|  |
| --- |
| Work/Activity: SCUBA Diving |
| The club undergoes SCUBA diving in a wide range of different locations and conditions. During each of these activities, the club follows the BSAC safe diving recommendations. These cover the general situations that may be encountered whilst diving and provide standard procedures to be followed to ensure the safety of all individuals involved. For all activities in open water, site specific risks will be analysed in the dive plan. This risk assessment ensures all club activities have a minimum level of risk that has been assessed although site specific risk assessments should always be undertaken. |
| Group: Southampton University Sub-Aqua Club | **Assessor(s): James Mudge (Diving Officer)** | **Contact: do@susac.org.uk** |
| Guidance/standards/Reference documents  | **Competence requirements** |
| All diving activities carried out by the club follow BSAC safe diving recommendations which can be found here:<https://www.bsac.com/safety/bsacs-safe-diving-guide/>This document is produced by a highly qualified and experienced team from BSAC (the National Governing Body for Scuba Diving and Snorkelling in the UK). As such it shall be considered the minimum benchmark for all diving practices. | **Role:**Diving OfficerDive Manager | **Skills, experience or qualifications:**The Dive Manager will have a minimum qualification level of BSAC Dive Leader or equivalent. This ensures that they are competent in first aid and oxygen administration. The Dive Manager is appointed by the Diving Officer, who shall be of at least this qualification if not higher and has the final say on all diving activity and is ultimately responsible for all club trips. The diving officer appoints the Dive Manager to ensure that the trip conforms to BSAC safe diving. The Dive Manager may dive, but they must hand over the responsibility to an Assistant Dive Manager with the minimum qualification of BSAC Sports Diver or above. |
| Linked Risk AssessmentsAlterative risk assessments are provided for the following activities:Sheltered WaterSwimming PoolsPowerboat UsePublic Engagement ActivitiesSUSU BunfightSocial Events  | **Role:**Training Officer | **Skills, experience or qualifications:** The training officer is appointed by the Diving Officer, and it is the Diving Officers decision alone who at appoint as they carry his direct authority from the National Diving Officer. They must be competent and confident in the role. No prior experience is required, and no minimum qualification is stipulated. |
| **Role:**Equipment Officer | **Skills, experience or qualifications:** The Equipment Officer should be a person of sound practical knowledge. They do not have to have any prior experience with scuba diving equipment, but it would be beneficial. They are in charge of maintaining a log of equipment and organising servicing and repairs. They are responsible for loaning out club equipment and making sure it is suitable for use. |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Task | Hazards | Affects Who? | Likelihood | Impact | Score | Current control measures | Additional control measures | Action by whom? | Likelihood | Impact | New Score |
| Diving | Ear damage from pressure changes whilst diving | All divers | 2 | 2 | 4 | Trainees are taught ‘ear clearing’. Divers are reminded to descent slowly and abort the dive if necessary. Divers are advised not to dive if they have a cold or other condition which may increase this risk.  | All divers abide by BSAC Safe Diving to mitigate risks as far as is reasonably practical. A suitably qualified Dive Manager (appointing by the Diving Officer) will always be on site to deal with any issues that arise. | Qualified onsite Dive Manager | 1 | 1 | 1 |
| Diving | Mask squeeze | All divers | 1 | 1 | 1 | Only masks with eyes and nose in same airspace to be used. Trainees taught to equalise masks. | A suitably qualified Dive Manager (appointing by the Diving Officer) will always be on site to deal with any issues that arise. | Qualified onsite Dive Manager | 1 | 1 | 1 |
| Diving | Running out of air on a dive | All divers | 2 | 3 | 6 | Divers are equipped with a regulator with a pressure gauge. Divers are taught how to deal with an out-of-air situation in their training. Divers are reminded to leave 1/3 of the cylinder’s supply as a reserve. Divers are also in pairs or groups and will monitor each other’s air and share air from one cylinder while ascending in an emergency. Newly qualified divers are paired with an experienced diver or instructor.  | On dives over 35m, divers should carry redundant air. This will ensure self-sufficiency and reduce the risk. | Qualified onsite Dive Manager | 1 | 1 | 1 |
| Diving | Separation from buddy | All divers |  2 | 3 | 6 | A buddy separation exercise is taught in diver training and All divers are reminded of the procedure in the dive brief. Divers to remain close throughout the dive and newly qualified or inexperienced divers are paired with experienced members or an instructor.  | Strobes / torches / buddy lines can be carried to allow divers to see each other better.  | Qualified onsite Dive Manager |  1 | 3 | 3 |
|  Diving | Decompression illness (DCI) | All divers |  2 | 3 | 6 | Divers to have a computer or a depth gauge and timer so that they can monitor their ascent rate. All dives to be planned with BSAC 88 tables or a dive computer. Other programs may be used at the Diving Officer’s discretion. Decompression dives require suitable qualifications and a full plan.No decompression dives require safety stopsAll divers have been trained to understand the causes of DCI and how to mitigate them. Novice divers will be diving with an experienced diver or instructor to ensure that they dive within their acceptable limits. Oxygen administration equipment and qualified administrators will be on site for all diving activities. | All divers abide by BSAC Safe Diving to mitigate risks as far as is reasonably practical. A suitably qualified Dive Manager (appointing by the Diving Officer) will always be on site to deal with any issues that arise. | Qualified onsite Dive Manager |  1 | 2 | 2 |
| Diving | Equipment malfunction | All divers |  1 | 3 | 3 | Equipment is serviced in accordance with manufacturer guidelines and any divers using their own equipment are advised to also have their equipment serviced regularly. Rinse and cleaned after every dive to help prevent saltwater damage or corrosion. Divers to dive with a regulator that has an octopus (secondary mouthpiece) to use or provide to a buddy in case of failure of the primary second stage. Divers dive in buddy pairs who can help in equipment failure cases.Newly qualified or inexperienced divers will be paired with an experienced diver or instructor.Diving over 35m will require the explicit permission of the Diving Officer and will require divers to carry a redundant gas supply.Any divers using different equipment configurations will be suitably knowledgeable in their ability to deal with equipment malfunctions. | All divers abide by BSAC Safe Diving to mitigate risks as far as is reasonably practical. A suitably qualified Dive Manager (appointing by the Diving Officer) will always be on site to deal with any issues that arise.Equipment servicing and maintenance shall be the responsibility of the Equipment Officer who shall ensure it is up to standard or not used. A log will be kept of all equipment. | Qualified onsite Dive Manager and Equipment Officer |  1 | 3 | 3 |
| Diving | Hypothermia from cold water temperatures | All divers |  2 | 2 | 4 | Divers will have suitable thermal protection whilst diving which will include at least a semi-dry suit or a dry suit and hood and gloves when diving in cold water and trips run in the UK. SUSAC has suitable thermal protective suits to hire out to diver who do not have their own. First aid kits and qualified administrators will be on site. Divers will be reminded of the need to wear extra thermal protection in particularly cold waters and anybody with unsuitable protection will not be allowed to dive. | All divers abide by BSAC Safe Diving to mitigate risks as far as is reasonably practical. A suitably qualified Dive Manager (appointing by the Diving Officer) will always be on site to deal with any issues that arise.First aid kits will be carried on all club trips and qualified first aiders will be present. | Qualified onsite Dive Manager |  1 | 2 | 2 |
| Diving | Nitrogen narcosis | All divers |  2 | 3 | 6 | Divers are reminded in the brief before a deep dive about narcosis and divers will be in pairs or small groups so that people can look out for signs of narcosis in their buddy and recommend a change in depth 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 as necessary. | All divers abide by BSAC Safe Diving to mitigate risks as far as is reasonably practical. A suitably qualified Dive Manager (appointing by the Diving Officer) will always be on site to deal with any issues that arise. | Qualified onsite Dive Manager |  1 | 2 | 2 |
| Diving | Illness from breathing contaminated air | All divers |  1 | 3 | 3 | The National Oceanography Centre compressor is regularly serviced and tested for air purity as required by law. When using the compressor, the air pump will be kept away from poor air sources and the filter replaced after a set number of hours as required. Only members who are trained to use the compressor will be allowed to fill club cylinders and any members that are newly qualified in use of the compressor will be supervised. If the club cylinders are being filled elsewhere, they will be sent to reputable sources with compressors of an appropriate standard. During the pre-dive equipment check every diver and their buddy will check the air taste and smell as well as their other equipment to check the air quality. If diving on enriched air only qualified divers will be allowed to retrieve a nitrox-filled cylinder from a reputable source and will personally analyse the air and adjust their dive plan accordingly. | All divers abide by BSAC Safe Diving to mitigate risks as far as is reasonably practical. A suitably qualified Dive Manager (appointing by the Diving Officer) will always be on site to deal with any issues that arise. | Qualified onsite Dive Manager |  1 | 3 | 3 |
| Diving | Entanglement in nets/lines etc | All divers | 2 | 3 | 6 | All divers carry appropriate cutting implement, such as filament line cutter, wire snips, diving knife, etc. For unqualified divers it shall be the Dive Leader or instructor’s duty to carry such implements. Dive Leaders and the Dive manager shall make divers aware of any known hazards prior to the dive and monitor the surface to ensure that no activity such as fishing happens in the same area the divers are in. | Divers shall be reminded of the necessity of carrying such equipment and recommended to buy their own. A selection of knives shall be available to borrow from the equipment store.  |  | 1 | 1 | 1 |
| Diving | Drowning | All divers | 1 | 3 | 3 | Buddy pairs are able to provide air redundancy in the event of running out of air or equipment failure. Divers are trained and run through drills to safely ascend with their buddy to the surface with an alternative air source. | Divers are to be careful near the edge of water. Regulators should always remain in mouths when in water, particularly if climbing a ladder or on a lift. | Qualified onsite Dive Manager | 1 | 3 | 3 |
| Diving | Heart attack | All divers | 1 | 3 | 3 | All divers required to annually self-certify their fitness to dive. | Recommend that any divers over the age of 50 regularly get check-ups. Make sure nearest AED is known on all trips. | Diving Officer/Dive Manager | 1 | 3 | 3 |
| Diving | Reduced underwater visibility | All divers | 2 | 3 | 6 | Divers to be counted in and out of the water. Divers should carry torches in poor conditions.  | Abandon dive if visibility too bad. | Qualified onsite Dive Manager | 2 | 1 | 2 |
| Diving | Injury from marine life | All divers | 1 | 3 | 3 | Divers reminded not to touch or harass marine life | First aid kit on site and local hospitals identified prior to trip | Qualified onsite Dive Manager | 1 | 3 | 3 |
| Diving | Being hit by surface traffic | All divers | 1 | 3 | 3 | Divers should use SMB’s in high traffic areas with alpha flags | Avoid diving in high traffic areas if possible | Qualified onsite Dive Manager | 1 | 3 | 3 |
| Diving | Lack of control of students | StudentsInstructors | 2 | 3 | 6 | All instructors to maintain full attention on students. No other activities (i.e. photography) should be engaged in. | Monitor to make sure instructors do not have other equipment on them that is for activities not suitable to diving with students. | Qualified onsite Dive Manager | 1 | 3 | 3 |
| Manual handling | Musculo-Skeletal injury from lifting heavy equipment | All divers |  2 | 2 | 4 |  Divers taught to lay down cylinders to prevent any damage or injury caused from falling. Also taught how to handle heavy weight belts and other equipment whilst assembling, disassembling or moving scuba units. First aid kits and trained administrators are always on site. | Make sure people are aware of correct manual handling procedures including lifting with a straight back and bent knees. Park vehicles as lose to water as safe. Remind divers to help lift heavy equipment in pairs. | Qualified onsite Dive Manager |  1 | 2 | 2 |
| Water entry/ exit | Slips, trips and falls | All divers |  2 | 2 | 4 | Divers are briefed of entry and exits before each dive and made aware of slippery surfaces, rough terrain etc. and advised to take care, move slowly and use any handrails provided for entries and/or exits that are more likely to cause a fall.First aid kits and qualified first aiders will be on site for every dive. | Monitor changing conditions as entry and exits may change with tides and their suitability with weather conditions. Remind divers not to walk in fins. | Qualified onsite Dive Manager |  2 | 2 | 4 |
| Travel | Road accident on travel to/from dive sites | SUSAC members and the general public / other road users |  1 | 3 | 3 | Only people with a valid driving license and insurance are allowed to drive members to dive sites. Cars must be taxed, insured and have a valid MOT. Nobody may tow the boat without a suitable licence and without the explicit permission of the Boat Officer. | The Dive Manger will make sure that everyone who is a driver complies with the aforementioned before being designated as a driver. | Dive Manager |  1 | 3 | 3 |

|  |
| --- |
| Likelihood |
| Impact | 3 | 6 | 9 |
| 2 | 4 | 6 |
| 1 | 2 | 3 |

|  |  |
| --- | --- |
| Reviewed By: | Comments: |
| Responsible person: | Date: |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

|  |
| --- |
| Impact |
| Level | **Description** |
| High (3)  | Major Injury or Death; Loss of limb or life-threatening conditions. In hospital for more than 3 days, and/or subject to extensive prolonged course of medical treatment and support.  |
| Medium (2) | Serious injury causing hospitalisation, less than 3 days. Rehabilitation could last for several months. |
| Low (1) | Minor/superficial injuries. Local first aid treatment or absence from work for less than 3 days. |

|  |
| --- |
| Likelihood |
|  |
| Level | **Description** |
| High (3) | Will probably occur in most circumstances |
| Medium (2) | Might occur at some time |
| Low (1) | May occur only in exceptional circumstances |