

Crawley Branch British Sub-Aqua Club

Branch Number 0148

Diving Operations Risk Assessment

February 2003



Standard Controls

Divers are obliged to observe the Rules of the British Sub-Aqua Club.

Divers are obliged to observe the Rules of the Crawley Branch of the British Sub-Aqua Club.

Divers are obliged to observe the Recommendations of the British Sub-Aqua Club. These include:

BS-AC Safe Diving Practices

BS-AC Rebreather Safe Diving Practices

BS-AC Mixed Gas Safe Diving Practices

BS-AC Instructor Manual

Sport Diving, The British Sub-Aqua Club Diving Manual

Other recommendations published by the BSAC

Divers are obliged to adhere to the Diver's Code of Conduct

Divers are obliged to dive within the restrictions of their training and experience.

Divers are obliged to operate within the Law, including UK, European, Maritime, and local.

Divers should ensure that all equipment is properly maintained and functional

Risk Assessment – Hazards And Control Methods

These examples are included for illustrative purposes only. They should be adapted and expanded to suit individual branch circumstances / dive locations. The grey columns are included to show how the Risk Evaluation was determined and would not normally be included in the Risk Assessment documentation. As this is only an illustrative assessment, certain columns may be blank.

Area	Hazard	Who	Likelihood	Severity	Risk Evaluation	Controls	Immediate measures to deal with consequences if risk does occur
Boat Launch & Retrieval	Crushing Injury	All			Minimal	Experienced Shore Party First Aider on Site BSAC Third Party Insurance	Zone off shore area where activity is
Boat Wake	Wet from Boat Wake	Public			Minimal	Experienced Boat Cox (RYA Level 2) Keep boat speed under 5 knots in affected areas	None
Cold	Hypothermia	Diver			Tolerable	Dry Suit & Thermal Protection	None
Cold Water	Equipment malfunction	Diver			Tolerable	Choose appropriate equipment for environment Ensure that only well maintained , regularly serviced equipment is used.	Buddy with alternate air source
Debris	Physical injury	Diver			Tolerable	Flexibility regarding entry and exit sites Change dive sites	Change method of entry Abort dive
Drowning	Death	Diver			Minimal	Experienced Trained Diver Dive Marshal in Charge of Diving Operations Divers use Brief & Buddy Checks Rescue Manager / Oxygen Administer on Site	Safety Diver on Standby Safety Boat by Diver

Area	Hazard	Who	Likelihood	Severity	Risk Evaluation	Controls	Immediate measures to deal with consequences if risk does occur
Entanglement	Death	Diver			Possible	Dive Knife Worn	Safety Diver on Standby Safety Boat by Diver
Incident to Public	Death	All			Minimal	Restrict area to authorised personnel	BSAC Third Party Insurance
Lacerations	Infection / Loss of Blood	Diver			Possible	Wear Gloves / First Aider on Site	Evacuate to Hospital
Low Visibility	Diver separation leading to diver injury	Diver			Tolerable	Training Use of Torch Ensure diver separation procedures are included in briefings Abort dive if necessary	Roped Diving Operations
Panic	Loss of Self Control	Diver			Minimal	Re-Surface	Safety boat above Diver
Rapid Ascent	Burst Lung	Diver			Minimal	Experienced Trained Diver	None
Roped Diving Operations	Death	Diver / Surface Cover			Minimal	Adhere to BSAC Safe Diving Practices Dive Marshal in Charge of Diving Operations Divers use Brief & Buddy Checks	Previous training in controlled conditions
Underwater Obstructions	Damage to Boat	Club's Boat			Possible	Experienced Boat Cox (RYA Level 2) Engine high in water in restricted areas Use of echo / depth sounder	- Insurance Cover

Area	Hazard	Who	Likelihood	Severity	Risk Evaluation	Controls	Immediate measures to deal with consequences if risk does occur
All	Heart attack	All	Rare	Fatal	Medium	Medical self-declaration / referral to Medical Referee.	CPR by Instructor. Emergency services activation plan.
Pool	Slipping on pool surrounds	All	Rare	Moderate injury	Low	No running in swimming pool area. Fins removed when walking on pool surrounds. Monitoring by Instructor.	Assistance / First Aid by Instructor.
Pool / Open Water	Ear damage	All	Occasional	Moderate injury	Medium	Trainees receive specific instruction in 'ear clearing'. Divers or snorkellers do not dive when suffering from a cold.	Assistance from Instructor or buddy.
Pool / Open Water	Mask Squeeze	Trainees	Rare	Minor injury	Low	Only mask which encloses both eyes and nose in the same airspace used. Trainees receive specific instruction in mask equalisation.	Assistance from Instructor or buddy.
Pool / Open Water	Injury from falling cylinders	Trainees	Rare	Moderate injury	Low	Trainees taught to always lay heavy equipment down. Monitoring by Instructor.	First Aid by Instructor.
Open Water	Running out of air	All divers	Occasional	Fatal	High	All SCUBA sets fitted with cylinder pressure gauges. Monitoring by Instructor. Instructor / trainee ratios in accordance with BSAC recommendations.	All divers carry AAS.
Open Water	Decompression illness	All divers	Occasional	Major injury	Medium	Dives planned and conducted in accordance with BSAC '88 Decompression Tables or decompression computer. All divers equipped with depth gauges and watches and / or decompression computers.	Oxygen Administration equipment and trained administrators on site.

Area	Hazard	Who	Likelihood	Severity	Risk Evaluation	Controls	Immediate measures to deal with consequences if risk does occur
Open Water	Rapid ascent	All divers	Occasional	Fatal	High	Progressive training. Correct weighting of all divers. Monitoring by Instructor. Instructor / trainee ratios in accordance with BSAC recommendations. Visual datum used for ascent exercises where appropriate.	Diving monitored by shore / boat cover able to provide / direct assistance. Oxygen Administration equipment and trained administrators on site.
Open Water > 30m	Nitrogen Narcosis	All divers	Frequent	Fatal	High	Progressive build up of depth experience for trainees. Progressive work-up dives for all divers who are going beyond their recent diving experience. Experience gained in company of Instructor / diver of greater experience at that depth. Clear dive plans.	Assistance from Instructor / buddy.
Open Water	Entanglement in nets / lines	All divers	Rare	Fatal	Medium	All divers carry appropriate cutting implement, such as filament line cutter, wire snips, diving knife, etc. Instructor control.	Assistance from buddy
Drift Diving	Separation from boat while drift diving	All divers	Occasional	Fatal	High	Dive plan agreed with boat Cox'n. All dive pairs follow same plan. All dive pairs marked by Surface Marker Buoy.	Each diver carries aids to visual detection – e.g. flags, sausage buoys, strobes, flares, whistles etc.
Open Water	Contact with dive boat / propeller	All divers	Rare	Fatal	Medium	Only trained cox'ns allowed to operate boats. Trainees receive specific instruction in boat exit / entry techniques. All exit from and entry to boats controlled by cox'n.	First Aid kit on boat. Boat crew trained in First Aid.

Area	Hazard	Who	Likelihood	Severity	Risk Evaluation	Controls	Immediate measures to deal with consequences if risk does occur
Open Water	Injury from other boats	All divers	Rare	Fatal	Low	Flag 'Alpha' flown while divers are underwater. Monitoring of other surface traffic by boat cover. Divers marked by SMBs or ascending under DSMBs.	First Aid kit on boat. Boat crew trained in First Aid.
	Deteriorating weather	All divers	Frequent	Fatal	High	Diving planned using latest weather information. Alternative site planned. Weather conditions constantly monitored by Dive Marshal / cox'n during diving. Diver recall mechanism available (e.g. signals via SMB line, Thunderflashes)	Diving cancelled or changed to back-up site by Dive Marshal. Diving in progress terminated using diver recall mechanism. Boat intentions and appropriate times notified to Coastguard prior to departure. Updated if plans are changed.

