Template based on SBA RA ISSUE 2.1 – Date: 8/04/2022

The Shamrock Trust Risk Assessment (To be conducted by an Officer of the Trust)

Activity: **Working at Jetties / Raising steam / Operating Shamrock on Windermere / Maintenance**

Activity / Event Date (If applicable): Throughout year

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The Shamrock Trust Risk Assessments

Introduction

To help Skippers and Officers of The Shamrock Trust (the Trust) look after Trust Friends, the guests of the Trust, fellow volunteers and others who may be affected by our activities the Trust has carried out this Risk Assessment of the following regular activities to identify the steps that Skippers and Officers should take to look after people (including yourself):

Working at Jetties/ Raising steam / Operating Shamrock on Windermere

Every time the boat is accessed or taken out, a non-written assessment should be made of any possible hazards occurring that are not covered in the written Risk Assessment and persons accessing the boat should be made aware of them, e.g. work on the jetties being carried out. This activity need not be onerous – it is a matter of getting into the habit of considering various potential hazards automatically. Generally, common sense, experience and established good practice will answer all the questions.

The following tables shows some potential hazards (there may be others), the risk associated with them (which may depend on conditions) and possible ways of reducing that risk. (The risk is a combination of the probability of an occurrence and the seriousness of its consequences.).
The advice in the tables is intended to help you the Skipper or Officer look after people including yourselves.

Basis of the risk assessments

1) The risk assessment assumes that:

- Skippers selected by the Trust will be competent steam boaters with experience and knowledge of operating on Windermere; and
- all new Skippers will be trained in the operation of Shamrock's steam plant, boat handling characteristics, general operating methods and operating Shamrock on Windermere.

2) Guidance on carrying out risk assessments provided by the Steamboat Association (SBA) of Great Britain including the SBA Risk Assessment Template.

What is important is thinking about what is being done, how people could be harmed, what would be sensible and reasonable to avoid or control these risks and then actually carrying out those measures to address the risks.
If you don't take reasonable steps to do these measures you have not helped manage the safety of people!

Severity of Harm Comparisons Guidance

Score	Example
1	A small cut requiring a plaster
2	A twist or sprain causing difficulty and pain or a larger cut that might need a stitch or tetanus jab
3	A painful injury such as a broken finger or arm but from which a full mend will be possible
4	A severe injury that causes permanent change such as a broken hip or neck or scarring.
5	A Fatality or severe permanent disability like blinding or spinal damage

Likelihood of Harm Guidance

Score	Category	Example
1	Very Unlikely	Something that will happen once in a blue moon under exceptional circumstances like being hit by lightning
2	Unlikely	Something that shouldn't happen under normal circumstances like a tyre blow out
3	Likely	Something that is likely to happen if simple precautions are not taken to prevent it like getting something in your eye if grinding metal without goggles
4	Very Likely	Something that is likely to happen under normal circumstances like not spotting a pot hole in the road
5	Difficult to Avoid	Something that is likely to happen as matter or course like hitting the kerb when parking

Part A Operating Shamrock on Windermere

A Skipper or person under the direct supervision of the Skipper undertakes the duties listed below.

	Hazard	Nature of Risk	Potential Harm	Current Actions or Advice to Control Risk	Likelihood of Harm (1-5) A	Severity of Harm (1-5) B	Score A X B	Notes/Additional Action Necessary (if score 15 or greater)
1	**General Hazards**							
1.1	Awkward steps leading to walkway Narrow walkways with unguarded sides. Deep water and moored boats either side. Tripping on mooring lines. Slippery surfaces – wet, muddy or icy	Falls and falling in water	Cuts, bruises, broken bones, dislocations and concussion. Drowning.	Use emergency jetty ladders and lifesaving equipment where available. Skipper to: - ensure mooring lines are tidy and easily visible. - discourage running and encourage use of suitable footwear.	3	5	15	Skipper to: - warn Trust's volunteers and guests; - ask people to walk single file where possible; - limit number of persons as necessary depending upon activity. - be aware of the location of emergency jetty ladders and life saving equipment.
1.2	Bollards, cleats & ropes on jetties	Trip features.	Cuts, bruises, broken bones, dislocations and concussion. In extremis drowning.	Skipper to keep mooring ropes tidy and remind participants of the possibility of tripping up.	2	5	10	
1.3	Falling or tripping as getting in or out of boat		Cuts, bruises, broken bones, dislocations and concussion.	Care when users are embarking or disembarking. Vigilance for trip hazards adjacent to water.	3	4	12	Skipper or volunteer briefed by Skipper to assist. Shamrock must be pulled in close to the jetty by an able-bodied person and held steady while the visitors climb on board over the gunwale in front of the cabin. Persons with reduced mobility to be accompanied at all times. Minimum of two people to access walkways and or be on Shamrock at one particular time.
1.4	Young children and non-swimmers	Falling in water.	Drowning.	Children must be supervised by parents. Keep away from edge of jetties.	3	5	15	Skipper to require all juniors & non-swimmers to bring and wear their own buoyancy aids.

1.5	Finger crushing	Movement of Shamrock against jetty / other boats could crush a hand.	Laceration or broken / dislocated bone.		3	3	9	Skipper to advise all to keep fingers in board when near other boats or mooring / moored. Special vigilance with children.
1.6	Coming alongside	Hand or foot etc. crushed between boat and mooring.	Laceration or broken / dislocated bone.	Skipper to instruct users not to put hands, feet etc over the side and not to fend off.	3	3	9	
1.7	Infectious Disease	Airborne transmission Transmission through touching infected surfaces or from contact with water.	Varies from asymptotic symptoms to flu like illness, and risk of very severe illness or long term debility.	Skipper to warn users about water born infections	4 3	2 (flu like illness) 4 (long term Illness)	8 12	
1.8	Wind exposure, hypothermia	Lake water can be very cold. Wind can develop very quickly.	Chills. Hypothermia.	Avoid entering water. Make sure suitable protective clothing is available. Skipper to always look out for adverse weather.	3	3	9	In poor weather conditions, Skipper to check crew and other users have protective clothing before casting off.
1.9	Weather deterioration	Fire blown out and loss of steerage. Taking on excess water / excessive rolling of boat. Blown onto shore / rocks / grounded / hull holed.	Sea sickness. In extremis boat holed / capsizes.	Skipper to be aware of the weather and weather forecast and to be prepared to seek shelter in heavy rain, wind and thunder.	3 2	2 4	6 8	Skipper to check at start of day for number of users and crew on board everyone would have adequate personal buoyancy in event of an emergency.
2	**Boating Hazards**							
	Hazard	**Nature of Risk**	**Potential Harm**	**Current Actions or Advice to Control Risk**	**Likelihood of Harm (1-5) A**	**Severity of Harm (1-5) B**	**Score A X B**	**Notes/Additional Action Necessary (if score 15 or greater)**
2.1	Overcrowding on boat	Crew unable to handle vessel	In extremis drowning	Trustees Decision to limit total number of people on board to twelve including skipper, each child and baby is to count as a person.	**2**	**5**	**10**	Skipper to ensure this is strictly enforced.
2.2	Washes	Excessive pitching and rolling of boat. People 'thrown out of seats'.	Cuts, bruises, broken bones, dislocations.	Skipper/helmsman to watch out for large washes coming from the more powerful motor boats and wake boarders.	2	3	6	

			Change course to take the wash on the bow or quarter.				
2.3 Waves	Water can become quite lumpy in moderate windy weather. Excessive pitching and rolling of boat. People 'thrown out of seats'.	Cuts, bruises, broken bones, dislocations.	Skipper to seek the shelter of the windward shore if possible.	2	3	6	
2.4 Water hazards (rocks / shallows)	Grounding and in extremis hull holed and boat sinks.	Inconvenience of waiting to be rescued. Cuts, bruises, broken bones from 'sudden jolt' throwing people from seats. In extremis drowning.	Skipper to: - undertake visual check to see sufficient depth of water; - keep a reasonable distance from the shore; - watch out for red hazard marker buoys; - watch out for submerged trees; - in flat surrounding areas keep further away from the shore.	2	5	10	Skipper to check at start of day for number of users and crew on board and that everyone would have adequate personal buoyancy in event of an emergency.
2.5 Swimmers and divers	Swimmers are very difficult to see in slightly rough conditions. Divers may surface unexpectedly.	Swimmer / diver: Cuts, bruises, broken bones, dislocations. In extremis drowning.	Both should be escorted by a boat with a blue and white flag, but this is often difficult to see as well. Skipper to keep a good look out, especially if there is a very slow moving boat nearby.	2	5	10	 Diver or swimmer escort flag - international signal flag Alpha
2.6 Collisions	People 'thrown out of seats'. Hull holed and boat sinks.	Cuts, bruises, broken bones, dislocations. In extremis drowning.	Skipper to: - always keep a lookout, particularly astern; - pass behind Lake - Steamers and the Windermere Ferry (chain hauled so danger of hitting chain ahead of ferry).	2 1	5 5	10 5	Skipper to check at start of day for number of users and crew on board everyone would have adequate personal buoyancy in event of an emergency.
2.7 Other water users	Need for abrupt change of course to avoid collision. People 'thrown out of seats'.	Cuts, bruises, broken bones, dislocations.	Skipper to be aware that numerous types of craft use the water including small dinghies, wind surfers, yachts, fishing boats, canoes, long distance swimmers, power boats, wake boarders, hire craft and large	2	4	8	

			ferry boats etc. and take early avoiding action.				
2.8 Propellor	Lines fall over side and get wrapped around prop. Loss of steerage.	Injury sustained whilst freeing line from prop.	Skippers to ensure lines stored below gunwhale. In event work near prop required, main steam valve feed to engine and throttle to be shut and cylinder drains opened to prevent accidental rotation of prop.	2	4	8	
2.9 Cuts	Wound may be contaminated with lake water.	Weil's disease or other infection.	Cover cuts with a sterile waterproof dressing, if in doubt seek professional medical attention.	2	2	4	
3.0 Night navigation	Collisions / grounding.	Cuts, bruises, broken bones, dislocations. In extremis drowning.	Skippers to: - not steam in the dark unless you have excellent knowledge of the area; - remember you may not be the only person using that stretch of water; - use the correct navigation lights.	3	5	15	Skipper to check at start of day for number of users and crew on board everyone would have adequate personal buoyancy in event of an emergency. Skipper to appoint a crew member to assist with look out duties.
3 Hazards Specific to Steam Boats (including raising steam)							
Hazard	**Nature of Risk**	**Potential Harm**	**Current Actions or Advice to Control Risk**	**Likelihood of Harm (1-5) A**	**Severity of Harm (1-5) B**	**Score A X B**	**Notes/Additional Action Necessary (if score 15 or greater)**
3.1 Hot surfaces / machinery	Any exposed steam pipes, engine parts or metal adjacent to boiler may cause an injury.	Scalding or burns to parts which come into contact.	Hot surfaces insulated where reasonably possible Skipper to brief all users and crew especially children about dangerous surfaces around dome, whistle etc.. Carry some burn cream or freezing spray.	3	2	6	Less exposed hot surfaces than many steamboats.
3.2 Contact with moving machinery	Impact or crush injury may result from contact with moving components.	Laceration or crush injury.	Nearly all moving parts on Shamrock enclosed whilst operating. Skipper briefing to crew.	2	3	6	
3.3 Sudden release of steam	Rapid expulsion of steam from boiler or plant could cause a burn injury.	Scalding or burns.	All steam plant to possess a valid boiler certificate.	1	5	5	

				The Trust Officers to ensure Shamrock only operated with a valid boiler inspection certificate.				
3.4	Smoke, cinders	Hot cinders.	Damage to clothing, minor skin burns, in extremis eye burn.	Skipper to warn people of the possibility, particularly before raking ash or using the blower. Steam NOT to be raised inside the building of the Windermere Jetty Museum.	3	3	9	
3.5	Disposal of ash, paraffin	Small quantity of paraffin carried on board for navigation lights. When disposing of hot ashes, dropping hot ashes could cause a fire on board.	Burns and possible compromise of the integrity of the hull and evacuation of vessel.	Shamrock Skippers will be a competent steamboat operator who understand the maintenance, storage and use of paraffin and disposal of ash. Always carry a fire extinguisher. When moored at the Windermere Jetty Museum hot ashes must be allowed to cool (e.g. overnight) before disposal.	3	4	12	
3.5	Noise (whistle use) and escaping steam	Damage to hearing could be a consequence of careless whistle use.	Temporary or permanent hearing damage.	Skipper to warn users that the safety valve may cause a sudden noise, and warn them before blowing the whistle.	2	4	8	

4 Emergencies

Skipper and crew members to:

- **carry a mobile phone on a network which has a signal on the Lake;**
- **make sure phone is charged and has credit; and**
- **carry a list of contact numbers for emergency services.**

	Hazard	Nature of Risk	Potential Harm	Current Actions or Advice to Control Risk	Likelihood of Harm (1-5) A	Severity of Harm (1-5) B	Score A X B	Notes/Additional Action Necessary (if score 15 or greater)
4.1	Person overboard		Hypothermia, drowning.	Skipper to keep rescue equipment (life buoy, boat hook, rope, ladder) readily to hand. Officer to regularly check rescue equipment. Officer to arrange practice in good weather at start of	2	5	10	

			operating season and mid-season. Skipper to brief crew on procedures.				
4.2 Collision / extreme weather / risk of sinking		Various injuries, drowning.	Skipper to: - call for assistance; - ensure everyone has adequate personal buoyancy; - get as close to land as possible.	See relevant hazards in Sections 1 & 2.			
4.3 Mechanical breakdown	Blown onto rocks / unable to avoid a collision / grounded in shallow water.	Various injuries, drowning.	Skipper to: - drop anchor to prevent/reduce drifting - call for assistance, - ensure everybody is warmly dressed and stays calm; - warn approaching boats etc.	See relevant hazards in Sections 1 & 2.			
4.4 Fire		Burns.	Skipper to brief crew on emergency procedure. Officer to check fire extinguishers at start of operating season.	See relevant hazards in Section 3.			
4.5 Medical Emergency e.g. suspected stroke, heart attack, or serious injury	Delay in receiving medical attention	Death	Skipper to call emergency services 999 and ask for Coastguard. Note exact location (landmarks, grid reference or what-3-words)	2	5	10	Coastguard will coordinate other emergency services including the Lake Wardens.
4.6 Acids and Alkalis	Handling boiler water treatment	Burn	Operator to follow procedure laid out in instruction book and Operations Manual	2	3	6	

Part B Risk Assessment for other activities (e.g. hazardous maintenance)

An Officer should prepare a risk assessment using relevant items in Parts A to C (updated as necessary) and complete Part D for the other identified hazards.
Part D is a blank risk assessment so an Officer can assess additional hazards and risks (e.g. relating to hazardous maintenance, slipping Shamrock etc.).
Part E provides a "Risk Identification Guidance" checklist. This offers some suggestions of potential hazards that might be specific to the activity or event and includes some additional potential maintenance activities.
By completing Part D in the same way as Parts A to C, an appropriate assessment of the risks facing persons who may be affected can easily be achieved.

What a Trust Officer needs to do for other activities:

1. Fill in your details and the activity / event name at the top of the Risk Assessment;
2. Identify hazards for your activity / event – examples of hazards include relevant hazards from Parts A to C and those listed in Part E plus anything else you spot;
3. Complete the columns for the nature of the risk, potential harm and what you normally do to make things safer;
4. Using the "**Likelihood of Harm Guidance**" table assess the "Likelihood of Harm" for all the risks **with** the identified current actions / advice carried out;
5. Using the "**Severity of Harm Guidance**" table assess the "Severity of Harm" for all the risks;
6. Multiply the value you have given for "Likelihood of Harm" by the "Severity of Harm" and write the score in the box;
7. If the "Score AxB" is greater or equal to 15 then you must write in the box what extra action you will be taking to reduce the likelihood of this risk and its rating.

Part C: Risks specific to your activity / event which are not included above

Hazard	Nature of Risk	Potential Harm	Current Actions and Advice to Control Risk	Likelihood of Harm (1-5)A	Severity of Harm (1-5)B	Score A X B	Notes/Additional Action Necessary (If score is 15 or greater)

Risk Identification Guidance

Event Risk/Hazard Identification Check Sheet			
Are any of the below hazards or risks are likely to occur at your event? If so please tick the box and add the hazard to the Risk Assessment			
SBA Risk Assessment Template prompts:		Venue inhabited by dangerous animals	
Electrical (shock, burn, explosion)		Display machinery not previously covered (steam engines, agricultural machinery etc)	
Hand tools (hammers, drills etc)		Road traffic accident	
Natural hazards (weather, flooding, lightening etc)	X	Vehicle collision (may not seem relevant but some events also include old vehicles)	
Site conditions (rabbit holes, loose footing, tripping etc)	X	Vehicle fire (may not seem relevant but some events also include old vehicles)	
Hygiene hazards (toilets, farm animal waste, waste disposal etc)		Drunken and intoxicated behaviour	
Services (buried or overhead power lines etc)		Large passenger carrying vessels	X
Falling objects		Shallow or deep water	X
Site housekeeping or untidiness	X	Submerged obstructions like wrecks or rocks	X
General obstructions		Tides and tidal currents	
Unsafe access	X	Domestic pets such as dogs, fighting, aggressive or dirty behaviour	
Building Integrity (falling masonry etc)		Reckless behaviour/showing off	
Trespassers & interlopers (gate crashers etc)			
Working at height (ladders or climbing on things)		**Additional prompts identified by The Shamrock Trust:**	
Asphyxiates		Hazards advised by Boat House Owner	X
Combustible materials not previously covered			
Corrosive, toxic or irritant materials		Lone working	X
Flammable or explosive substances not previously covered			
Gasses, fumes or vapours		Asbestos	

Oxidising and reducing substances (strong acids or alkalis etc)	X	Airborne irritants / dust	
Loud noise (loud sirens, engines, bangs etc)		Hot work	
Temperatures and intense sun	X	Welding	
Crowding		Electrical safety – supplies to and use of maintenance tools	
Animals (farm, display, police or wild etc)		Noise from tools	
Suffocation		Vibration from tools	
Entertainment ride or attraction hazards (bouncy castles etc)		Lifting and moving heavy items with lifting equipment	
Rides (tractors, miniature rail, driving instruction etc)		Recovery and launching of Shamrock	
Site machinery (tractors, diggers, lorries, FLT, transporters etc)		Manual handling and lifting	
Flora & fauna hazards (nettles, thorns, poisonous fruit etc)		Washing and toilet facilities	
Dehydration			

Legal Requirement for users and Friends of Shamrock on board the Vessel

Those permitted to travel on board are defined in law by the MCA thus :-

MCA MGN 604 (M+F) section

4.1 In the United Kingdom any vessel that is not a “pleasure vessel” as defined in the Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) Regulations 1998 (SI 1998 No. 2771), as amended, is required to have onboard appropriate valid certification if it proceeds to sea (‘to sea’ means beyond categorised waters as defined in MSN 1776 (M+F)). The definition of pleasure vessel in the above Regulations is: “pleasure vessel"

(bb) in the case of a vessel owned by a body corporate, used only for sport or pleasure and on which the persons on board are employees or officers of the body corporate, or their immediate family or friends; and (ii) on a voyage or excursion which is one for which the owner does not receive money for or in connection with operating the vessel or carrying any person, other than as a contribution to the direct expenses of the operation of the vessel incurred during the voyage or excursion;