

Risk Assessment, Safety and Recovery Plan

Contents

Safety culture and primacy of the RowSafe document

Description of event

Type of boats

Competency of crews

Positions of responsibility for safety

Risk Assessment

Weather and water conditions

- Classification of risk levels
- Actions required for each level of risk

Safety boats

Recommended clothing to be worn when afloat

Communications

Crew lists

Appendix A Route map of Ullswater

Appendix B Grid map of Ullswater

Appendix C Route map of Derwent Water

Appendix D Grid map of Derwent Water

Appendix E Route map of Bassenthwaite Lake

Appendix F Grid map of Bassenthwaite Lake

Appendix G Locations of access points to launching areas

Appendix H Emergency medical services

Appendix I Risk assessment event analysis

Appendix J Risk Matrix

Appendix K Coastguard map

In an incident where life is threatened dial 999 and ask for the coastguard.

Safety culture and primacy of the Rowsafe document

British Rowing promote safe rowing in all their activities. This includes recreational rowing tours. Rowsafe is BR's safety document, the full copy of which can be downloaded [here](#). It is presumed that all members of the tour are familiar with Rowsafe.

Everyone involved in rowing is expected to ensure their actions or lack of action do not compromise the safety of themselves or others. Confusion in role definition can lead to necessary tasks being left to others or not being completed at all.

Expected roles are outlined in very general terms below and in more detail throughout RowSafe.

Everyone is expected to:

- Take responsibility for their own safety both on and off the water.
- Ensure that their actions both on and off the water do not put others at risk.
- Ensure that they have prepared for the activity that they are about to undertake, including having eaten appropriately and have sufficient drinking water.
- Ensure that they are dressed appropriately for the conditions and that their hair, if long, is restrained such that it does not interfere with their rowing.
- Be aware of and abide by Rowsafe.
- Follow the guidance in the Event Safety Plan.
- Report all incidents to the event organisers.

Description of event

The event is a recreational rowing tour where the objective is to row over several days on attractive stretches of water for enjoyment as opposed to racing other crews as is done at regattas.

Some 100 members of British Rowing are staying at the North Lakes Hotel near Penrith and the Crown Inn at Pooley Bridge on Ullswater between Thursday 29th August and Sunday 1st September 2019.

The tour is located on three lakes; Ullswater, Derwent Water and Bassenthwaite Lake. 21 boats are split into three equal flotillas with a flotilla being placed on each of the lakes. Similarly the rowers are also split into three groups who rotate daily between the three lakes so that everyone rows on each lake. Some 30 additional day rowers will be joining the main party on Saturday and Sunday primarily on Ullswater.

The distance rowed varies according to which lake is being rowed, namely:

Ullswater ~ 25km on Friday and Saturday and ~15km on Sunday

Derwent Water ~ 8km on all days

Bassenthwaite Lake ~10km on all days

The routes on the three lakes are shown in Appendices A, C and E the rear of this plan.

Type of Boats

All the boats are Class C stable coxed quads meaning there are 4 people sculling the boat and fifth person steering.

All the boats have watertight bow and stern sections and additional buoyancy under each rowing position. This allows the boat to stay afloat even if it gets swamped in rough water conditions.

Most of the boats have keels allowing them to be pulled out on the shore and stored on grass or hardstanding. They do not need to be racked when out of the water.

Competency of crews

All crew members have been taught to scull at their clubs and have been rowing for at least a year. Many participants have been rowing for many years / decades and are veterans of many tours.

Similarly, all participants have some experience of coxing and can steer a boat as well as give coherent instructions to the crew.

Each boat has a captain, who will be the most competent member of the crew, and who is in charge of the boat and decides who rows in each seat position and also coxes. The captain has overall responsibility for the safety and conduct of the crew.

Anyone with a medical condition or allergy which might affect the safety of their crew should make the organisers of the tour aware at least two weeks before the start of the event.

Positions of responsibility for safety

Tour safety adviser (TSA)

Peter Barker (mobile 07974 158839)

The role of the tour safety adviser is essentially one of coordination. Though likely to be based on Derwent Water acting as the assistant on the safety boat the TSA will be:

- Giving daily safety briefings
- Deciding on the lake status
- Contact each of the other two safety boats on a regular basis whilst on the water. This will typically be every 30 minutes in Green conditions. In amber this should be decreased to 15 minutes.
- Liaising on changes in weather conditions which may require a change to the lake status and relaying this to the VSAs.
- Coordinating response to an emergency on one or more of the lakes and ensuring the rest of the tour party are safe.

Venue safety advisers (VSA)

Ullswater – Glenn Wouters (mobile 07760 361775)

Derwent Water – Don Mitchell (mobile 07979 181810)

**Bassenthwaite Lake – John or Caroline Turnbull
(mobile 07771 807993 or 07973 415656)**

The role of the venue safety adviser (VSA) is to:

- liaise with the TSA
- brief boat Captains before launching each day
- to monitor the movement of the flotilla on the venue ensuring they are within hailing distance of the lead captain's boat or safety boat.
- Along with the lead captain, to monitor lake status and alert crews and the TSA of any changes in the status
- ensure crews respond according to changes in lake status
- to render assistance to crews in need of help
- to raise the alarm should an emergency arise

Flotilla lead captains

The captains of each flotilla will appoint a lead captain who will assist with live risk assessments and liaise with the other captains and the venue safety adviser regards the water conditions and what actions may be needed to mitigate any new risks.

Risk Assessment

The risk assessment and classification matrix are at Appendix I & J. This shows that the most significant difficulty is likely to be wind over water.

This is mitigated by the type of boats used and safety measures and procedures described below.

Weather and water conditions

Forecasts can be found on these websites. They provide both average and gust wind speeds

Met Office <https://www.metoffice.gov.uk/>

XC Weather <https://www.xcweather.co.uk/>

Table 1 – Assessing lake conditions

Beaufort wind scale	Mean Wind Speed		Limits of wind speed		Wind descriptive terms	Probable wave height on lakes in metres*	Lake condition descriptive terms
	MPH	ms ⁻¹	MPH	ms ⁻¹			
0	0	0	<1	<1	Calm		Calm (glassy)
1	2	1	1-3	1-2	Light air		Calm (rippled)
2	6	3	5-7	2-3	Light breeze		Smooth (wavelets)
3	10	5	8-11	4-5	Gentle breeze	<0.2	Slight movement
4	15	7	12-18	6-8	Moderate breeze		Moderate movement
5	22	10	20-24	9-11	Fresh breeze	<0.5	Some white horses
6	28	12	25-31	11-14	Strong breeze	>0.5	Significant number of white horses
7	34	15	32-38	14-17	Near gale		Rough
8	42	19	39-46	17-21	Gale		Very rough
9	50	23	47-54	21-24	Strong gale		High
10	60	27	55-63	25-28	Storm		Very High
11	69	31	64-72	29-32	Violent storm		Very High
12	-		74+	33+	Hurricane		Phenomenal

See page 6 for explanation of colour coding.

NB The orientation of the lake relative to the wind direction will influence the state of the water as shown below:

Ullswater – Orientation predominantly SW to NE meaning that a SW or NE wind will produce rougher water than a wind blowing across the lake.

Derwent Water – Orientation predominantly N – S meaning that a N or S wind will produce rougher water than a wind blowing across the lake.

Bassenthwaite Lake – Orientation predominantly SE – NW meaning that a SE or NW wind will produce rougher water than a wind blowing across the lake.

Due to the topography of the lakes, wind strength and direction can be very variable around each lake and can change markedly during the course of a day. The safety advisors will be monitoring these changes and may change the recommended route or even designate areas unsuitable for rowing.

Water Levels

A further risk is water level, notably this year which has been dry resulting in low water levels particularly on Derwent Water and Bassenthwaite Lake. This increases the risk of grounding.

As it is not possible to know what the water levels will be at the time of the tour a risk assessment will be made immediately prior to the tour date and boat captains briefed on where the potential hazards lie.

Classification of Risk Levels

Risks have been categorised into three levels:

Green – In this condition the weather is forecast as benign with a wind speed less than 5m/sec or 10mph (Force 0-3); mild temperatures between 10°C and 25°C; flat water and no risk of thunderstorm or fog. NB A green condition can be withdrawn during the course of a day.

Amber -In this condition the weather is currently or forecast as being moderately windy ie speeds less than 10m/sec 22mph along the length of the lake (Force 4 or 5); temperature between 5°C and 10°C or between 25°C and 30°C; waves less than 0.5m high or a risk of thunder or fog. NB An amber condition can be imposed or withdrawn during the course of a day.

Red - In this condition the weather is currently or forecast as having winds speeds in excess of 10m/sec or 22mph along the length of the lake (Force 6 and above); temperature below 5°C or above 30°C; waves in excess of 0.5m high; active thunder storms or fog. NB A red condition can be imposed or withdrawn during the course of a day.

The level of risk will be decided at the beginning of each day by the tour safety adviser in conjunction with the venue safety officers and communicated to the boat captains at the morning briefing at each venue. The direction of the wind at each lake will be taken into account.

Should the conditions change during the day whilst crews are still on the water then the lead captain and venue safety officer will decide what level of risk now prevails and advice given to each boat captain by VHF radio or failing that by mobile phone – both by voice and text.

Actions required for each level of risk

Green – The tour may continue without the need for the rowers to wear life jackets. NB Coxes are to wear life jackets at all times whilst on the water.

Amber – The tour can continue but the crew are advised to don lifejackets. The boat captain is to continually monitor conditions and communicate with the flotilla lead captain and the venue safety adviser should conditions start or continue to deteriorate.

Red – The tour on that day is not to commence. If boats are already on the water, they are to seek sheltered water as a matter of urgency. If the risk is from a thunder storm they must get off the water. They are to communicate to the venue safety adviser their location at the time the red condition is imposed and their location once they are in a place of shelter. The crew are strongly advised to don lifejackets if on the water when a state of red is declared.

Due to the changeable nature of the weather patterns in the Lake District and the topography of the lakes it is possible for one venue to be in a state of red whilst another venue may be on amber.

Safety boats

There will be a safety boat on each lake provided by the event with a crew of two; a coxswain and an assistant. The coxswain should be certificated for RYA level 2 power boat handling.

The boats making up the flotillas shall remain as group whilst on the water and shall be within hailing distance of the safety boat.

The safety boat will shadow the flotilla of boats and provide assistance as needed.

In the event of an incident where a crew becomes unable to continue rowing to a place of safety under their own power then the safety boat will provide assistance.

The priority will be the safety of the personnel. Recovery of equipment will only proceed once the crew are safe.

Each safety boat crew shall:

- carry two throw bags and have experience on their deployment.
- carry blankets & space blankets in dry grab bags. Space blankets will not be used on their own.
- carry first aid kit & spare lifejackets.
- wear correct clothing and lifejackets 150NM or above with crotch straps fitted & fit for use.
- carry full VHF communications or similar plus emergency contact information together with a mobile phone in a pouch.
- if possible, carry a hand-held GPS plus maps.

- have an understanding on how to get any casualty into their boat safely & to be able to evacuate them directly on handover to the medical services.
- be aware familiar with the evacuation places and their location on maps.
- ensure fuel tanks are checked & full each day.
- carry a schedule of each day's activities and any information about boating crew's issues.

Recommended clothing to be worn when afloat.

It is important for safety reasons for crews to be easily visible when afloat. We therefore recommend that the bow person and cox of each boat wears high-vis as a top layer.

We are launching off beaches on all three venues, so rowers will get their feet wet. It is recommended therefore that robust soled water shoes are worn when launching and recovering the boats. It is not uncommon to find glass cans and rusty metal on the lakebed. Wellingtons are not recommended as swamping can easily occur.

Everyone going afloat should have a life jacket (preferably not automatic) or, if one is not available, then a personal floatation device (pfd) can be used. Life jackets used by coxes should have a crotch strap fitted and used.

Communications

VHF:

With marine VHF radio communication distances of around 9km line of sight (LOS) can be expected. This means that VHF radio can be an effective means of communication on Bassenthwaite Lake and Derwent Water. Ullswater is larger at 13km long with a sharp bend near its SW end. This means that VHF radio can be used for communication at either the NE or SW ends of the lake but not between the extremities of the lake. The channel to be used on each lake will be communicated to the boat captain when the handsets are issued.

Mobile phone:

The OFCOM website provides useful information on mobile phone coverage for each of the networks. Acceptable coverage can be expected on all networks for Bassenthwaite Lake and Derwent Water. However, mobile coverage is more compromised at the SW end on all networks with Vodafone providing the best coverage.

It has therefore been decided to use mobile phones only on Bassenthwaite Lake and Derwent Water and VHF radio as the primary means of communication on Ullswater backed up by mobile phone.

The captain of each boat shall carry a mobile phone in a waterproof pouch. In addition, on Ullswater three boats will be issued with VHF as well as providing their own mobile phones. These three boats will be positioned in the flotilla as lead middle and tail boats thereby increasing the likelihood of line of sight with the safety boat.

Each safety boat will also have a mobile phone with the addition of VHF radio for the safety boat on Ullswater.

Each captain shall have a grid map of the lake being rowed. See Appendices B, D and F.

In the event of an emergency the two-digit grid reference giving their approximate location shall be communicated to the venue safety officer.


If a crew member of the boat in trouble has a mobile phone that has the ability of providing latitude and longitude of its location then this too shall be relayed to the venue safety officer in addition to the two-digit grid reference.


Crew List


A crew list will be prepared and distributed at the start of the tour. It is the responsibility of the captain of each boat to advise each morning the venue safety adviser of the lake where they are boating of any changes of crew.

Total distance ~25km (Friday and Saturday)

Total distance ~15km (Sunday)

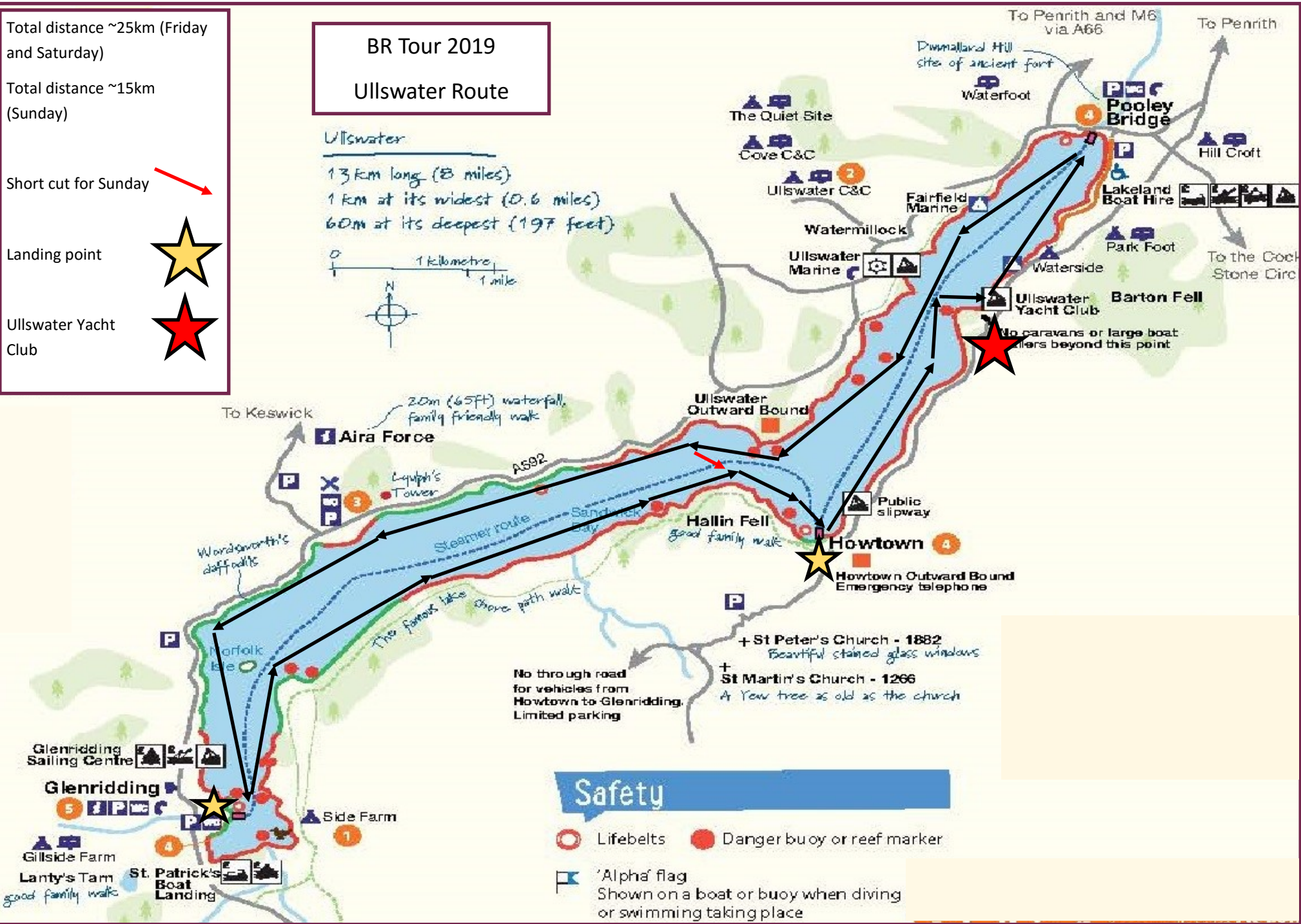
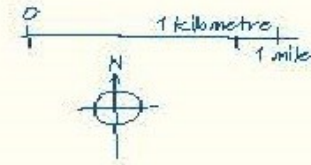
Short cut for Sunday 

Landing point 




Ullswater Yacht Club 

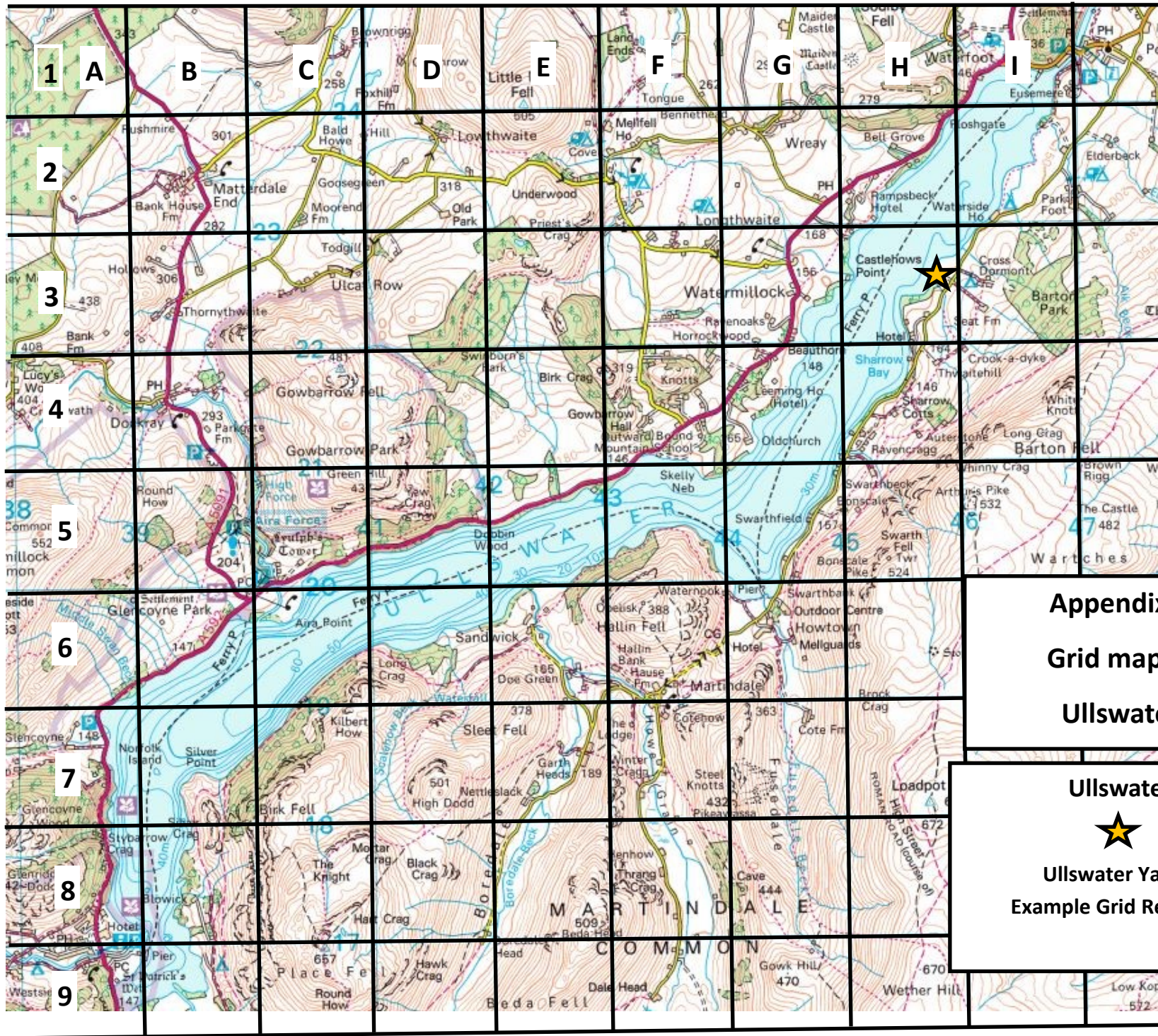
BR Tour 2019
Ullswater Route

Ullswater
13 km long (8 miles)
1 km at its widest (0.6 miles)
60m at its deepest (197 feet)



Safety

-  Lifebelts
-  Danger buoy or reef marker
-  'Alpha' flag
Shown on a boat or buoy when diving or swimming taking place

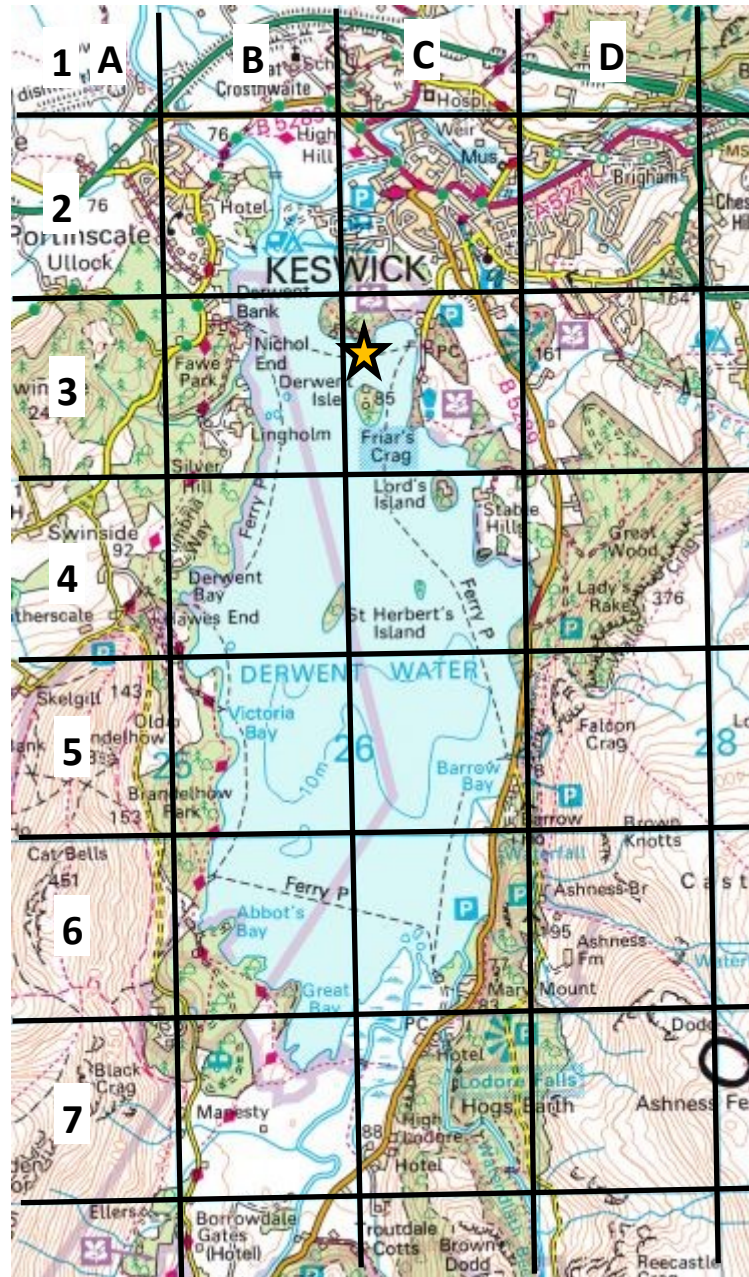


Appendix B
Grid map of
Ullswater

Ullswater

Ullswater Yacht Club
Example Grid Reference = H3

Appendix D
Grid map of
Derwent Water



Derwent Water
★
Lakeland Rowing Club
Example Grid Reference = C3

Bassenthwaite Lake

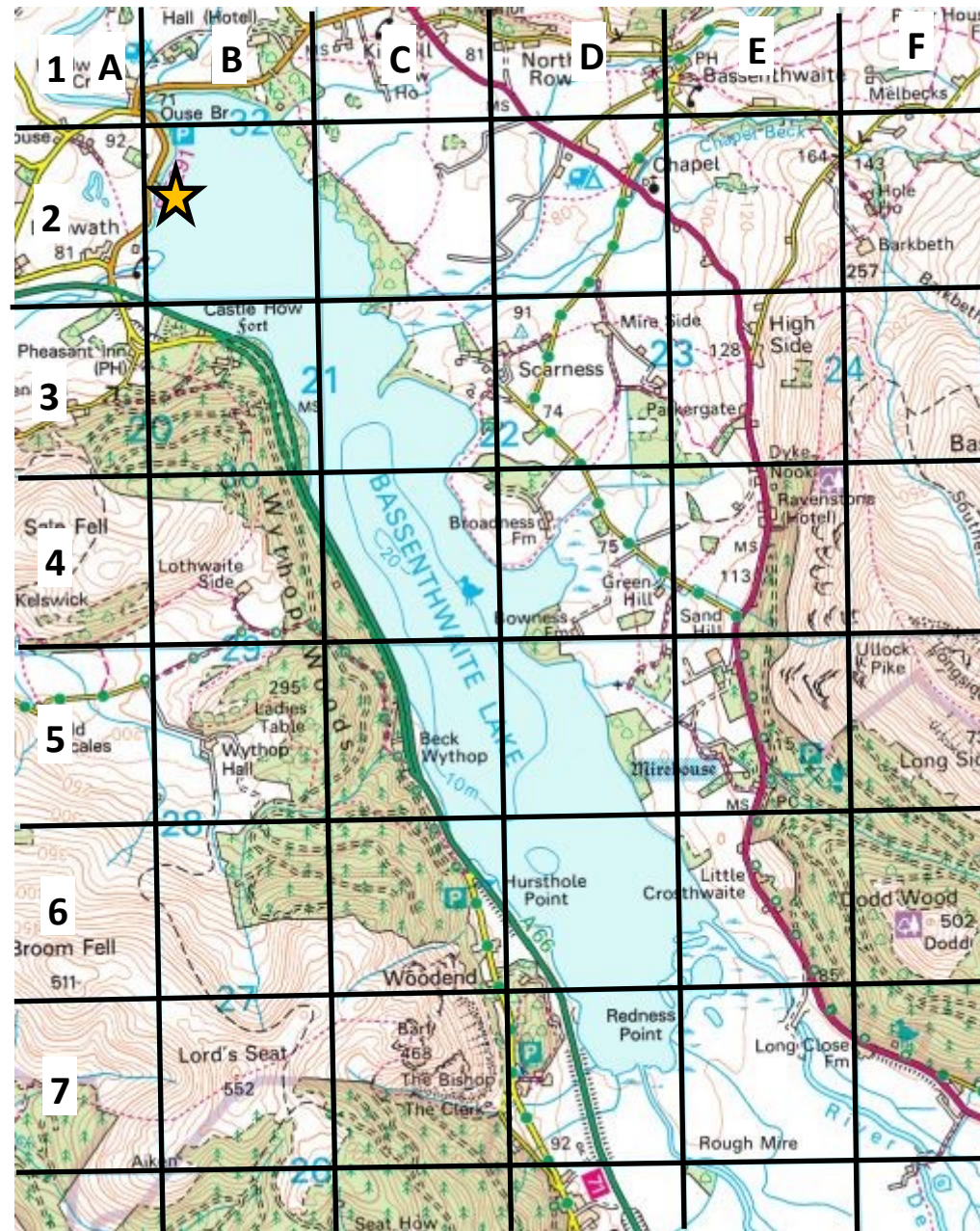
National Nature Reserve

5 kilometres long (3.1 miles)
 1 kilometre at its widest (0.62 miles)
 19 metres at its deepest (62.4 feet)




Appendix F

Grid map of Bassenthwaite Lake



Bassenthwaite Lake



Bassenthwaite Sailing Club

Example Grid Reference = B2

Locations of access points to launching areas:

Ullswater Yacht Club

Thwaite Hill
Howtown
Penrith
CA10 2NA

OS Ref 3459 5225

Lat. / Long. 54.594958, -2.838472

Lakeland Rowing Club

The Isthmus
Keswick
CA12 5DJ

OS Ref 3261 5228

Lat. / Long. 54.594744, -3.145928

Bassenthwaite Sailing Club

Dubwath
Bassenthwaite Lake
Cockermouth
CA 13 9YD

OS Ref. 3199 5314

Lat. / Long. 54.670730, -3.243592

Appendix H

Emergency Services

In an incident where life is threatened dial 999 and ask for the coastguard.

For minor injuries or illness contact one of the services below:

Keswick Cottage Hospital

(A & E Minor Injuries Unit only)
Crosthwaite Road
Keswick
CA12 5HP
Tel 01768 245678

Penrith Hospital

(A & E Minor Injuries Unit only)
Bridge Lane
Penrith
CA 11 8HX
Tel 01768 245555

Cumberland Infirmary

Newtown Road
Carlisle
CA2 7HY
Tel 01228 523444

Local GPs

The Lakes Medical Practice
Bridge lane
Penrith
CA11 8HW
Tel 01768 214345

Castlehead Medical Centre
Ambleside road
Keswick
CA12 4DB
Tel 01768 772025

After hours

Ring 111
or
Cumbria Health on Call (CHOC) 01228 608200



Appendix I

BR North Lakes Tour - Bassenthwaite, Derwentwater and Ullswater								
RISK ASSESSMENT								
Area of concern	Hazard	Hazardous event	Severity of injury/damage	Probability of injury/damage	Risk basic ass.	Barriers	Controls	Risk with mit.
Travel	Road accident	Injury	3	A	L	Participants own responsibility before and after event. Bus hired for event with professional driver	Emergency plan with contact numbers and location of medical facilities	L
Boat handling	Lifting	Muscular strains/sprains	3	B	L	Practised in boat handling. Ensure sufficient people to lift boats	Group is experienced and will assist each other	L
	Slipping	Bruising and sprains through falls	2	C	L	Choose boating areas with even terrain	First aid kit available for minor injuries	L
	Parts of boat	Cuts and grazes on sharp objects / projections	1	C	L	Crews experienced and aware of typical hazards e.g. riggers and bolts	First aid kit available for minor injuries	L
	No landing stage	Cuts to feet on launching or landing	1	A	L	Wear watershoes Lake shore generally fine gravel of small pebble	Carry first aid kit	L
Weather & Water conditions	Very hot	Heat /sunstroke / sunburn	3	A	L	September - normal weather conditions cool.	Participants instructed to wear hats, apply sunscreen and drink plenty of water. Land party and support boat carry extra water	L
	Cold and wet	Hypothermia	3	B	L	Suitable clothing Do not row in extreme weather	Support boat / land party recover affected participant(s) and seek medical assistance if necessary	L
	Strong winds cause rough water	Swamping due to waves	2	C	M	Review conditions before going afloat using current weather information and visual inspection of conditions - support boat can be deployed to check. Route chosen with respect to prevailing wind and shelter available by following shoreline. If wave height and wind strength assessed as too dangerous, abandon or curtail row. (see guidance material at Appendix...)	Boats carry bailers Boats have buoyancy and would not sink Crew can propel boat to bank Communications to alert Support/safety boat available to assist	L
	Thunderstorm	Lightning strike	5	A	M	Monitoring of weather forecast No boating in thunder conditions	Crews will be instructed to head for the bank and get off the water Emergency procedures to call assistance	L
Environment	Pollution, contaminated water	Illness	2	A	L	Low pollution levels in Lakes Participants instructed to wash hands or use hand sanitiser before touching food. Participants instructed to cover open wounds and grazes with waterproof plaster	Seek medical assistance	L
	Cross contamination of waterways	Ecological damage	1	A	L	Wash boats and oars with antibacterial agent before / on arrival		
	Injury to wildlife	Hitting waterbirds	1	A	L	Avoid controlled areas marked on maps		
Navigational accident	Collision with other craft	Potential for boat damage & injury	2	A	L	Boats are coxed Crews and coxswains experienced Maps provided showing routes and hazards e.g. Sailing areas, ferries	Emergency procedures and communications to seek help	L
	Grounding	Potential damage to boat	1	A	L	Hazard areas briefed Boats have keels and strong hulls	Crew can refloat boat Support boat can assist	L
	Capsize / falling in	Immersion of crew	2	A	L	Boats are stable Crews experienced	Boats buoyant, can be used for support Capsize most likely when getting or out near bank where water shallow Carry dry kit / space blankets Support / safety boat/bank party assists	L
Equipment failure	Damage / loss of rudder	Loss of steering, risk of collision	1	A	L	Equipment checked for defects before boating	Sculled and crew boats can proceed using oars to steer Spares either carried or available via support from land Communications available by mobile phone to call help Safety boat assists	L
	Broken blade	Crew member unable to row	1	A	L	Boat still controllable and rowable with 3 crew	Bank support seek spare	L
Medical	Blisters and sores	Unable to row	2	A	L	Participants experienced rowers Instructed to protect hands with tape or gloves. Advised to use seat pads if sensitive	First aid kit available from land party Quad sculls able to carry on with 3 of crew	L
	Extreme exhaustion	Unable to row Medical assistance needed	2	A	L	Distances reasonable relative to age, experience and weather expected Boat captains instructed to give appropriate rest stops	Sculled crew boats can carry on with a member resting Communications available by mobile phone to call help Maps provided to establish location Emergency plan identifies numbers and location of medical facilities Safety boat assists	L
	Medical emergencies	Serious illness	3	B	M	Any known conditions declared and allowed for beforehand Checks made each morning as to condition of participants Boat captains instructed to monitor condition of crew	Emergency situations to be reported by mobile phone to safety coordinator Emergency service response will be co-ordinated through land-based Safety Coordinator using pre-determined emergency numbers Maps provided to establish location Locks and landing points identified for access to recover casualty Sculled crew boats can carry on with 3 out of 4 if necessary	L

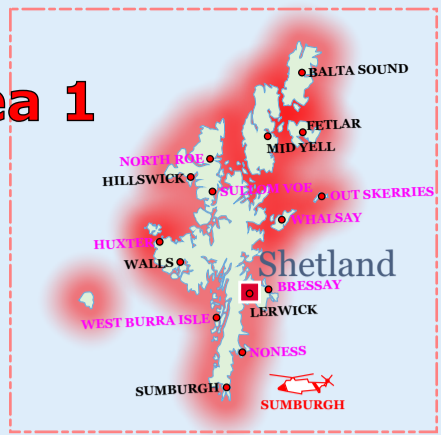
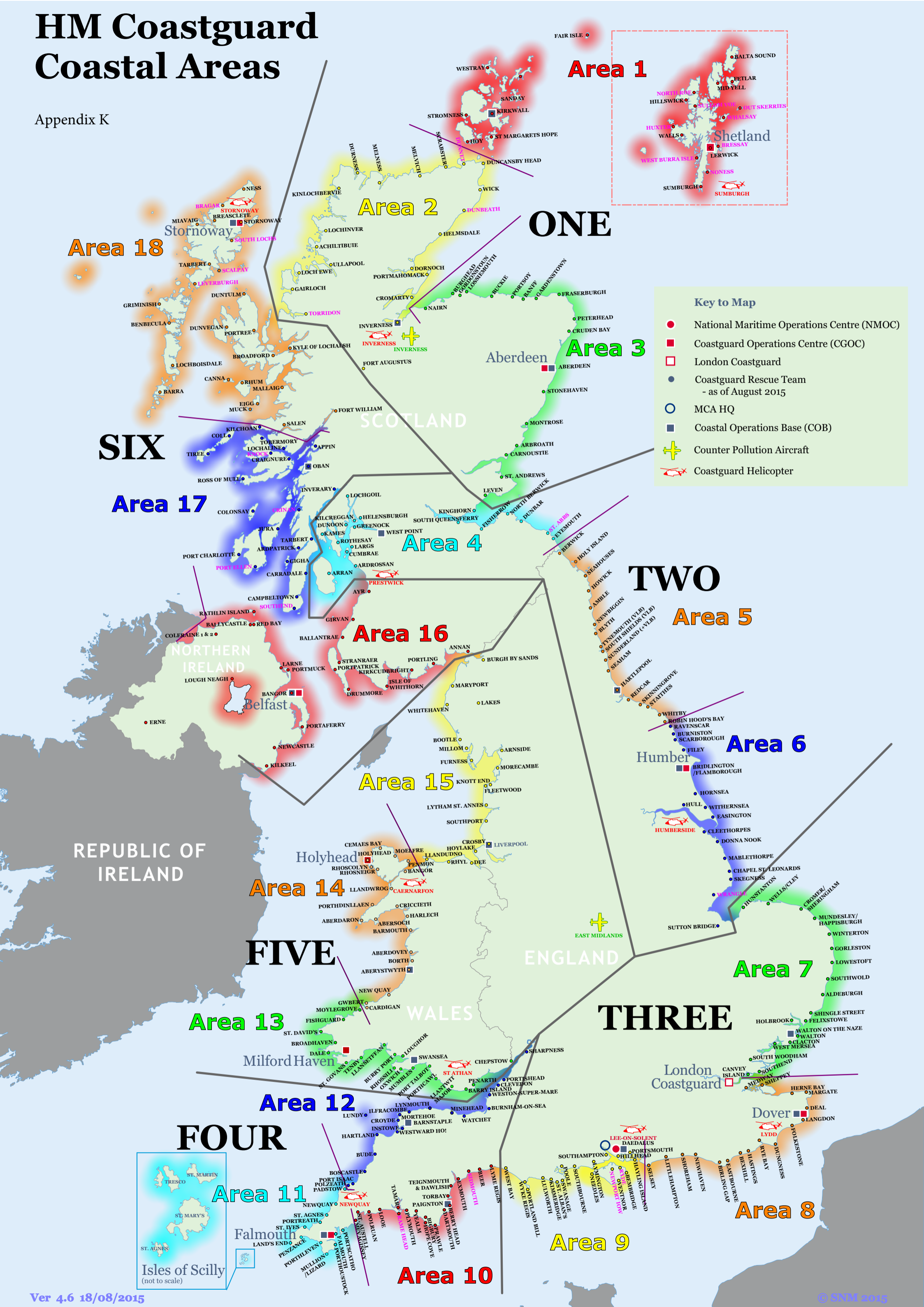


		People	Assets	Probability				
				A	B	C	D	E
				Highly improbable <i>(has not been known to happen in rowing)</i>	Improbable <i>(has been known to happen in rowing)</i>	Possible <i>(could happen to about 1% of the club's active members per decade)</i>	Probable <i>(could happen to about 1% of the club's active members per year)</i>	Highly probable <i>(could happen to about 10% of the club's active members per year)</i>
Severity	1	Slight injury or health effect <i>(Requires little or no treatment; no need to take time off rowing or training)</i>	Minor damage to equipment <i>(<£100)</i>	Low	Low	Low	Low	Moderate
	2	Minor injury or health effect <i>(Requires First Aid or rest; potentially a few days off rowing or training)</i>	Damage repair costs low <i>(£500)</i>	Low	Low	Low	Moderate	Substantial
	3	Moderate injury or health effect <i>(Requires treatment beyond simple First Aid; potentially a week or so off rowing or training)</i>	High damage repair costs <i>(>£1000)</i>	Low	Low	Moderate	Substantial	Intolerable
	4	Major injury or health effect <i>(Requires hospital treatment for more than one day; potentially a few weeks off rowing or training)</i>	Very high damage repair costs <i>(loss of boat, 3rd party damage)</i>	Low	Moderate	Substantial	Intolerable	Intolerable
	5	Fatality or Life Threatening Injury or Health Effect <i>(could end a rowing career or cause hospitalisation for a few months)</i>	Major damage & major costs <i>(loss of several boats, high 3rd party damage)</i>	Moderate	Substantial	Intolerable	Intolerable	Intolerable

Low	An acceptable level of risk. No additional barriers/controls are required. Start or continue the activity but check that the current barriers/controls remain effective.
Moderate	An acceptable level of risk that should be reviewed. Implement additional barriers/controls to reduce the risk if the opportunity arises. Start or continue the activity with care.
Substantial	An unacceptable level of risk. Improve the barriers/controls and allocate resources to reduce the risk. Do not start or continue the activity until the risk has been reduced.
Intolerable	An unacceptable level of risk. Improve the barriers/controls and allocate resources to reduce the risk. Do not start or continue the activity until the risk has been reduced. Prohibit the activity if it is not possible to reduce the risk.

HM Coastguard Coastal Areas

Appendix K



Key to Map

- National Maritime Operations Centre (NMOCC)
- Coastguard Operations Centre (CGOC)
- London Coastguard
- Coastguard Rescue Team - as of August 2015
- MCA HQ
- Coastal Operations Base (COB)
- ✈ Counter Pollution Aircraft
- ✈ Coastguard Helicopter