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| **Risk Assessment** | | | | |
| **Risk Assessment for the activity of** | **Sub-Aqua Diving** | | **Date** | **28 Aug 2018** |
| **Club or Society** | **Southampton University Sub-Aqua Club** | **Assessor** | **Diving Officer** | |
| **President or Students’ Union staff member** | ***Jamie Hill*** | **Signed off** |  | |

| ***PART A*** | | | | | | | | | | |
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| **(1) Risk identification** | | | **(2) Risk assessment** | | | | **(3) Risk management** | | | |
| **Hazard** | **Potential Consequences** | **Who might be harmed**  **(user; those nearby; those in the vicinity; members of the public)** | **Inherent** | | |  | **Residual** | | | **Further controls (use the risk hierarchy)** |
| **Likelihood** | **Impact** | **Score** | **Control measures (use the risk hierarchy)** | **Likelihood** | **Impact** | **Score** |
| Diving | Ear damage from pressure changes whilst diving | SUSAC members | **2** | **2** | **4** | Methods of ‘clearing’ are taught in Ocean Diver training and are used when descending. 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. These practices are in accordance with BSAC regulations. | **1** | **2** | 2 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Diving | Running out of air on a dive | SUSAC members | **1** | **4** | 4 | Divers are equipped with a regulator with an air gauge so that they can monitor the air in the cylinder at all times during a dive. Divers are taught how to deal with an out-of-air situation in their training but are advised at the start of every dive to check their air gauge regularly to avoid this situation. Divers are also reminded to leave 1/3 of the cylinder’s supply as a reserve in case of any unforeseen circumstances.  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. These practices are in accordance with BSAC regulations. | **1** | **2** | 2 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Diving | Separation from buddy | SUSAC members | **4** | **2** | **8** | A buddy separation exercise is taught in diver training and all divers are reminded of the procedure at the beginning of each dive. Divers are to search for 1 minute and then re-unite at the surface. Divers are put in pairs or small groups so that they can stay close together and newly qualified or inexperienced divers are paired with experienced members or an instructor. These practices are in accordance with BSAC regulations. | **3** | **1** | 3 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Diving | Decompression sickness from a rapid ascent | SUSAC members | **1** | **3** | 3 | All divers will have a computer or a depth gauge and timer so that they can monitor their ascent rate. Any divers have proper training to do so and will have made a suitable plan for the dive before the start of the dive. On the dive all divers will carry out any necessary safety stops on ascent. These practices are in accordance with BSAC regulations.  Any novice divers will be diving with an instructor to insure that they dive within their acceptable limits. All diving activities will have a dive manager present who will have contact information for appropriate emergency services. Oxygen administration equipment and qualified administrators will be on site for all diving activities. | **1** | **1** | 3 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Water entry/exit | Slips, trips and falls | SUSAC members | **1** | **2** | 2 | 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 hand rails provided for entries and/or exits that are more likely to cause a fall.  First aid kits and qualified administrators will be on site for every dive. | **1** | **2** | 2 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Diving | Equipment malfunction | SUSAC members |  |  | 3 | SUSAC equipment is serviced in accordance with BSAC guidelines and any divers using their own equipment are advised to also have their equipment serviced regularly. Equipment is also rinsed/cleaned after every dive to help prevent blockages in the valves. All divers also 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 also trained how to deal with various scenarios involving equipment malfunction and make a safe ascent to the surface. Divers will be in pairs or small groups to allow everyone to have assistance on hand if there should be equipment failure during a dive. Newly qualified or inexperienced divers will be paired with an experienced diver. |  |  | 3 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Diving | Hypothermia from cold water temperatures | SUSAC members |  |  | 2 | 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 |  |  | 2 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Travel | Road accident on travel to/from dive sites | SUSAC membersand other drivers | **1** | **3** | 3 | Only people with a valid license and insurance are allowed to drive members to dive sites. | **1** | **3** | 3 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Diving | Nitrogen narcosis | SUSAC members | **3** | **1** | 2 | 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 as necessary. | **2** | **1** | 2 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Diving | Illness from breathing contaminated air | SUSAC members | **1** | **3** | 3 | The SUSAC cylinders are kept in test for visual and hydraulic testing as legally required. The NOC compressor is also regularly serviced as required by worldwide regulations. 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.  During the pre-dive equipment check every diver and their buddy will check the air taste 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. | **1** | **1** | 3 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Using the SUSAC boat | Injury from hitting a diver or mishandling of the boat | SUSAC members | **2** | **3** | 6 | All boat handlers are suitably qualified with qualifications of at least powerboat level 2 or equivalent and trained in VHF use. When using the SUSAC boat there are at least 2 qualified boat handlers on the boat and 1 handler will be on the boat at all times (i.e. not diving) so that the boat is not left unsupervised. Charter boats will be used if needed for the dive site. | **1** | **2** | 3 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Handling equipment | Injury from dropping heavy equipment | SUSAC members | **3** | **1** | 3 | Divers are taught to always lay down cylinders to prevent any damage or injury caused from falling. Divers are 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. | **1** | **1** | 1 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Using the compressor | Explosion and general noise disturbance | SUSAC members | **1** | **3** | 3 | Training is offered on compressor operation and only trained members may use it, newly trained members are supervised until achieving a satisfactory standard in the compressor operation. Use of the compressor is only done in working hours so that there is no noise disturbance to locals. | **1** | **1** | 1 | Only qualified members are allowed to operate the compressor, under supervision if necessary as detailed in the BSAC safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) |
| Diving | Drowning | SUSAC members | **2** | **5** | 10 | 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. | **1** | **3** | 3 | All SUSAC members abide by BSAC regulations as set out in their training and follow the safe diving recommendations (http://www.bsac.com/core/core\_picker/download.asp?id=999) to help mitigate any and all risks that arise from partaking in scuba diving activities. As such, there is always a qualified Dive Manager on site to deal with any issues that may occur. |
| Weekly meetings, socials and travel between venues | Slips, trips and falls | SUSAC members | **1** | **2** | 2 | Care is taken when moving up/down stairs. Many members and the committee have been trained in first aid if necessary | **1** | **1** | **1** | All social events are organised and overseen by members of the committee and it is their responsibility to ensure that everyone is safe during these events. |
| Socials | Members getting home safely at late times | SUSAC members | **1** | **1** | 1 | Our meetings are held in the evenings and often run to a late hour; we ensure that everyone walking home is not walking alone. | **1** | **1** | 1 | All social events are organised and overseen by members of the committee and it is their responsibility to ensure that everyone is safe during these events. |
| Travel | Road accident for travel to/from venues that are beyond walking distance | SUSAC members | **1** | **3** | 3 | Only people with a valid license and insurance are allowed to drive members to far venues. | **1** | **3** | 3 | Diving limited on days when driving occurs with rest periods for drivers on long drives |

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| ***PART B – Action Plan*** | | | | | | | |
| **Risk Assessment Action Plan** | | | | | | | |
| **Part no.** | **Action to be taken, incl. Cost** | **By whom** | **Target date** | | **Review date** | **Outcome at review date** | |
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| Responsible committee member signature: | | | | | Responsible committee member signature: | | |
| Print name: | | | | Date: | Print name: | | Date |

**Assessment Guidance**

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| 1. Eliminate | Remove the hazard wherever possible which negates the need for further controls | If this is not possible then explain why |  |
| 1. Substitute | Replace the hazard with one less hazardous | If not possible then explain why |
| 1. Physical controls | Examples: enclosure, fume cupboard, glove box | Likely to still require admin controls as well |
| 1. Admin controls | Examples: training, supervision, signage |  |
| 1. Personal protection | Examples: respirators, safety specs, gloves | Last resort as it only protects the individual |

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| **LIKELIHOOD** | 5 | 5 | 10 | 15 | 20 | 25 |
| 4 | 4 | 8 | 12 | 16 | 20 |
| 3 | 3 | 6 | 9 | 12 | 15 |
| 2 | 2 | 4 | 6 | 8 | 10 |
| 1 | 1 | 2 | 3 | 4 | 5 |
|  | | 1 | 2 | 3 | 4 | 5 |
| **IMPACT** | | | | |

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| Impact | | Health & Safety |
| 1 | Trivial - insignificant | Very minor injuries e.g. slight bruising |
| 2 | Minor | Injuries or illness e.g. small cut or abrasion which require basic first aid treatment even in self-administered. |
| 3 | Moderate | Injuries or illness e.g. strain or sprain requiring first aid or medical support. |
| 4 | Major | Injuries or illness e.g. broken bone requiring medical support >24 hours and time off work >4 weeks. |
| 5 | Severe – extremely significant | Fatality or multiple serious injuries or illness requiring hospital admission or significant time off work. |

Risk process

1. Identify the impact and likelihood using the tables above.
2. Identify the risk rating by multiplying the Impact by the likelihood using the coloured matrix.
3. If the risk is amber or red – identify control measures to reduce the risk to as low as is reasonably practicable.
4. If the residual risk is green, additional controls are not necessary.
5. If the residual risk is amber the activity can continue but you must identify and implement further controls to reduce the risk to as low as reasonably practicable.
6. If the residual risk is red do not continue with the activity until additional controls have been implemented and the risk is reduced.
7. Control measures should follow the risk hierarchy, where appropriate as per the pyramid above.
8. The cost of implementing control measures can be taken into account but should be proportional to the risk i.e. a control to reduce low risk may not need to be carried out if the cost is high but a control to manage high risk means that even at high cost the control would be necessary.

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| Likelihood | |
| 1 | Rare e.g. 1 in 100,000 chance or higher |
| 2 | Unlikely e.g. 1 in 10,000 chance or higher |
| 3 | Possible e.g. 1 in 1,000 chance or higher |
| 4 | Likely e.g. 1 in 100 chance or higher |
| 5 | Very Likely e.g. 1 in 10 chance or higher |