### **GENERAL OPEN WATER TRAINING - INLAND SITES**

Site: Inland Dive Sites:

Cromhall, Dosthill, Stoney Cove & Vobster Quay Project: General Open Water Training & Skills Refreshment Organisation's name: InDepth Dive Centre & Club - PADI 26763 - SAA 1170



## **OPEN WATER** RISK ASSESSMENT





### **GENERAL OPEN WATER TRAINING - INLAND SITES**

#### CONTACT INFORMATION

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SAA Club No: 1170 PADI Club No: 26763

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### **GENERAL OPEN WATER TRAINING - INLAND SITES**

#### COURSES & TRAINING COVERED BY THIS RISK ASSESSMENT

#### PADI COURSES COVERED

Scuba Diver **Open Water Diver** Adventure Diver / Advanced Open Water Diver Divemaster Assistant Instructor IDC Dry Suit Peak Performance Buoyancy Underwater Digital Imaging Photography Videography Photogrammetry **Underwater Navigation** Search & Recovery Sidemount Drift Diver **Equipment Specialist** DSMB Diver Underwater Naturalist Boat Diver Fish ID Multilevel Diver Altitude Diver Full Face Mask PADI AWARE - All Courses

#### SAA COURSES COVERED

Elementary Diver Open Water Diver / 1 Star Diver Club Diver / 2 Star Diver Dive Leader / 2 Star Diver Dive Supervisor / 3 Star Diver Skill Development - refer to PADI Equivalent

### COURSES & TRAINING **EXCLUDED** FROM THIS RISK ASSESSMENT (See course(s) specific Risk Assessments)

PADI COURSES **EXCLUDED** 

**Rescue Diver** Deep Diver Emergency Oxygen Provider Enriched Air Nitrox - EANx Wreck Diver **Cavern Diver** Night Diver Ice Diver Self-Reliant Diver **Diver Propulsion Vehicle - DPV** Tec 40, 45, 50 Tec Sidemount Tec 40 Triimix, Tec 45 Trimix, Tec 50 Trimix Tec Trimix 65 Tec Trimix Diver Gas Blender / Tec Gas Blender Discover Rebreather / Rebreather / Advanced Rebreather Freediving - All Courses

SDI COURSES <u>EXCLUDED</u> Solo Diver

TDI COURSES EXCLUDED All Courses Excluded

**PLEASE NOTE:** Only those courses specified opposite are covered by this risk assessment. If the course is not listed, then please use the correct risk assessment or seek clarification and an updated document.



# **GENERAL OPEN WATER TRAINING - INLAND SITES** REEDIVING AVE/MINE & CLUB **CONTENTS** 1. Risk Assessment Overview - At a glance ~ Page 5 2. Risk Matrix ~ Page 6 3. Risk Assessment - General Risks ~ Page 7 4. Risk Assessment - Diving (IN-WATER) Risk Assessment ~ Page 10 5. Depth ~ Additional Risk Assessment ~ Page 16 $\bigcirc$ 6. Emergency First Response Flow Chart ~ Page 17 7. Additional Safety Measures ~ Page 18 VERSION 1.1 ~ REVISION 3

### **RISK ASSESSMENT OVERVIEW**

#### Site: Inland Dive Sites:

Cromhall, Dosthill, Stoney Cove & Vobster Quay

**Project: Recreational Open Water Training** 

Organisation's name: InDepth Dive Centre & Club

Date of last review: N/A

Date of next review: April 2024

#### **GENERAL RISKS**

What are the hazards?	Risk Rating			
Trips & Falls	4,3-12			
Lifting & Carrying Equipment	3,2-6			
Deep Water Entry	3,2-6			
Shallow Water Entry	3,2-6			
Hypothermia (too cold) or Hyperthermia (too hot)	2,3-6			
Manual Handling	3,2-6			
Medical Conditions	4,1-1			

Risk factor is calculated by taking the Likelihood (L) 1-5 and associate it with the probable Consequence (C) 1-5 The risk control factors are then taken into account and the risk is reviewed accordingly.

See Risk Matrix on page 5.

Assessment carried out by: James Neal Date assessment was carried out: April 2023



SIGNED.

#### **DIVING (IN-WATER) SPECIFIC RISKS**

What are the hazards?	Risk Rating			
Drowning	2,5-10			
Entanglement	2,1-4			
Out of Gas	2,3-6			
Mask Breakage	1,2-2			
Squeeze	2,1-2			
Panic	2,3-6			
Separation	2,3-6			
Uncontrolled/Rapid/Breath-Hold Ascent	2,2-4			
Dry Suit Training	4,2-8			
Barotrauma	2,3-6			
Decompression Sickness	2,3-6			
Immersion Pulmonary Oedema (IPO)	2,4-8			
Computer Failure	3,1-4			
Freeflow	3,2-6			
Toxic Gas	2,3-6			
Drysuit / Wing / BCD Inflator Failure	3,1-3			
Task Focusing	3,2, 6			
Fatigue	2,2-4			
Familiarity / Complacency	3,2-6			
Heart Attack, Stroke, Haemorrhage	2,4-8			

RISK Matrix														
Risk Rating Guidance	Consequence (C)	5	5	10	15	20	25	20 - 25	STOP	Stop activity and take immediate action				
		4	4	8	12	16	20	15 - 16	URGENT ACTION	Take immediate action, stop activity if necessary and maintain existing controls rigorously				
		3	3	6	9	12	15	8 - 12	ACTION	Improve (if possible) Ensure risks are well briefed and understood				
		2	2	4	6	8	10	3 - 6	MONITOR	Monitor for any incidents and look to improve if possible				
		1	1	2	3	4	5	1 - 2	NO ACTION	No further action, but ensure controls are maintained and reviewed				
			1	2	3	4	5							
				Likelih	ood (L	)								
Guidance. When completing a risk assessment, you should:	<ol> <li>Establish who</li> <li>Identify who</li> <li>Calculate an</li> <li>Identify risk o</li> <li>Calculate a risk</li> <li>Calculate a risk</li> <li>Calculate a risk</li> <li>Calculate a risk</li> <li>Record any risk</li> </ol>	at haza is at ris initial f control evised L) and required	ards ard k, how Risk Ra measu Risk R Conse d action	es. if the additional controls are followed; you should be looking to change leted by.										
6. Record any required actions, who is responsible for these Note. Ideally, you should look to reduce the risks to as 'low as reasonable									cticable'	REEDINN				
Likelihood (L)	Classifications								Consequence (C) C	Classifications				
1. Very Unlikely instances of any	y: Remote or Imp	orobabl	e; past	t exper	ience	shows	no kno	wn	1. Insignificant: No	injury, no damage to property or the environment.				
2. Unlikely: Past experience suggests that event rarely happens.									2. Minor: Minor injur to property or the en	ry possibly needing first aid, resulting in no loss time; little or no damage vironment.				
<b>3. Fairly likely:</b> Experience shows that events can occur, either frequently or occasionally.									<b>3. Medium:</b> Up to 3 days absence; relatively minor injury, moderate damage to proper the environment requiring short remedial work.					
4. Likely: Experience shows isolated incidents occur.									4. Major: More than	7 days absence, serious injury / damage to property or the environment				
5. Very Likely: repeated incide	Very likely to hap nts.	pen ur	iless a	ctively	preve	nted, p	ossibili	ty of	of <b>5. Catastrophic:</b> Accident resulting in death(s); destruction of property; irreversible damage to the environment.					
Review Date:	This risk assess new hazards id	sment s entified	should I or an	be rev accide	iewed nt or i	perioc nciden	lically. I t.	Review soon	ner should conditions of	change, if additional equipment is introduced, or processes changes,				

### **RISK ASSESSMENT**

Site: Inland Dive Sites:

Cromhall, Dosthill, Stoney Cove & Vobster Quay Project: Recreational Open Water Training Organisation's name: InDepth Dive Centre & Club Date of next review: April 2024 Assessment carried out by: James Neal Date assessment was carried out: April 2023



#### **GENERAL RISKS**

What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	Risk Rating	Additional Controls	Residual Risk	Action by whom?	Action by when?
						Co Co		
Trips & Falls	Any team member	Risk of personal injury. Sprains, strains and breaks.	<ol> <li>Safety briefings.</li> <li>Minimise kit carried.</li> <li>Appropriate footwear.</li> <li>Awareness of uneven surfaces.</li> </ol>		Monitor & continuous assessment	Ongoing Many open water sites are old quarries, uneven surfaces, loose stones.	Dive Supervisor All team members	Review annually
Lifting & Carrying Equipment	Any team member	Risk of personal injury. Sprains, strains. Injury to back.	<ol> <li>Safety briefings.</li> <li>Minimise kit carried.</li> <li>Appropriate footwear.</li> <li>Proper lifting techniques.</li> </ol>		Monitor & continuous assessment	Ongoing Particular care should be emphasied as part of every site brief.	Dive Supervisor All team members	Review annually
Deep Water Entry	Any team member	Risk of personal injury. Incorrect procedure, fall face first. Dry suit zip left open / risk of drowning BCD / Wing failure	<ol> <li>Safety briefings.</li> <li>Pre-dive safety checks.</li> <li>Appropriate training.</li> <li>Equipment regularly serviced.</li> <li>Awareness of site entry points.</li> </ol>		Monitor & continuous assessment	Ongoing Underwater obstacles can move and visibility may obscure. Due care and attention should be given.	Dive Supervisor All team members	Review annually

What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	Risk Rating	Additional Controls	Residual Risk	Action by whom?	Action by when?
Shallow Water Entry	Any team member	Risk of personal injury. Incorrect procedure, fall face first. Increased risk of trips and falls, resulting in: Sprains, strains and breaks.	<ol> <li>Safety briefings.</li> <li>Pre-dive safety checks.</li> <li>Appropriate training.</li> <li>Awareness of site entry points and hazards.</li> </ol>		Monitor & continuous assessment	Ongoing Underwater obstacles can move and visibility may obscure. Due care and attention should be given.	Dive Supervisor All team members	Review annually
Hypothermia (too cold) or Hyperthermia (too hot)	Any team member	Any team members could be affected by exposure to the elements both surface and sub-surface affecting thermal balance of body temperature, resulting in ill health or fatality.	<ol> <li>Be mindful that dry suits can, and do, leak.</li> <li>Dry suit training represents increased risks due to lack of experience. Increased risk of loss of buoyan- cy control.</li> <li>Dive Supervisor / Top side safety to monitor divers at regular intervals.</li> <li>Divers should wear appropriate thermal protection for the time of year and location.</li> <li>Familiarity of symptoms and early detection.</li> <li>Team to maintain good communications throughout the day.</li> </ol>		Dry suit training should only be conducted in shallow water and any skills being undertaken should, ideally, take place at the start of the dive or after the safety stop. Ascent skills and inversion being the two main examples. Café (where offered) for hot / cold drinks. If a café isn't available then own waterside facilities should be available. Flasks etc. Team members & students advised and encouraged to all bring a dry bag with spare layers of warm, dry clothing & towels.	Ongoing Dry Suit training, MUST only take place once an orientation has been completed in a swimming pool. This MUST include inversion training and all other skills as stated in the course requirements / standards. Even after completing this there will remain a residual risk of a student(s) flooding their dry suit, (partially or fully) particularly during inversion exercises. Consider the time of year and try to avoid winter months.	Dive Supervisor All team members	Continuous review

What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	R	Risk Rati	( ng	Additional Controls	Residual Risk	Action by whom?	Action by when?
Manual Handling	Any team member	Any Team member could suffer injury from climbing out of the water onto the pontoon or out of the water via the 'beach'. Injury from lifting an item or retrieving an item from the bottom. Injury from carrying cylinders in / out of the water and to / from the gas room.	<ol> <li>Wear Appropriate footwear</li> <li>When possible, use a cylinder trolley</li> <li>ALWAYS Secure the load with a chain or strap Take care over rough surfaces</li> <li>Take regular rest breaks</li> <li>Two person lifts where practical.</li> <li>Use of liftbag for any item over 7kg in-water. (Appropriate training required.)</li> <li>Always use proper lifting technigues, bending knees and not back.</li> </ol>				Monitor & continuous assessment Following the failure of a 1st stage on a pressured cylinder, advise divers that they should try and avoid carrying presurrised cylinders on their shoulders with 1st stages attached.	Ongoing A Residual Risk of sprain or strain will always be present, especially in older divers. Repetitive diving can increase residual risk as divers fatigue. This can be particularly the case on longer diving holidays, such as those on liveaboards.	Dive Supervisor All team members	Review annually
Medical Conditions & Medication	Any team member	Team members are likely to have any number of pre-existing medical conditions. These should not be contra-indicated conditions or medications.	1. Dive Medicals 2. Disclosure to team 3. Assistance as necessary / required.				1. Dive briefings should include asking if all team members are feeling well and able to dive. There should be absolutely no peer pressure to dive / complete a task.	Ongoing Be mindful that divers may be tempted to lie on medical forms. Ideally, have new forms completed for every course, regardless of how recently they may have undertaken training. Doing so will either pick up on a problem or demonstrate deliberate and ongoing deceit.	Instructor(s) All team members	Continuous review

#### DIVING (IN-WATER) SPECIFIC RISKS

What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	R	Risl Rati	k ing		Additional Controls	Residual Risk	Action by whom?	Action by when?
Drowning	Any team member	Any Team member could suffer a drowning incident, including any persons on the surface that may be taking part, assisting, etc	<ol> <li>Any dedicated surface cover should wear appropriate atire.</li> <li>When around the water's edge everyone should walk, not run.</li> <li>All buoyancy equipment should be regularly inspected and serviced.</li> </ol>					Emergency buoyancy aids and throw lines.	Ongoing Scuba Diving, by its very nature, will always carry a residual risk of drowning. Managing that risk is critical. Safe Diving Practices should always be followed and equipment should be serviced regularly.	Dive Supervisor All team members	Continuous review
Entanglement	Divers Freedivers Snorkellers	Entanglement: Injury to diver from becoming entangled in lines / poor DSMB deployment	1. All divers to be aware of potential underwater snagging (hanging lines / DSMB lines being used for practice, line laying skills)					Entry point shall be assessed before entry and supervisor / instructor to constantly monitor the divers.	Ongoing Lines will always pose a hazard. Awareness is critical.	Dive Supervisor All team members	Continuous review
Out of Gas	Divers	Any student / members could drown if they run out of gas. Risk of serious decompression injury if a team member bolts for the surface as a consequence of running out of gas.	<ol> <li>Check all cylinders for gas prior to enter- ing the water.</li> <li>Double-check all student cylinders and ensure that they have at least 150 bar at the start of any in-water activites.</li> </ol>					Surface cover will be watching. In-water assistants with students.	Ongoing Complacency in those divers that are more experienced can creep in. It is important to periodically remind instructors and seasoned divers that they are not infallable!	Dive Supervisor All team members	Continuous review

								(2)		
What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	R R	isk ating	g	Additional Controls	Residual Risk	Action by whom?	Action by when?
Mask Breakage	Divers Freedivers Snorkellers	Cuts Abrasions Eye damage	<ol> <li>Masks should be stored in fins, face down when not in use.</li> <li>Masks should be either on the face or around the neck, not on forehead.</li> </ol>				Instructors remind students and train good habits from the very beginning.	Ongoing	Dive Supervisor All team members	Continuous review
Squeeze Mask Dry Suit	Divers Freedivers Snorkellers	Risk of skin damage to face (mask squeeze) or any part of the body as a result of a dry suit squeeze, typically resulting from a failure to correctly connect drysuit inflator hose.	<ol> <li>Divers should perform proper buddy / self-reliant checks prior to entering the water.</li> <li>Instructors brief students and ensure they understand the procedures.</li> </ol>				Remind all divers that their equipment must be in test and that they should perform a buddy check.	Ongoing Complacency, remind seasoned divers that they too can still forget to attach a dry suit hose or descend too quickly!	Dive Supervisor All team members	Continuous review
Panic	Divers Freedivers Snorkellers	Any person may have a panic situation either underwater or on the surface. Risk of inhaling water, rapid ascent / breath hold ascent Drowning Harm others whilst panicking	<ol> <li>Follow all training standards.</li> <li>Remind students that panic is not an option. (Rule 2.)</li> <li>Reinforce calm, controlled breathing techniques.</li> <li>Do not allow peer pressure from family members or friends.</li> </ol>				In-Water support with a safety diver where appropriate. Brief any new Divemasters or trainees of the hazards.	Ongoing It's impossible to know what's going on in someone's personal life. Many factors could affect an individual. So be mindful of this and monitor all students at all times.	Dive Supervisor All team members	Continuous review
Separation	Divers	Risk of separation in poor visibility may result in diver panic and uncontrolled ascent to surface. DCS Lung Overexpansion	<ol> <li>Dive briefing should always include standard procedure for separation. Stay for one minute and then make a normal, safe, ascent.</li> <li>Support Divers / DMs if possible</li> </ol>				Ongoing Use of alternate dive site(s) if necessary. Reschedule if conditions are poor.	Ongoing Weather can easily affect visibility.	Dive Supervisor All team members	Continuous review

Uncontrolled Ascent / Rapid Ascent / Rapid Ascent / Rapid Ascent / Rapid Ascent / Rapid       Divers       Lung over expansion injury Decompression sickness / injury       1. Follow all training standards. 2. Remind students of the need to control bouyancy and not ex- ceed maximum ascent rates of 16mtrs per minute. Icales of 16mtrs per training commences. 2. Follow all training isckness / injury       Divers       In-reased risk of loss of buoyancy to any open water training commences. 2. Follow all training standards. 3. Remind students of the need to control bouyancy and not exceed maximum ascent resulting in:       In-Water support, ate.       Ongoing Dry Suit training, Ongoing Dry Suit training, Ongoing Dry Suit training, training commences. 2. Follow all training standards. 3. Remind students of the need to control bouyancy and not exceed maximum ascent rates of 16mtrs per minute. Ideally 10 mts per minute.       In-Water support, ate.       Dry Suit training, training commences. 2. Follow all training standards. 3. Remind students of the need to control bouyancy and not exceed maximum ascent rates of 16mtrs per minute.       In-Water support, ate.       Dry Suit training, training, training commences. 2. Follow all training, training conducted at the start of the first dive of any given day to ensure assolute minute. Introlled at the start of the first dive of any given day to ensure assolute minute.       Dive Supervisor traines of the the start of the first dive of any given day to ensure assolute minute.       Follow course guidancel	What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	R R	lisk latin	g	Additional Controls	Residual Risk	Action by whom?	Action by when?
Dry Suit Training       Divers       Increased risk of loss of buoyancy that can result in missed safety stop, breath-hold ascent, resulting in:       1. Ensure Dry Suit orientation has been conducted in a swimming pool ascent, resulting in:       In-Water support where appropri- ate.       Ongoing       Dive Supervisor       Continuous review         Brief any new Diversasters or training commences. In:       E. Follow all training standards.       S. Remind students of the need to control bouyancy and not exceed maximum ascent rates of 18mrs per minute.       Brief any new Diversasters or trainees of the hazards.       Ongoing       Dive Supervisor       All team members         Decompression bougancy to ensure attack       2. Follow all training standards.       S. Remind students of the need to control bouyancy and not exceed maximum ascent rates of 18mrs per minute.       Brief any new Diversasters or trainees of the hazards.       Dive Supervisor       All team members         Follow all training sickness / injury       S. Remind students of the rates of 18mrs per minute.       S. Remind students of the ray to ensure absolute minimum nitrogen loading       Diversasters or trainees of the suit.       Diversasters or trainees of the suit.       Diversasters or trainees of the suit.	Uncontrolled Ascent / Rapid Ascent / Breath-Hold Ascent	Divers	Lung over expansion injury Decompression sickness / injury	<ol> <li>Follow all training standards.</li> <li>Remind students of the need to control bouyancy and not ex- ceed maximum ascent rates of 18mtrs per minute. Ideally 10 mtrs per minute.</li> </ol>				In-Water support where appropri- ate. Brief any new Divemasters or trainees of the hazards.	Ongoing Dry Suit training courses are particularly prone to potential uncontrolled ascent. Follow course guidance!	Dive Supervisor All team members	Continuous review
been completed.	Dry Suit Training	Divers	Increased risk of loss of buoyancy that can result in missed safety stop, breath-hold ascent, resulting in: Lung over expansion injury Decompression sickness / injury	<ol> <li>Ensure Dry Suit orientation has been conducted in a swimming pool environment prior to any open water training commences.</li> <li>Follow all training standards.</li> <li>Remind students of the need to control bouyancy and not exceed maximum ascent rates of 18mtrs per minute. Ideally 10 mtrs per minute.</li> <li>Inversion exercises should be conducted at the start of the first dive of any given day to ensure absolute minimum nitrogen loading</li> <li>Ascent skills should be conducted AFTER a full safety stop has been completed.</li> </ol>				In-Water support where appropri- ate. Brief any new Divemasters or trainees of the hazards. Club dry suits tend to be sized for the 'average' person. Try to ensure students are fitted with the best possible suit.	Ongoing Dry Suit training courses are particularly prone to potential uncontrolled ascent, by virtue of their very nature and the skill(s) being taught. Namely the inversion recovery skills. Follow course guidance!	Dive Supervisor All team members	Continuous review

What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	Ri Ra	sk ating	3	Additional Controls	Residual Risk	Action by whom?	Action by when?
Barotrauma	Divers Freedivers	Damage to ears. Damage to lungs. Damage to eyes.	<ol> <li>Divers should be made aware of the need to equalize their ears.</li> <li>Maximum ascent rate of 18m per minute, preferably 10m per minute, should still be followed at all times.</li> <li>All divers are taught how to equalize their ears and mask's air space.</li> </ol>				Emergency Action Plan	Ongoing Scuba Diving, by its very nature, carries with it the risk of barotrauma.	Dive Supervisor All team members	Continuous review
Decompression Sickness	Divers	Little to no risk of physical injury in the swimming pool.	<ol> <li>All divers are suitably supervised.</li> <li>Maximum ascent rates of 10 metres per minute to be followed.</li> </ol>				Emergency Action plan O2 kit	Ongoing Scuba Diving, by its very nature, carries with it the risk of DCS.	Dive Supervisor All team members	Continuous review
Immersion Pulmonary Oedema (IPO)	Divers Freedivers Swimmers	Potentially fatal	<ol> <li>Whilst IPO is highly unlikely, it is not impossible, in a heated swimming pool, but this is an emerging condition that is poorly understood and can have serious consequences.</li> <li>Awareness of IPO symptoms.</li> <li>Include in all pre-dive briefings.</li> </ol>				Although risk is generally low, IPO remains a relatively unknown condition and awareness is limited, ensure signs and symptoms are covered in all pre-dive briefs, especially if conditions are hot.	Ongoing Scuba Diving, by its very nature, carries with it the risk of IPO.	Dive Supervisor All team members	Continuous review
Computer Failure	Divers	No risk of physical injury in the swimming pool.	<ol> <li>None required as computers are optional in the swimming pool.</li> <li>Recommend back-up computers.</li> </ol>				All computers should be checked as part of the buddy check and spare batteries should be available.	Minimal.	Dive Supervisor All team members	Continuous review

Freeflow         Divers         Potential risk of injury, serious injury, serious death should a diver experience a catastrophic loss of gas.         1. Remind divers of risk, especially in colder waters and winter months.         Remind divers that their own thisk, especially in colder waters and winter months.         Remind divers that their own thisk, especially in cubes of gas.         Dive Supervisor         Continuous all team           Toxic Gas         Divers         Contaminated coulder values and cause potential cause potential cause potential cause death as appropriate in the divers appropriate in the divers and dumps are checked as part of the pre-dive as faster spoud an inflator jam members         Dive Supervisor All team members         Continuous review	What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	Ri Ra	isk ating		Additional Controls	Residual Risk	Action by whom?	Action by when?
Toxic GasDiversContaminated cylinder fills can cause potential carbon monoxide poisoning which, in turn, could be fatal at depth.1. Only fill cylinders at reputable filling SWMA. 2. Analyse all gas mixes if qualified. 3. Record all mixes as appropriate in the dive management log. 4. Mark all cylinders a result of convulsion due to oxygen toxicity.1. Only fill cylinders at reputable filling.Taste and smell all gas mixes as part of the pre- dive safety check. And verbally gas tastes good and that there is no flicker on the SPG.Ongoing Risk typically increases when overseas, part of the pre- dive safety check. And verbally gas tastes good and that there is no flicker on the SPG.Dive Supervisor All team membersContinuous reviewDrysuit / Wing failureDiversPotential risk for a uncontrolled a scent should an inflator jam open and not be easily / quickly detached.1. All equipment must be in service and sock-tup buoyancy back-up buoyancy1. All equipment must be in service and sock-tup buoyancy toxicity.All inflators and dumps are checked as part of the pre-dive safety check.OngoingDive Supervisor All team membersContinuous reviewDrysuit / Wing failureDiversPotential risk for a uncontrolled the instruct act as back-up buoyancy detached.1. All equipment must be in service and societ should the hold ether fail.All inflators and dumps are checked as part of the pre-dive safety check.Dive Supervisor All team membersDrysuit / Wing failureDive to be aborted should ether	Freeflow	Divers	Potential risk of injury, serious injury or even death should a diver experience a catastrophic loss of gas.	<ol> <li>Remind divers of risk, especially in colder waters and winter months.</li> <li>Recommend some form of redundancy: 'Pony' bottles, bail- outs or stages.</li> </ol>				Remind divers that their own kit should be regularly serviced. Club kit is routinely inspected and serviced.	Ongoing Scuba Diving, by its very nature, carries with it the risk of freeflow, especially in colder water and winter months.	Dive Supervisor All team members	Continuous review
Drysuit / Wing / BCD inflator failureDiversPotential risk for an uncontrolled ascent should an inflator jam open and not be easily / quickly detached.1. All equipment must be in service and routinely serviced.All inflators and dumps are checked as part of the pre-dive safety check.OngoingDive Supervisor All team membersContinuous reviewIt is highly unlike- ly that both the drysuit and the1. All equipment must be in service and routinely serviced.1. All equipment must be in service and routinely serviced.All inflators and dumps are checked as part of the pre-dive safety check.OngoingDive Supervisor All team membersContinuous review	Toxic Gas	Divers	Contaminated cylinder fills can cause potential carbon monoxide poisoning which, in turn, could be fatal at depth. Incorrect gas in a cylinder could cause death as a result of convulsion due to oxygen toxicity.	<ol> <li>Only fill cylinders at reputable filling stations. Preferably SWMA.</li> <li>Analyse all gas mixes if qualified.</li> <li>Record all mixes as appropriate in the dive management log.</li> <li>Mark all cylinders appropriately with the mix, MOD, name and date of fill.</li> </ol>				Taste and smell all gas mixes as part of the pre- dive safety check. And verbally state that the gas tastes good and that there is no flicker on the SPG.	Ongoing Risk typically increases when overseas, particularly on liveaboards. Remind everyone of this!	Dive Supervisor All team members	Continuous review
wing/BCD would both fail.	Drysuit / Wing / BCD inflator failure	Divers	Potential risk for an uncontrolled ascent should an inflator jam open and not be easily / quickly detached. It is highly unlike- ly that both the drysuit and the wing/BCD would both fail.	<ol> <li>All equipment must be in service and routinely serviced.</li> <li>Drysuit can act as back-up buoyancy control should the wing/BCD fail.</li> <li>Dive to be aborted should either fail.</li> </ol>				All inflators and dumps are checked as part of the pre-dive safety check. Remind divers that hoses should be replaced at least every 5 years.	Ongoing	Dive Supervisor All team members	Continuous review

What are the hazards?	Who might be harmed and how?	How might people be harmed?	Existing risk control measures	Ris Rat	sk ting		Additional Controls	Residual Risk	Action by whom?	Action by when?
Task Focusing	Divers	Potential risk of injury, serious injury or even death should a diver become overtly task focused and consequently fail to monitor either their gas or their NDL. Risk is greatly reduced in a swimming pool.	<ol> <li>Remind all students that monitoring their gas is an essential part of learning to scuba dive.</li> <li>Remind those practicing skills that complacency causes accidents!</li> </ol>				Dive briefs should remind all divers of roles and risks of task focusing. Identify high risk courses: Navigation Photography Videography Photogrammetry Search & Recovery	Ongoing Complacency in more seasoned and experienced divers. Human Factors	Dive Supervisor All team members	Continuous review
Fatigue	Divers Freedivers Snorkellers	Fatigue can cause significant impairment to a divers' ability to perform even simple tasks.	<ol> <li>If diving below 40 metres then only one dive per day will be permitted.</li> <li>If any diver is fatigued prior to diving then they will not be permitted to dive that day / until suitably rested.</li> </ol>			RAV MAN	Team awareness Refreshments Minimum 1 hour surface intervals between dives is recommended.	Ongoing	Dive Supervisor All team members	Continuous review
Familiarity / Complacency	Divers Freedivers Snorkellers	Dive site familiarity can lead to diver complacency	1. Participants should be reminded that all diving has risks. Dive briefs to include complacency warning.				Strict dive planning and surface to surface times Dive Supervisor	Ongoing Human Factors	Dive Supervisor All team members	Continuous review
Heart Attack Stroke Haemorrhage Or other medical emergengy	Divers Freedivers Swimmers	Potentially fatal. Serious life-changing disability	<ol> <li>Follow Agency Standards.</li> <li>Medical forms and disclaimers.</li> </ol>				1. Dive briefings should include asking if all team members are feeling well and able to dive. There should be absolutely no peer pressure to dive / complete a task.	Ongoing	Dive Supervisor All team members	Continuous review

### DEPTH RISK ASSESSMENT

#### HOW DOES RISK INCREASE WITH DEPTH?

It goes without saying that the deeper you dive, the greater the risk. Therefore, the diver either has to accept that increased risk or put into place additional safety measures to negate said risk. The divers qualified to dive below 40 reality tends to be a combination of both. It is virtually impossible to remove all risks associated with deeper dives, particularly those below 100 metres.

Any dive below 40 mtrs or any dive that involves mandatory

decompression should be considered a technical dive. All project divers are required to dive within the limits of their training and experience. Only metres may do so and only divers qualified to dive on mixed gas may dive below 50 metres.

The graphic below is intended to represent what would be considered a reasonable level of risk to depth ratio.

The maximum depth of the pool is a mere 3 metres and therefore the maximum depth of any training dive would be similar. This depth falls well within the acceptable risk factor. And whilst the risk factor can never be zero where water is concerned, the risk is very low associated with these shallow depths.

6 5 **RISK FACTOR** 4 3 2 1 80 20 30 50 60 70 90 100 110 10 40 120 130 140 150 **DEPTH** (mtrs)

SICALNAL		
GRAPH		
LEL		RISK CURVE
RLF		ACCEPTABLE RISK
AV	1	RECREATIONAL DEPTH LIMIT
RISK FACTORS		
Th's	1	LITTLE / NO RISK
C C	2	ACCEPTABLE RISK
	3	ACCEPTABLE WITH CAUTION
T	4	EXTREME CAUTION
150	5	UNACCEPTABLE
	6	EXTREMELY DANGEROUS

CENTRE

& CLUB

RECREATIONAL FREEDIVING CAVE/MINE

### **EMERGENCY FIRST RESPONSE**

The meaning and prioritized flow of AB-CABS is:

- **A** = **A**irway Open?
- **B** = **B**reathing Normally?
- **C** = **C**hest **C**ompressions
- **A** = **A**irway Open
- **B** = **B**reathing for the Patient
- **S** = **S**erious Bleeding, **S**hock, **S**pinal Injury



#### Cycle of Care: AB-CABS Continue Until Help or AED Arrives AB Airway Breathing Open? Normally? Chest C

### **ADDITIONAL SAFETY MEASURES**

#### **TEAM MEMBERS**

All team members are EFR (Emergency First Response) trained. All team members are Emergency Oxygen (O2 admin) trained. All team members are trained in the use of an AED (defibrillator).

All training is refreshed every 24 months.

Key personnel are EFR Instructor Trainers.



#### **LOCATION INFORMATION:**

#### **EMERGENCY EQUIPMENT**

An O2 kit is always kept with the Dive Marshall / Surface Cover. A First Aid kit is always kept with the Dive Marshall / Surface Cover. A mobile phone is always kept with the Dive Marshall / Surface Cover.

Surface Cover vehicle is last to park in order to have immediate access to exit. All mobile networks to be checked to ensure coverage waterside.

#### **EMERGENCY ACTION PLAN**

A separate Emergency Action Plan is kept with the Project Plan.



CROMHALL (South West Maritime Academy): Wotton Road, Cromhall, GL12 8AA DOSTHILL: Wigford Road, Dosthill, Tamworth, B77 1LL STONEY COVE: Stoney Stanton, Leicester, LE9 4LR VOBSTER QUAY: Upper Vobster, Radstock, BA3 5SD

#### WHAT THREE WORDS:

CROMHALL: newsprint.gliders.safety DOSTHILL: movies.upgrading.takes STONEY COVE: activates.topping.tiling VOBSTER QUAY: cobbled.relaxed.billiard

#### **USEFUL CONTACT NUMBERS:**

EMS: 999

DDRC: 01752 209999

Midlands Diving Chamber: 01788 579555

James Neal: 01291 418181