

**RISK ASSESSMENT – KIRCUBBIN SC Annual Regatta – 24<sup>th</sup> June 2023**

last updated 10.5.23

<b>RACE OFFICER</b>	<b>Pete McDowell</b>	<b>SAFETY OFFICERS</b>	<b>Davy Duff &amp; Lynn Andrews</b>
<b>NUMBERS EXPECTED</b>	<b>maximum of 50, typically 30 or less</b>	<b>SUPPORT BOATS PLANNED</b>	<b>Committee Boat + 1 KSC safety/mark boat + at least 1 other ; see below re dinghies also.</b>
<b>SAILING/RACE AREA</b>	<b>The Race Area is within the navigable water north from Sand Rock Pladdy to north of Herring Bay, bounded on the west by the shoal areas from Sand Rock to Eel Rock &amp; the Sheelaghs, and on the east by the Ards Peninsular.</b>		
<b>BOAT TYPES &amp; COMPETITORS</b>	<b>Due to limited resources within Kircubbin SC, the Annual Regatta is run essentially as a 'keelboat event'. However, the Club may welcome additional dinghy classes, so this risk assessment includes a separate set of 'Sailing Risks' and control measures for each of the two boat types. It should be noted that, in the case of visiting youth dinghy classes (Topper, Laser 4.7, Optimist, etc) where a wide range of competencies may be expected, a race can only be put on where a dedicated dinghy-class safety boat has been provided by prior arrangement, most usually involving the dinghy class' home Sailing Club &amp; safety boat.</b>		

**RISK FACTOR LEGEND**

For each hazard, values of likelihood and impact are assigned: low = 1, medium = 2, high = 3. The product of likelihood and impact gives the risk factor, which may be interpreted as follows.

<b>RISK FACTOR</b>	<b>CONTROL MEASURES / FURTHER ACTIONS IMPLEMENTED</b>
1 or 2	Low risk factor, improvements considered
3 or 4	Medium risk factor, control measures implemented
6 or 9	High risk factor, rigorous control measures implemented

The Control Measures in the risk assessment reduce the risk factors to reasonable and acceptable levels.

HAZARD	KEELBOAT SAILING RISKS	LIKELY HOOD	IMPACT	RISK FACTOR	CONTROL MEASURES
MOB & recovery aboard	Persons in water at risk of drowning or hypothermia. Possible injury during recovery.	2	3	6	Normally self-recovered by competitor. If summoned by VHF, Safety Boat will attend quickly & recover victim to safety : smaller boats may not have VHF, so Safety Boat crews must be vigilant and attend any incident where safety issues may be developing. Safety boats carry first aid & thermal blankets for hypothermia. RO can make personal flotation mandatory for competitors if the conditions warrant [ Flag Y – RRS 40 ].
Injury as a result of gear failure or other accident.	Rope burns, cuts, sprains, bruising, breaks, blows to head. Consequent MOB. Injury from entanglement.	3	3	9	Lesser injuries will be self-treated onboard by competitor. In the event of more serious injury, summoned by VHF, Safety Boat will attend quickly & take victim ashore for medical attention : as above, small boats may not have VHF, so Safety Boat crews must be vigilant. Safety Officer ashore will summon outside medical aid if necessary, & liaise with emergency services. [ KSC Gate may need to be opened ]
Grounding, disablement or sinking.	Loss of manoeuvrability, damage to boat, loss of boat.	1	1	1	Lesser incidents usually self-treated by competitor. Safety Boats will be vigilant for more serious incidents & will attend & determine best course of action, also advise Race Committee.
Collision between competitors and other vessels incl spectator boats.	Injury, MOB. Damage to boats	1	3	3	RRS and Collision Regulations apply. Safety boats advise other vessels to keep clear and report situation to Safety Officer ashore Contention minimised by course design, the order & separation of starts, & the relatively small number of boats afloat.
Physical / medical problems arising afloat.	Fatigue, dehydration, hypothermia, other condition.	1	3	3	Lesser incidents usually self-treated by competitor. In the event of more serious problems, summoned by VHF, Safety Boat will attend quickly & take victim ashore for medical attention : as above, small boats may not have VHF, so Safety Boat must be vigilant. Safety Officer ashore will summon outside medical aid if necessary, & liaise with emergency services. [ KSC Gate may need to be opened ]
Competitor incompetence	Potential to cause accidents	1	2	2	RRS Rule 4 (Decision to Race). Vigilance by safety boats. Encourage retirement if in difficulty. Place competent person aboard.

HAZARD	DINGHY SAILING RISKS (Dinghy classes have dedicated Safety Boat)	LIKELY -HOOD	IMPACT	RISK FACTOR	CONTROL MEASURES
Capsise	Difficulty recovering. Separation from capsised boat	3	2	6	Lighter crews/bigger boats may require assistance with righting. Assistance is required where crew has lost contact with boat (crews are normally aware that safety is jeopardised by separation from their boat).
MOB	Persons in water at risk of drowning or hypothermia.	2	3	6	Buoyancy aids worn at all times - mandatory. Safety boat counts heads-in-the-water & attends quickly. Crews recovered to Safety boat or dinghy. Safety boats carry thermal blankets for hypothermia cases.
Injury as a result of collision or other accident	Cuts, sprains, bruising, rope burns, breaks, blows to head. MOB	2	3	6	Tactical positioning of safety boats at high risks parts of course. Safety boats vigilant and attend all incidents. First aid is carried. In the event of more serious problem, Safety boat will take victim ashore for medical attention. Safety Officer ashore will summon outside medical aid if necessary, & liaise with emergency services. [ KSC Gate may need to be opened ]
Gear failure and damage to boat	Disablement or loss of manoeuvrability. Inability to return to shore.	1	2	2	Safety boats vigilant and attend all incidents. Disabled boats towed to shore or temporarily secured, crews taken on board Safety Boat.
Entanglement &/or Entrapment under hull following capsise	Rapidly leads to drowning.	1	3	3	Safety Boat counts heads-in-the-water & attends quickly. Safety boat crews may wear wet/drysuits and be ready to enter water to assist righting the boat. Knife carried for entanglements <b>but righting the boat almost always obviates the problem more quickly</b> . Tactical positioning of safety boats and suitable ratios minimises time to attend. Safety boat are drivers suitably qualified and briefed to attend all incidents quickly.
Medical conditions	Fatigue, hypothermia, other condition, dehydration.	1	3	3	First aid is carried. In the event that competitor is unable to cope, Safety Boat will take ashore victim for respite or medical attention if required. Safety Officer ashore will summon outside medical aid if necessary, & liaise with emergency services. [ KSC Gate may need to be opened ] Time on water in prevailing weather is not an issue for a short afternoon event.
Collision between competitors and other vessels.	Injury, MOB. Damage to boats	1	2	2	RRS and Collision Regulations. Safety boats report situation to RO &/or Safety Officer. Special care when towing.
Competitor incompetence	Need greater attention from safety boats. Potential to cause accidents	1	2	2	RRS 4 (Decision to Race). Vigilance by safety boats, - can give respite/rest with Safety Boat if in difficulty, encourage retirement if appropriate. Sanctions discourage non-cooperation.

HAZARD	EVENT RISKS	LIKELY HOOD	IMPACT	RISK FACTOR	CONTROL MEASURES
Deterioration of weather or sea conditions.	Safety boats may not be able to support all dinghies in difficulty. Many capsizes.	1	3	2	RO keeps close watch on weather forecasts and developing conditions. RO may shorten or abandon races if appropriate. Competitors may be taken aboard SB & their boat marked & left, if SB is also required elsewhere. Call coastguard if Safety Boats cover becomes overloaded.
Communications lost, equipment failure	Loss of control over event and safety on the water.	1	2	2	All Safety Boats & Race Committee ashore have VHF radios : RO & Race Committee have spare radios also. Mobile phone contacts lists provide a back-up.
Safety Boat problems, crew unwell, breakdown etc.	Safety Boat needs assistance and draws resources. Unable to return or function.	1	3	3	Generally there are enough Safety Boats to stand-in for failure by either/both KSC boats. Broken-down Safety Boats can be anchored for later recovery.
Unsuitable weather before going afloat.	Many competitors may not be able to deal with the conditions. Safety boats may not be able to support all dinghies in difficulty	1	3	3	RO has current weather forecast to assess going afloat. Helms/owners have responsibility to race/not race (RRS 4). Dinghy class races can be abandoned (or all races may be abandoned).
Fog	Possibility of lost competitors. Dinghies unable to find way back.	1	3	3	RO can shorten or abandon race. Dinghy Class Safety Boats will escort dinghies home. Larger keelboats almost all have GPS, they will assist other boats to navigate home.
Boat or crew missing	Prolonged missing situation could lead to risk of hypothermia or drowning.	1	3	3	Keelboats are autonomous & unlikely to be at risk (& can be called by VHF). Dinghy Class SB will ensure all dinghies return or initiate search if required. Race Committee will check all competitors are accounted for.
Safety boat activity	Injury to RIB crew, or sailors in the water, damage to capsized dinghy or collision with other boats.	1	3	3	All SB drivers are suitably qualified.
Major incident	Fatality or serious injury involving a call to emergency services	1	3	3	Following an initial VHF call from the Safety Boat attending, the Safety Officer ashore will summon outside required medical aid, & liaise with emergency services. [ KSC Gate may need to be opened ]
Becalmed	Fleet unable to sail home.	1	1	1	Safety Boats or keelboats with engines will tow those without. Dinghies towed in by Safety Boat/s.

HAZARD	LOCATION RISKS	LIKELY HOOD	IMPACT	RISK FACTOR	CONTROL MEASURES
Navigational hazards	The west side of the Race Area is bordered by a series of reefs & pladdies : north of the Race Area, the water becomes shoal : and there is a small number of reefs on the east shore.	2	2	4	Owners/helms are responsible for where they go. All the reefs and pladdies bordering on the Race Area are charted and/or marked. Regatta Sailing Instructions (SIs) are well publicised & include information on local hazards & tide heights. The SIs require avoidance of marked hazards while racing.
Dinghies - loss of control on slipway	Accidents or injuries to sailors or others while moving boats to/from slipway and launching or recovering.	2	2	4	Dinghy owners to be responsible for safe launch and recovery. As there is plenty of space on the KSC slip, with a small dinghy class there is little risk.

### **Conclusions**

For keelboat races, the highest risk is of injury aboard the competing boat, typically from gear failure or similar : the other significant risk is from 'Man Overboard' situations and possible injury during recovery. A good communication system (vhf radio), together with vigilance and prompt action from the Safety Boat fleet, all backed up by the Race Committee ashore, provide the most important control measures.

For dinghy races, the highest risks are of injury while competing, and from problems arising out of capsising or otherwise becoming parted from the boat. As above, vigilance and prompt action by the Safety Boat fleet backed up by the Race Committee ashore are the most important control measures.

Sailors will generally be well aware of navigational dangers at the edges of the Race Area, & these are depicted in the necessary Sailing Instructions for the Regatta.

**The control measures outlined above are practised and in hand and they reduce the risks for KSC's Annual Regatta to an acceptable level.**