors.

4. Finishing Area

The finish is always the start line unless the course is shortened in which case the new finish line will be communicated by the Race Officer and Patrol Boats.

5. Manning and Race Control

The Race Officer is responsible for managing the race, making judgement calls on whether to shorten the race and is the shoreside contact to the emergency services should the Patrol Boats radio in that they are evacuating a competitor for medical attention.

6. Safety Control Measures

Standard and Event-Specific Control Measures for the event are defined in the Control Measures and are the primary means for the safe management of the race.

7. Risk Assessment

A quantitative assessment of event risks both before and after the measures and assets are implemented to reduce the defined risks. A final risk assessment is based on a judgement of the likely effect that the control measures will have in reducing the event risks.

Standard Control Measures for Club Dinghy Races

1. Planning

	Measures	General Comments
1.1	Use of Tidal Prediction Information	Time events to suit tidal range and streams. We will target to start most races around 30 – 60 minutes before high water unless the race exits the harbour in which case the start time will be approximately 90 minutes before low water.
1.2	Planning of Starting Sequence	Where dinghy races take place on the same day as a cruiser race, the dinghy start time will be at least 30 minutes before the cruiser start time.
1.3	Advance Briefing of Race Management	Written instructions will always be available on the signing in sheet and the Race Officer is available in the Race Box for the hour prior to the race start.
1.4	Advance Safety Briefing with Authorities.	For club races, no formal notification is necessary to the harbour authority
1.5	Shipping Movement Monitoring	The Race Officer should advise racers of the likely departure and arrival time of the Kendalls dredger. Should this occur during a race, the Patrol Boat will ensure that racers are aware of the dredger. Standing order for racers is that the dredger has right of way and should be given a wide berth regardless of whether this negatively impacts a racers racing line.
1.6	Weather monitoring.	Use forecasts to decide whether to proceed. Race Officers, in discussion with experienced sailors present, will decide whether to proceed with the race.
1.7	Clothing	Sailors are required to wear appropriate clothing. During the Frostbite and Icicle series, Drysuits or winter wetsuits are obligatory.
1.8	Manning	Race Officers will have been through the relevant club training programme
1.9	Emergency /Contingency Procedures	As part of their training, Race Officers are given access to the club telephone and emergency telephone numbers are on the noticeboard in the Race Box.

2. Communications

2.1	Notice of Race.	Race series' are described in the Club Calendar and notices of race are given on the club website.
2.2	Sailing Instructions/Amendments.	All Tudor races (excluding LHRW) are covered by Tudor Sailing Club Sailing Instructions which are available to all members on our website
2.3	Safety Briefing.	Formal safety briefings will not be held each race however the Race Officer and senior club members racing will identify new or youth members and will offer individual safety briefings should they be requested
2.4	Signals.	Race Signals as defined in the Sailing Instructions will be hoisted on the club flagpole or from the race gantry on the committee boat.
2.5	VHF Radio Announcements.	Race Officer and Patrol Boats will use channel 32 (M2) for VHF communication
2.6	Mobile Telephones and VHF	Communication with race management and coastguard will be by telephone using the contact list on the noticeboard in the race box

2.7	International Collisions Regulations	For right of way between racing and non-racing traffic, the ICR will apply.
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3. Control Measures before start

3.1	Safety inspections.	All competitors are responsible for ensuring that their craft are fit for racing. Should the Patrol Boat crew or Race Officer have any concerns about the condition of a vessel, the Race Officer will have the right to refuse entry to the race.
3.2	Patrol boats	Any Patrol Boats will launch before dinghies start launching and will be the last to be recovered.
3.3	Postponement/suspension of Starts	In the event of commercial or other traffic movements, the race start can be postponed by a sound signal and flying the red and white pennant

4. Additional Control Measures after start and during race

4.1	Abandonment.	Race Office has the right to abandon the race in the event of adverse weather or an event which consumes the Patrol Boat resource
4.2	Shortening course.	In the event of lack of wind, failing light, failing visibility or other factors
4.5	Monitoring of wind/sea conditions	The Patrol Boat crew will advise the Race Officer by VHF of any change in sea state/weather conditions at different parts of the course

5. Additional Control Measures at Finish

5.2	Retirement monitoring.	The Patrol Boats will contact the Race Officer by VHF to notify of any competitors who are retiring and returning to the slip
5.3	Harbour Patrol	At least one Patrol Boat will be at the back of the fleet as the tail ends complete the race to ensure that no competitors are left out on the course
5.4	Race Declaration	All racers will complete the signing on sheet and the Race Officer will mark off racers against this sheet as they return to the slip

Standard Control Measures for Club Dinghy Cruises

1. Planning

	Measures	General Comments
1.1	Use of Tidal Prediction Information	The Cruise leader will time the start of the cruise to match the requirements of the destination
1.2	Cruise and Safety Briefing	30 minutes before going afloat, all participants are required to attend the cruise briefing which will include details of departure, assembly points, Go/NoGo points and any stopping points.
1.3	Advance Safety Briefing with Other Parties	If visiting other Sailing Clubs, the Cruise Leader will call ahead to ensure that there is space for the arriving fleet of dinghies and Patrol Boats
1.4	Shipping Movement Monitoring	The Cruise Leader will advise racers of the likely departure and arrival time of the Kendalls dredger. Should this occur during the cruise, the Patrol Boat will ensure that participants are aware of the dredger.
1.5	Weather monitoring.	Use forecasts to decide whether to proceed. Cruise Leader, in discussion with experienced sailors present, will decide whether to proceed with the cruise and what the conditions need to be when they reach Go/No Go points.
1.6	Clothing	Participants are required to wear suitable clothing and are advised in the safety briefing to be prepared for changes in the weather
1.7	Manning	Cruise Leaders will be experienced sailors who have participated in each cruise in the past
1.8	Emergency /Contingency Procedures	As well as VHF, Cruise Leaders will also carry a fully charged mobile phone in appropriate dry bag.

2. Communications

2.1	Notice of Cruise.	Race cruises are listed in the club calendar and are advertised through internal emails in advance of the date, detailing the type of participant who is welcome.
2.3	Safety Briefing.	30 minutes before going afloat, all participants are required to attend the cruise briefing which will include details of departure, assembly points, Go/NoGo points and any stopping points.
2.5	Safety equipment.	Cruise participants are invited to carry a VHF radio and a mobile phone for emergency use. For cruises leaving the harbour, each vessel is required to carry a compass and whistle
2.6	VHF Radio Announcements.	Cruise Leader, Patrol Boats and any cruise participants with a radio will use channel 32 (M2) for VHF communication
2.9	International Collisions Regulations	For right of way, ICR will apply.

3. Control Measures before start

3.1	Safety inspections.	All participants are responsible for ensuring that their craft are fit for the cruise. Should the Patrol Boat crew or Cruise Leader have any concerns about the condition of a vessel, the Cruise Leader will have the right to refuse entry to the race.
3.2	Patrol boats	Any Patrol Boats will launch before dinghies start launching and will be the last to be recovered.

4. Additional Control Measures after start and during race

4.1	Abandonment.	In the event of adverse weather or other factors.
4.2	Shortening course.	In the event of lack of wind or other factors.
4.4	Escort vessels	Club members or other vessels.
4.5	Monitoring of wind/sea conditions	By communication with observers and escort vessels.

5. Additional Control Measures at Finish

5.1	Finish Line Length	Matched to number/size of competing boats.
5.2	Retirement monitoring.	Reporting by boats retiring or tally system.
5.3	Harbour Patrol	Patrolling of finishing area.
5.4	Race Declaration	Boats sign in after race to monitor all finishers.
5.5	Use of Engine	Boats to clear line after crossing the finishing line

Risk Assessment

In building this Risk Assessment matrix, the following standards have been used:

Hazard : What is causing the potential harm to individuals

Potential Impacts : Potential harm / impacts to individuals

Likelihood: (L) How likely is the hazard to occur if the control measures are not in place

1 – Unlikely

2 – Likely

3 – Highly likely

Severity: (S) Nature of the physical harm

1 – Low – such as requiring minor first aid

2 – Medium – such as requires evacuation to medical facilities

3 – High – serious injury or death

Risk: (R) - Likelihood x Severity

Overall Risk without CM - Risk assessment before applying appropriate control measure (1 or 2 – Low, 3 or 4 – Medium, >4 – High)

Specific Control Measure – identified control measure that reduces the likelihood or severity

Overall Risk with CM – resultant risk assessment following the use of the specific control measures

No	Hazard	Potential Impact	L	S	R	Overall Risk without CM	Specific Control Measure (CM)	L	S	R	Overall Risk with CM
	Collision • Racing boat with other racer	• Minor injuries • Capsize	2 1	1 1	2 1	Low Low	• Rules of racing covering avoiding of collisions • RO to identify novice/youth sailors to all racers and PB crew	1 1	1 1	1 1	Low Low
	• Racing boat with cruiser	• Minor injuries • Capsize • Separation from boat (MOB)	2 2 2	1 2 2	2 4 4	Low Med Med	• “Rules of the Road” • Role of Patrol Boat • If scheduling dinghy and cruiser racing at the same time, allow at least 30	1 1 1	1 1 1	1 1 1	Low Low Low

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								mins between start times – dinghies start first				
	• Racing boat with commercial vessel		• Minor injuries • Major Injuries • Capsize • Separation from boat (MOB)	2 1 3 3	1 2 3 3	2 2 9 9	Low Low High High	• Warning from Patrol Boat when commercial vessels are seen approaching • Delay start with approach of commercial vessel • All racers advised that racing line must be sacrificed in favour safety	1 1 1 1	1 2 3 3	1 2 3 3	Low Low Med Med
	Grounding due to poor navigation or poor decision making		• Minor Injuries • Separation from Boat • Exposure	1 1 1	1 2 2	1 2 2	Low Low Low	• Use of standard courses • Participants to understand the navigation warnings in harbour • RO/PB to identify novice/youth sailors and offer advice on lee shores and tidal times/behaviour • PB training on lee shore recovery	1 1 1	1 1 1	1 1 1	Low Low Low
	Rig failure • Booms/Ropes/Jammers • Capsize		• Minor Injuries • Capsize • Separation from boat	1 1 1	1 2 2	1 2 2	Low Low Low	• Check of rig before launch • PB training about using abandoned boat techniques to bring crew to safety whilst still offering cover	1 1 1	1 2 1	1 2 1	Low Low Low
	Capsize due to • Crew capability • Changing conditions • Kit failure • Collisions		• Minor Injuries • Separation from boat • Drowning	2 1 1	2 1 3	4 1 3	Med Low Med	• Training of boat recovery of crew • PB training in boat and crew recovery • Awareness of position of all participants where practicable • Buoyancy Aid or life jacket must be worn when on water • RO – monitor weather forecast and cancel or shorten race if conditions change • PB monitor sea and weather conditions	2 1 1	1 1 3	2 1 3	Low Low Med
	Exhaustion • Repeated Capsize • Length of race / cruise • Weather conditions		• Major Injury	2	2	4	Med	• Limits on race length • Observations by PB of the weakness of crew • Rapid extract of exhausted crewmember	1	2	2	Low
	Entrapment		• Drowning • Major Injury	2 2	3 2	6 4	High Med	• PB equipment to include knife	1 1	3 2	3 2	Med Low

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		<ul style="list-style-type: none"> • Minor injury 	3	1	3	Low	<ul style="list-style-type: none"> • Recommendation for all crew to carry own knife • PB training re head counts on capsized craft 	1	1	1	Low
	Cold weather exposure <ul style="list-style-type: none"> • Due immersion • Stranding 	<ul style="list-style-type: none"> • Hyperthermia • Death 	2 1	2 3	4 3	Med Med	<ul style="list-style-type: none"> • PB to expedite return of recovered sailors with appropriate blanket • Set race length in recognition of general weather conditions • Minimum clothing requirements for winter series • PB training to identify the signs of hypothermia 	1 1	2 3	2 3	Low Med
	Injuries/illness Pre-existing conditions	<ul style="list-style-type: none"> • Major injuries 	1	2	2	Low	<ul style="list-style-type: none"> • Notification by sailors of conditions to RO for awareness 	1	1	1	Low
	Operation of PB <ul style="list-style-type: none"> • Causing collision • Causing avoiding helming • Unsafe close operation / propeller 	<ul style="list-style-type: none"> • Minor Injuries • Major Injuries 	2 2	1 2	2 2	Low Med	<ul style="list-style-type: none"> • PB training standards to be maintained • Ensure PB helms and crews are current 	1 1	1 2	1 2	Low Low
	Slips, trips & falls whilst rigging / launching / recovery	<ul style="list-style-type: none"> • Minor Injuries 	2	1	2	Low	<ul style="list-style-type: none"> • Sailors to arrive with sufficient time to rig and launch • Racers to assist each other, especially when launching • Published list of first aid trained members • First Aid kit available and accessible • RO call emergency services if required 	2	1	2	Low
	Fog / Visibility loss <ul style="list-style-type: none"> • Increased likelihood of collision or exhaustion / exposure • Disorientation 	<ul style="list-style-type: none"> • Exhaustion • Collision 	2 2	2 2	4 4	Med Med	<ul style="list-style-type: none"> • Requirement for whistle & compass, especially out of harbour • Check weather forecast before commencing • PB report back to RO with reports of changing conditions • RO shorten course or cancel race if conditions deteriorate sufficiently 	1 1	2 2	2 2	Low Low
	Becoming detached from fleet	<ul style="list-style-type: none"> • Exposure 	1	1	1	Low	<ul style="list-style-type: none"> • PB required to check sails regularly • Retirement monitoring by RO and PB 	1	1	1	Low

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								<ul style="list-style-type: none"> • PB to turn back boats if scale of detachment risks limiting overall PB coverage of the fleet • On cruises, identify clear rally points and times 				
	Crew member(s) overboard		<ul style="list-style-type: none"> • Drowning • Exposure 	1 2	3 2	3 4	Med Med	<ul style="list-style-type: none"> • All racers to wear Buoyancy Aids and clothing appropriate to the conditions • All racers advised to carry a whistle • PB training to include MOB recover techniques • All sailors clear that their first obligation is the safety of themselves and other competitors over race positions 	1 1	3 2	3 2	Med Low
	Change in sea/weather conditions • Dinghies unable to make appropriate headway		<ul style="list-style-type: none"> • Capsize • Exposure 	2 1	1 2	2 2	Low Low	<ul style="list-style-type: none"> • Check weather forecast before start • PB remains in communication with crews and RO about changing conditions • RO shorten course or cancel race if conditions deteriorate sufficiently • Use abandoned boat markers if necessary to prioritise crew and fleet safety 	1 1	1 2	2 2	Low Low
	Competence of crews Capsize Exhaustion Rigging associated injuries		<ul style="list-style-type: none"> • Minor Injury • Major Injury • Capsize • Entrapment • Drowning 	2 1 2 1 1	1 2 2 2 3	2 2 4 2 3	Low Low Med Low Med	<ul style="list-style-type: none"> • RO advise minimum recommended capability/experience according to the conditions • PB advise struggling crew to retire • Use abandoned boat markers if necessary to prioritise crew and fleet safety • Crew and Helm to review that competency in light of conditions before sailing 	2 1 2 1 1	1 2 2 2 3	2 2 4 2 3	Low Low Med Low Med