CONFINED WATER (SWIMMING POOL) TRAINING

Site: Confined Water Training

Tewkesbury School Swimming Pool & Thornbury Leisure Centre

Project: Confined Water Training & Skills Refreshment

Organisation's name: InDepth Dive Centre & Club - PADI 26763 - SAA 1170

CONFINED WATER RISK ASSESSMENT

RESPECT THE WATER

CONFINED WATER (SWIMMING POOL) TRAINING

CONTACT INFORMATION

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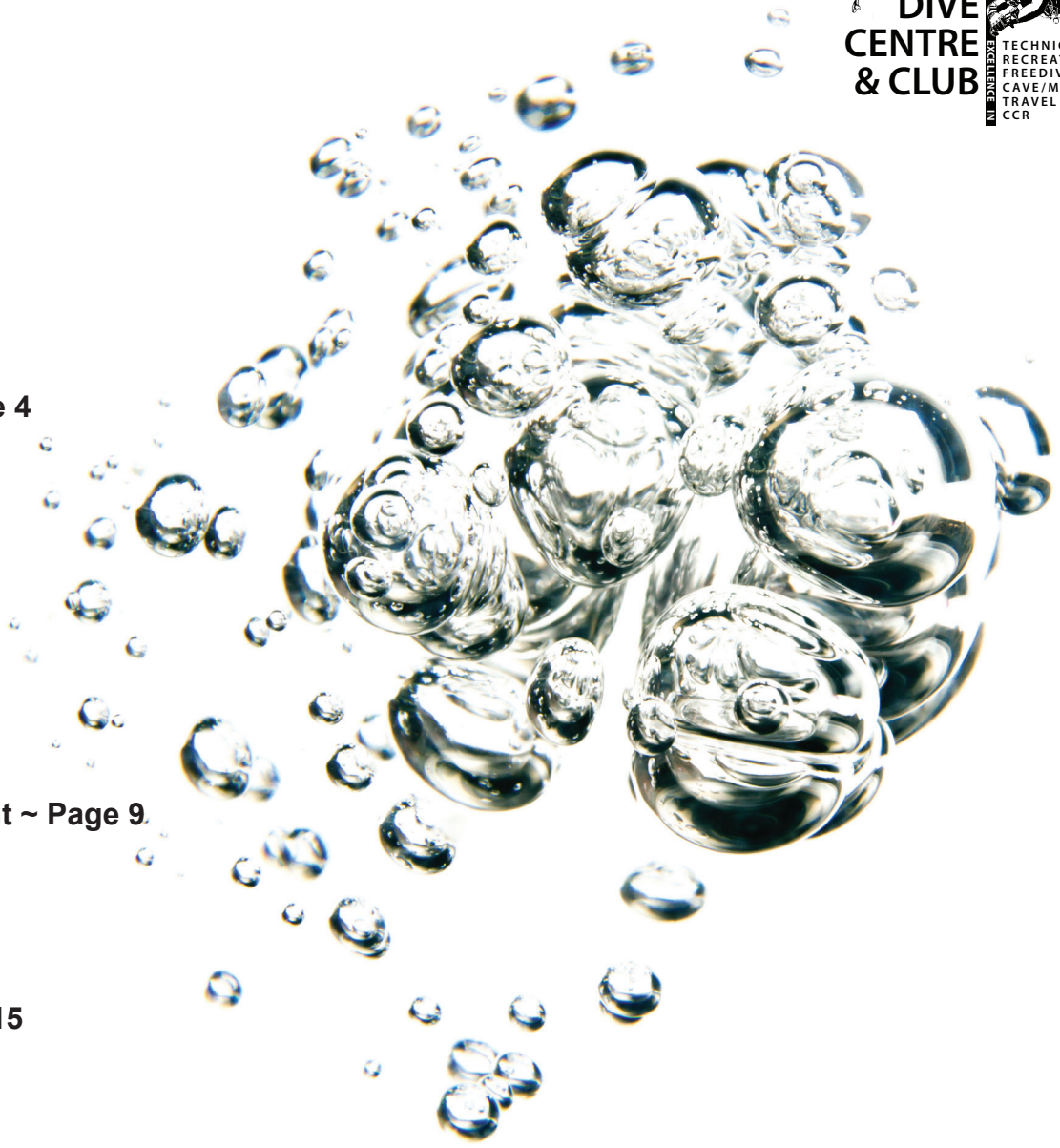
SAA Club No: 1170
PADI Club No: 26763

InDepth DIVE CENTRE & CLUB
TECHNICAL
RECREATIONAL
FREEDIVING
CAVE/MINE
TRAVEL
CCR

CONTENTS



VERSION 1.1 ~ REVISION 1

RISK ASSESSMENT OVERVIEW

Site: Confined Water Training

Tewkesbury School Swimming Pool

& Thornbury Leisure CentreProject: Confined Water Training

Organisation's name: InDepth Dive Centre & Club

Assessment carried out by: James Neal

Date assessment was carried out: March 2023

SIGNED.....

Date of last review: February 2024 ~ Date of next review: March 2025

GENERAL RISKS

What are the hazards?	Risk Rating					
Trips & Falls	3,2-6					
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)	3,2-6					
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.

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					
Rapid/Breath-Hold Ascent	2,2-4					
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
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
	Likelihood (L)				

20 - 25	STOP	Stop activity and take immediate action
15 - 16	URGENT ACTION	Take immediate action, stop activity if necessary and maintain existing controls rigorously
8 - 12	ACTION	Improve (if possible) Ensure risks are well briefed and understood
3 - 6	MONITOR	Monitor for any incidents and look to improve if possible
1 - 2	NO ACTION	No further action, but ensure controls are maintained and reviewed

Guidance.

When completing a risk assessment, you should:

1. Establish what hazards are associated with the proposed task.
2. Identify who is at risk, how they might be harmed, and the existing risk control measures.
3. Calculate an initial Risk Rating for the activity.
4. Identify risk control measures that reduce the risks to an acceptable level
5. Calculate a revised Risk Rating – you should consider how much safer the task will be if the additional controls are followed; you should be looking to change the Likelihood (L) and Consequence (C) ratings.
6. Record any required actions, who is responsible for these and when they will be completed by.

Note. Ideally, you should look to reduce the risks to as 'low as reasonably practicable'

Likelihood (L) Classifications	**Consequence (C) Classifications**
1. Very Unlikely: Remote or Improbable; past experience shows no known instances of any event occurring.	**1. Insignificant:** No injury, no damage to property or the environment.
2. Unlikely: Past experience suggests that event rarely happens.	**2. Minor:** Minor injury possibly needing first aid, resulting in no loss time; little or no damage to property or the environment.
3. Fairly likely: Experience shows that events can occur, either frequently or occasionally.	**3. Medium:** Up to 3 days absence; relatively minor injury, moderate damage to property or 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: Very likely to happen unless actively prevented, possibility of repeated incidents.	**5. Catastrophic:** Accident resulting in death(s); destruction of property; irreversible damage to the environment.

Review Date:	This risk assessment should be reviewed periodically. Review sooner should conditions change, if additional equipment is introduced, or processes changes, new hazards identified or an accident or incident.

RISK ASSESSMENT

Site: Confined Water Training

Tewkesbury School Swimming Pool & Thornbury Leisure Centre

Project: Confined Water Training

Organisation's name: InDepth Dive Centre & Club

Date of last review: February 2024 ~ Date of next review: March 2025

Assessment carried out by: James Neal

Date assessment was carried out: March 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?
Trips & Falls	Any team member	Risk of personal injury. Sprains, strains and breaks.	1. Safety briefings. 2. Minimise kit carried. 3. Appropriate footwear.		Monitor & continuous assessment	Ongoing	JN / Dive Supervisor	Review annually
Lifting & Carrying Equipment	Any team member	Risk of personal injury. Sprains, strains. Injury to back.	1. Safety briefings. 2. Minimise kit carried. 3. Appropriate footwear. 4. Proper lifting techniques.		Monitor & continuous assessment	Ongoing	JN / Dive Supervisor	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	1. Safety briefings. 2. Pre-dive safety checks. 3. Appropriate training. 4. Equipment regularly serviced.		Monitor & continuous assessment	Ongoing	JN / Dive Supervisor	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. Sprains, strains and breaks.	1. Safety briefings. 2. Pre-dive safety checks. 3. Appropriate training.		Monitor & continuous assessment	Ongoing	JN / Dive Supervisor	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.	1. Be mindful that even in a relatively warm pool, participants can still get cold. 2. Be mindful that surface cover may get too hot sat at the poolside. 3. Dive Supervisor / Top side safety to monitor divers at regular intervals. 4. Divers should wear appropriate thermal protection for the time spent in the swimming pool and take regular breaks if in the pool for prolonged periods. 5. Familiarity of symptoms and early detection. 6. Team to maintain good communications throughout the working day.		Team members encouraged to bring plenty of Hot / cold drinks and refreshments for consumption throughout the day. Café (when open) for additional supplies. When café isn't open then own waterside cooking facilities should be available. Team members encouraged to all bring a dry bag with spare layers of warm, dry clothing.	Ongoing	All team members	Continuous review

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?
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.	1. Wear Appropriate footwear 2. When possible, use a cylinder trolley 3. ALWAYS Secure the load with a chain or strap Take care over rough surfaces 4. Take regular rest breaks 5. Two person lifts where practical. 6. Use of liftbag for any item over 7kg in-water. (Appropriate training required.) 7. Always use proper lifting technigues, bending knees and not back.		Monitor & continuous assessment	Ongoing	JN / Dive Supervisor	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	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	Risk Rating	Additional Controls	Residual Risk	Action by whom?	Action by when?
Drowning	Any team member	Any Team member could suffer a drowning incident, including surface cover at the side of the pool.	1. Dedicated surface cover should wear appropriate atire. 2. When around the pool surround all members should walk, not run. 3. All buoyancy equipment should be regularly inspected and serviced. 4. The 'Dive Pit' at Thornbury should not be used for Confined Water skills that require water that is shallow enough in which to stand.		Emergency buoyancy aids and throw lines at the side of the pool.	Ongoing	JN / Dive Supervisor	Continuous review
Entanglement	Divers Freedivers Snorkellers	Entanglement: Injury to diver from becoming entangled in lines / poor DSMB deployment	1. All pool users to be aware of potential underwater snagging (hanging lines / pool lane markers / DSMB lines being used for practice, line laying skills)		Entry point shall be assessed before entry and supervisor / topside person to constantly monitor the divers.	Ongoing	JN / Dive Supervisor / Surface Cover	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.	1. Risk is minimal in a swimming pool. Check all cylinders for gas prior to entering the pool. Double-check all student cylinders and ensure that they have at least 100 bar at the start of a pool session.		Surface cover will be watching. In-water assistants with students.	Ongoing	All Team members	Continuous review

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?
Mask Breakage	Divers Freedivers Snorkellers	Cuts Abrasions Eye damage	1. Masks should be stored in fins, face down when not in use. 2. Masks should be either on the face or around the neck, not on forehead.		Instructors remind students and train good habits from the very beginning.	Ongoing	JN / Dive Supervisor	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 drysuit squeeze, typically resulting from a failure to correctly connect drysuit inflator hose.	1. Divers should perform proper buddy / self-reliant checks prior to entering the water. 2. Instructors brief students and ensure they understand the procedures.		Remind all divers that their equipment must be in test and that they should perform a buddy check.	Ongoing	JN / Dive Supervisor / Surface Cover	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	1. Follow all training standards. 2. Remind students that panic is not an option. 3. Re-inforce calm, controlled breathing techniques. 4. Do not allow peer pressure from family members or friends.		In-Water support where appropri-ate. Brief any new Divemasters or trainees of the hazards.	Ongoing	All Team members	Continuous review
Rapid Ascent / Breath-Hold Ascent	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 18mtrs per minute. Ideally 10 mtrs per minute.		In-Water support where appropri-ate. Brief any new Divemasters or trainees of the hazards.	Ongoing	All Team members	Continuous review

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?
Barotrauma	Divers Freedivers	Damage to ears. Damage to lungs. Damage to eyes.	1. Divers should be made aware of the need to equalize their ears even in a swimming pool. 2. Maximum ascent rate of 10m per minute should still be followed in the pool. 3. All divers and freedivers are taught how to equalize their mask's air space.		Emergency Action plan	Ongoing	JN / Dive Supervisor	Continuous review
Decompression Sickness	Divers	Little to no risk of physical injury in the swimming pool.	1. All divers are suitably supervised. 2. Maximum ascent rates of 10 metres per minute to be followed.		Emergency Action plan O2 kit	Ongoing	JN / Dive Supervisor	Continuous review
Immersion Pulmonary Oedema (IPO)	Divers Freedivers Swimmers	Potentially fatal	1. 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. 1.Awareness of IPO symptoms. 2. Include in all pre-dive briefings.		Although risk is low, IPO remains a relatively unknown condition and awareness is limited, ensure signs and symptoms are covered in all pre-dive briefs.	Ongoing	JN / Dive Supervisor	Continuous review
Computer Failure	Divers	No risk of physical injury in the swimming pool.	1. None required as computers are optional in the swimming pool.		All computers should be checked as part of the buddy check and spare batteries should be available if needed.	Ongoing	All divers	Continuous review

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?
Freeflow	Divers	Potential risk of injury, serious injury or even death should a diver experience a catastrophic loss of gas.	1. Risk is greatly reduced in the swimming pool as water temperatures are much higher.		Remind divers that their own kit should be regularly serviced. Club kit is routinely inspected and serviced.	Ongoing	JN / Dive Supervisor	Continuous 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.	1. Only fill cylinders at reputable filling stations. Preferably NDAC. 2. Analyse all gas mixes. 3. Record all mixes as appropriate in the gas log. 4. Mark all cylinders appropriately with the mix, MOD, name and date of fill.		Taste and smell all gas mixes as part of the pre-dive safety check.	Ongoing	JN / Dive Supervisor	Continuous review
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 unlikely that both the drysuit and the wing/BCD would both fail.	1. All equipment must be in service and routinely serviced. 2. Drysuit can act as back-up buoyancy control should the wing/BCD fail. 3. Dive to be aborted should either fail.		All inflators and dumps are checked as part of the pre-dive safety check.	Ongoing	All divers	Continuous review

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?
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.	1. Remind all students that monitoring their gas is an essential part of learning to scuba dive. 2. Remind those practicing skills that complacency causes accidents!		Dive briefs should remind all divers of roles and risks of task focusing.	Ongoing	JN / Dive Supervisor	Continuous review
Fatigue	Divers Freedivers Snorkellers	Fatigue can cause significant impairment to a divers' ability to perform even simple tasks.	1. If diving below 40 metres then only one dive per day will be permitted. 2. If any diver is fatigued prior to diving then they will not be permitted to dive that day / until suitably rested.		Team awareness Refreshments	Ongoing	All divers	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	All divers	Continuous review
Heart Attack Stroke Haemorrhage Or other medical emergengy	Divers Freedivers Swimmers	Potentially fatal. Serious life-changing disability	1. Follow Agency Standards. 2. Medical forms and disclaimers.		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	All divers	Continuous review

DEPTH RISK ASSESSMENT

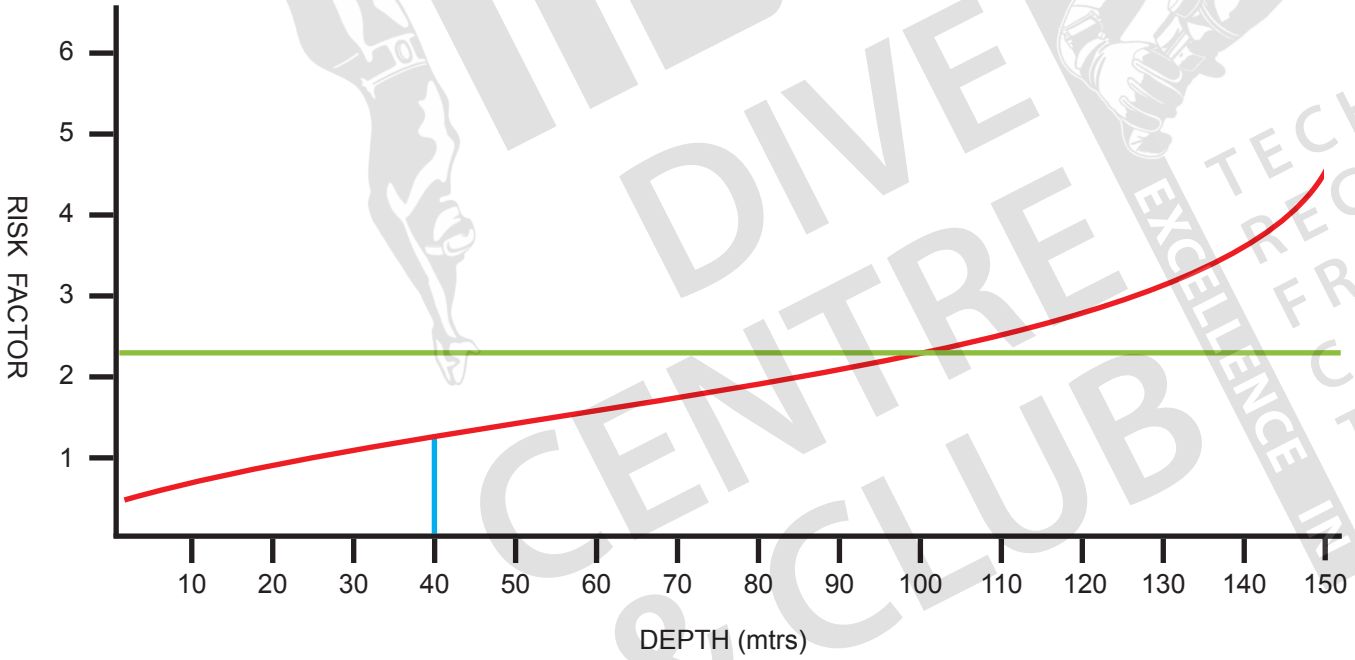
HOW DOES RISK INCREASE WITH DEPTH?

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 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 divers qualified to dive below 40 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.



GRAPH

	RISK CURVE
	ACCEPTABLE RISK
	RECREATIONAL DEPTH LIMIT

RISK FACTORS

1	LITTLE / NO RISK
2	ACCEPTABLE RISK
3	ACCEPTABLE WITH CAUTION
4	EXTREME CAUTION
5	UNACCEPTABLE
6	EXTREMELY DANGEROUS

The meaning and prioritized flow of AB-CABS is:

A = **A**irway Open?

B = **B**reathing Normally?

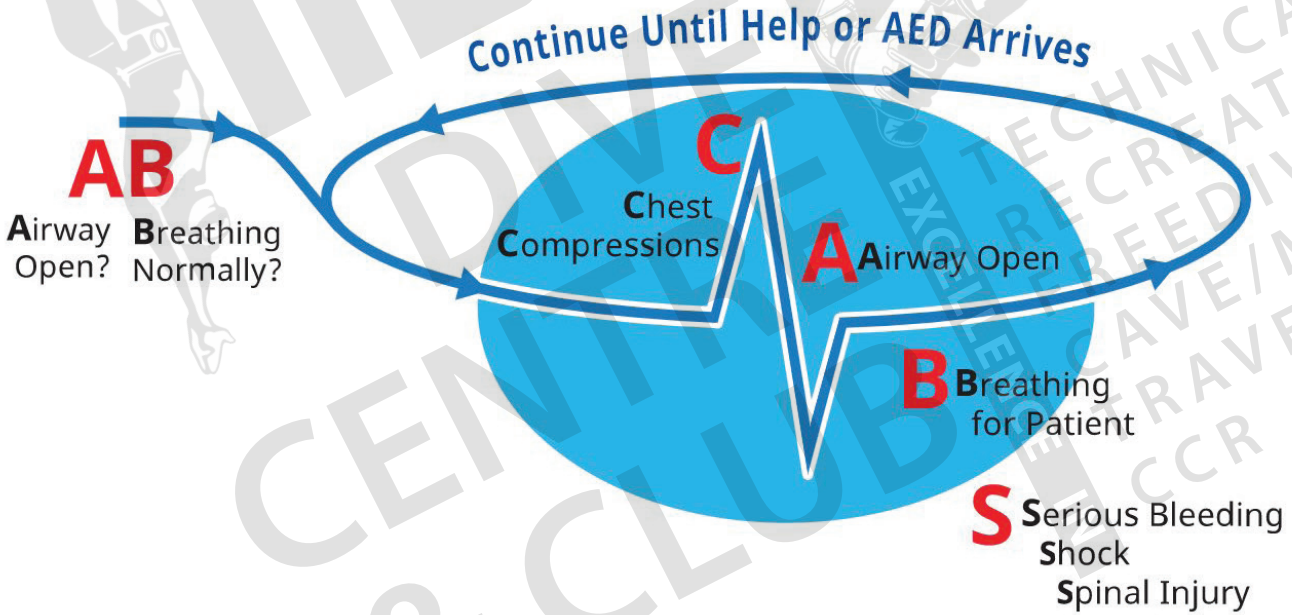
C = **C**hest **C**ompressions

A = **A**irway Open

B = **B**reathing for the Patient

S = **S**erious Bleeding, **S**hock, **S**pinal Injury

Cycle of Care: AB-CABS™



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.

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.

LOCATION INFORMATION:

Tewkesbury School Sports Centre:

Ashcurch Road, Tewkesbury, GL20 8DF

Thornbury Leisure Centre:

Alveston Hill, Thornbury BS35 3JB

WHAT THREE WORDS:

Tewkesbury School Sports Centre: unguarded.endearing.cargo

Thornbury Leisure Centre: conducted.clef.monopoly

USEFUL CONTACT NUMBERS:

EMS: 999

DDRC: 01752 209999

Midlands Diving Chamber: 01788 579555

James Neal: 01291 418181