

Recreational Diving and Snorkelling Occupational Health and Safety Manual

and

Safety Management System

“Legal Name”

“Business Name”

**Reviewed and updated
“date”**

Acknowledgements

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- Aquanaut
- Divers Alert Network (DAN) Asia Pacific
- Dive Industry Victoria Association Inc.
- Professional Association of Diving Instructors
- Scuba Schools International

Disclaimer

This manual is intended to be used by dive operators as a general guide for assessing and managing some common risks and hazards associated with recreational diving operations. It does not address all the risks and hazards associated with recreational diving operations and before relying on any of the information in this manual dive operators should carefully evaluate its accuracy, currency, completeness and relevance for their purposes, and should obtain any appropriate professional advice relevant to their particular circumstances.

The information contained in this manual is general in nature and does not constitute professional, scientific, medical, technical or expert advice. It may be subject to change without notice. All reasonable efforts have been made to ensure the information is accurate, complete and current at the date of publication.

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1.1 Preface

This document contains a recreational diving and snorkelling occupational health and safety manual (the “OHS manual”); and a safety management system (the “SMS”). Its objective is that together these two documents can allow a recreational diving business to implement and continuously improve the control measures necessary for the safe conduct of their undertaking.

Specifically the OHS Manual addresses the personnel, plant, procedural requirements, associated activities and emergency procedures found typically in Victorian recreational diving and snorkelling businesses.

It has been written with reference to relevant standards and legislative documents to ensure a minimum compliance standard. There is also advice, recommendations and examples to assist with implementation and suggested good practice.

It aims to give advice as to what actions are “reasonably practical” to reduce risk to health and safety. This may assist in demonstrating compliance with duties imposed under sections 21, 23 and 24 of the *Occupational Health and Safety Act (Victoria) 2004*.

The safety management system contained within this document will allow business claim (through self declaration) conformance with AS 4801-2000 *Occupational health and safety management systems- specifications and guidance for use*. In doing so it can provide evidence that may assist in demonstrating compliance with regulated occupational health and safety requirements and civil proceedings.

1.2 Scope

This manual addresses snorkelling, SCUBA diving using air, EANx and mixed gases, rebreathers and decompression stop diving; where these activities occur as a part of a business undertaking.

It does not address:

- Diving and snorkelling in swimming pools.
- Recreational diving and snorkelling not associated with a business undertaking.
- Diving that is not recreational diving; e.g. construction diving
- Specific control measures for the conduct of recreational diving where hazards exist outside of those specified in this document; e.g. shark feeding, or cave diving.

Further it does not address all associated occupational health and safety hazards in a recreational diving business. These may be covered by other relevant legislation.

Examples: Electrical safety, confined spaces, hazardous substances, manual handling, dangerous goods, personal protective equipment, fatigue, gas installations, housekeeping, plant, vehicles, ventilation, biohazards, working at heights, working over water, alcohol, smoking, drugs, fire, first aid, access, noise, security and violence, berthing vessels, lines and cables under tension, other underwater work, harassment and bullying, hypothermia, heat stress.

Further it does not address other hazards and risks that may be addressed by other safety legislation other than OHS legislation. Relevant to recreational diving businesses, these types of legislation may include:

- Marine safety legislation
- Environmental protection legislation
- Consumer protection legislation.

Note: It is important that each business clarifies exactly what its undertakings are regarding the conduct of recreational diving and snorkelling. This manual includes the following typical dive and snorkel business undertakings:

1. Dive equipment hire and sales, including consumables such as breathing gases
2. The conduct of recreational diving and snorkelling, including diver training.

It is important that all parties, particularly clients, contractors and other third parties, are clearly informed of the nature of the undertaking between the parties, and any terms and conditions that may apply to the contract entered into. This is best done in writing and should occur before any contract is made and service delivered, for example by completing a statement of understanding and waiver as a part of the sales process; or by two dive companies entering into a service agreement.

In the event of a dispute, particularly one involving injury to a client, it is the client's perception of the business undertaking that may count most heavily. Therefore due care

must be taken not to offer a “part service” whereby some control measures are implemented but others are not.; unless the remaining control measures are provided by another dive and snorkelling business. (This may be considered both having your cake and eating it).

Example 1: Dive business A hires dive equipment to a client after undertaking the appropriate certification checks. The undertaking extends only to the appropriate performance of the dive equipment. However the client then asks for extensive advice revealing a lack of recent dive experience. The client is now requesting a new service. The dive business should either decline to provide this service, and possibly to hire the equipment to the diver; or enter into a contract with the client to provide a different service, being dive training or the conduct of a recreational dive under the control of the dive business.

Example 2: Dive business A takes a booking from a certified diver to undertake a boat dive. Dive business A assesses the competence of the diver and provides hire equipment. Dive business B operates the dive boat and conducts the diving, other than the assessment and equipment hire to the client. Both dive businesses have different undertakings to the client and a contractual relationship between themselves. Clear documentation between the businesses and for the client clarifies which business is responsible for the different control measures required for the safe conduct of the diving.

Example 3: Dive business A takes a booking from a certified diver to undertake a boat dive. Dive business A assesses the competence of the diver and provides hire equipment. The assessment shows the diver is inexperienced. The business tells the diver to undertake a “check out” dive at an adjacent beach site but provides no other control measures. The diver may reasonably assume that diving is being conducted and expect the control measures to be in place. The dive company should have conducted the “check out” dive as a conducted diving activity.

Further advice on managing a duty of care and limiting liability should be sought from:

- OHS authorities
- Insurance providers
- Dive training organisations
- Industry associations
- Professional advisors.

The AAS standards (Victoria) contain excellent introductory advice on these issues.

1.3 How to use this document

The recreational diving and snorkelling OHS Manual consists of the following sections:

- Risk assessment for recreational diving and snorkelling
- Duties and responsibilities
- Control measures for recreational diving
- Control measures for recreational snorkelling
- Plant and equipment
- Emergency procedures
- Appendices

The document is a template. It is not appropriate to adopt it for use in a business without a substantial review to ensure that it is appropriate.

Even the best operational manual is defective if it is not properly implemented. The manual must be capable of being understood by, and relevant to, all of those expected to implement it.

Any statement may be modified to suit the needs, language and scope of a business. However, the template has been written to comply with a number of standards. Care should be taken with modifications to ensure they do not make the final document non-compliant with a relevant standard.

Example: A dive business does not undertake mixed gas diving. It may therefore remove all references to mixed gas diving and remain compliant with the referenced standards. Another dive business decides to change a competency requirement for a particular duty. This may make the manual non-compliant if a referenced standard requires the particular competency for that duty.

When a section of the manual is changed, care must be taken to ensure all related sections are changed accordingly.

Example: A dive business decides it wants to create a new duty and responsibility for a person to assess divers in the shop but who is not the dive supervisor. It modifies the manual by creating a new duty and responsible statement for this person, detailing the competence required and the duties to be undertaken. The same duties and responsibilities may be removed from the dive supervisor's statement. It must then amend the control measure "recruitment and assessment of divers" and assign responsibility for undertaking some or all these duties to the new position. It may then also be necessary to change the documents in the appendices relevant to diver assessment.

Each section contains boxed "notes" and "examples" to assist businesses understand the intent of the section. These may be omitted or kept in the final document as needed.

The SMS includes documents, records and actions to be undertaken within a timeframe. Again this needs to be reviewed and modified to suit the needs of the business.

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The basic steps of the safety management system are:

- Review the OHS manual to ensure it is current and relevant to control all hazards associated with the business undertakings.
- Develop and implement systems to ensure all stated control measures are known to the relevant parties and are put into action.
- Monitor the operation of the business to ensure compliance with the stated control measures.
- Review the control measures to ensure they remain current and relevant for the workplace; and reflect current standards and knowledge of recreational diving hazards.

These steps form a part of a spiral of “continuous improvement”. The process is dynamic and ongoing. Each step needs both documents and people to make things happen.

Without a real commitment from the top end of a business (directors, owners, managers) to a “safety culture”, including both a time and budget commitment, there is little chance of a successful implementation.

Some of the documents required are those you need to read, such as resource materials; others will be those you will write, such as adapting the template manual to your own needs; and others will be those you complete, such as logs and training records. As most dive and snorkelling businesses are small, this documents aims to make this process as easy as possible by the provision of example documents in the appendices.

The people you need to involve are primarily our own staff. Along with management, they need to commit to the safety culture. They will have the best knowledge of the operation of your business, and what OHS issues it may have. Their support is crucial to successful implementation and change. Businesses that respect their staff, can properly induct new staff and can keep experienced staff are best placed to succeed.

Other people you need to involve include customers, whose attitudes and behaviours can impact drastically on your goals, and people outside your business who can assist, such as OHS professionals and recreational dive training organisations.

1.4 Definitions

Alternative ascent system

A highly visible buoyancy device that is, as a minimum, capable of supporting the weight of a submerged diver and an ascent line that the diver may follow to the surface and use to complete any decompression requirements.

Buoyancy compensating device (BCD)

A device worn by a diver which can be inflated or deflated to control buoyancy.

Business

A legal person (e.g. individual, partnership, company) conducting an undertaking.

Certified.

A certificate or other document of attainment of proficiency (e.g. a qualification) that has been awarded to an individual in relation to the activity or skill under consideration.

Certified diver

A person who has satisfactorily completed an entry level or higher course of training and has certification issued by a recreational diving training organisation.

Communications device

A radio or telephone able to make two way contact with emergency services without leaving the dive or snorkel site.

Competent person

A person who, through training, qualifications or experience, or a combination of these, has the skills necessary to perform the specified duty.

Confined water

A body of water offering swimming pool-like conditions with respect to clarity, calmness, current, depth and access to water shallow enough to stand up in.

Control measure

Measures that are implemented to control a risk. Normal control measures are those implemented whenever the activity is conducted. Additional control measures are implemented when determined through activity specific risk assessments.

Decompression system

An algorithm used to calculate decompression requirements, including any ascent rates and decompression stops. The algorithm is usually expressed in allowable depths, times, stops and ascent rates stated by dive tables, a dive computer, or proprietary software.

Decompression stop

The specific length of time, as determined by the decompression system being used, that a diver spends at a designated depth before being able to safely ascend further.

Dive/snorkel plan

The procedure and documentation by which the dive or snorkel business conducts a risk assessment and implements control measures for a particular diving or snorkelling activity.

Dive/snorkel site

The location where the business conducts diving or snorkelling.

Group

A group of divers or snorkellers in the water with the same objectives.

Dive computer

An electronic device which displays information calculated from a decompression model.

EANx

Enriched air nitrox. A mixture of oxygen and nitrogen where the volume of oxygen in the mixture is over 22%. Also called oxygen enriched air.

EANx rebreather

A rebreather designed for use with EANx.

Entry level certification.

The minimum level training required to become a certified diver.

Hazard

Anything with the potential to affect a person's health or safety.

MOD

Maximum operating depth

Mixed gas

A gas for breathing underwater that is not air or EANx.

Mixed gas rebreather

A rebreather designed for use with mixed gases other than EANx.

OHS

Occupational health and safety

Open water

A body of water which is subject to variable environmental conditions.

Plant.

Machinery, equipment, appliances, pressure vessels, implements, tools, personal protective equipment and any component, fitting, connection or accessory. Note: Local OHS legislation will define plant and impose specific requirements.

PPO2

Partial pressure of oxygen

Records

Permanent written or computer information.

Recreational diving or snorkelling

Diving or snorkelling conducted by a business as a part of their undertaking for persons undergoing training, persons being supervised, certified divers using any compressed gas, and associated workers.

Recreational diving training organisation or agency

An organisation engaged in the certification of divers and snorkellers through documented training procedures which comply in principle with the AS4005 series; or through units of competency under the National Outdoor Recreation Industry Training Package for diving and snorkelling delivered by a registered training organisation resulting in a statement of attainment being issued; or through another internationally recognised training series, where the standards of the training series comply with the control measures stated in this manual.

Redundant gas system

An additional gas storage and delivery system containing sufficient gas to allow the diver to return from the furthest point of the dive achievable on the current gas and ascend to a point where another gas supply is available.

Resort course

An introductory dive experience or educational program that does not result in a person becoming a certified diver. It shall be conducted in accordance with the standards of a recreational diving training organisation.

Risk

The likelihood and severity that harm from the hazard will affect a person.

Safety Stop

A delay in ascent by a diver similar to a decompression stop but where the stop is not mandated by the decompression system being used.

SCUBA

Self contained underwater breathing apparatus

SMS

A recreational diving and snorkelling occupational health and safety management system based on AS4801.

Trimix

An underwater breathing mixture of oxygen and two other inert gases.

Worker

A person who performs work for a business undertaking, whether the person is employed through a contract of service, a contract for service, as a trainee or volunteer.

1.5 Referenced documents

Note: It is highly recommended that copies of these reference documents are obtained and used as part of the initial and ongoing review of this manual and safety management system.

The standards referenced in the preparation of this document include:

Victorian OHS legislation

The Occupational Health and Safety Act (Victoria) 2004

Australian Standards

2030.1 The verification, filling inspection, testing, and maintenance of cylinders for the storage and transport of compressed gases. Part 1: Cylinders for compressed gases other than acetylene

2299.3 Occupational Diving Operations. Part 3 Recreational industry diving and snorkelling operations.

2473.2 Valves for Compressed Gas Cylinders. Part 2 Outlet connections (threaded) and stem (inlet) threads

3848.2 Filling of portable gas cylinders. Part 2 Filling of portable cylinders for SCUBA and SCBA- safe procedures

4005 Training and certification of recreational divers

4005.1 Part 1: Minimum entry-level SCUBA diving

4005.2 Part 2: Recreational SCUBA dive supervisor

4005.3 Part 3: Assistant SCUBA instructor

4005.4 Part 4: SCUBA instructor

4005.5 Part 5: SCUBA instructor trainer

4801 Occupational health and safety management systems- specifications and guidance for use

HB211 Occupational health and safety management systems- a guide to AS4801 for small business.

International Standards

ISO 12209 Gas cylinders- outlet connections for gas cylinder valves for compressed breathable air

12209.1 Part 1 Yoke type connections

12209.2 Part 2 Threaded connections

12209.3 Part 3 Adaptor for 230 bar valves

Outdoor Recreation Centre Inc. - Adventure Activity Standards

Snorkelling, SCUBA diving and wildlife swims

Dive Industry Victoria Association

Code of Practice for commercial providers of recreational snorkelling and SCUBA diving services in Victoria. June 2005

Part A: The Recreational Diving and Snorkelling Occupational Health and Safety Manual

2.1 Recreational diving and snorkelling occupational health and safety policy

Note: The document below is an example OHS policy. Implementing an OHS policy is discussed in SMS section 3.1.

“Business name” is committed to ensuring the health and safety of all persons affected by the conduct of its recreational diving and snorkelling business, including workers, volunteers, trainees and other clients.

“Business name” recognises that recreational diving and snorkelling are adventure activities taking place in an aquatic environment. This creates a number of significant risks to health and safety which can only be minimised and not prevented.

“Business name” undertakes to minimise these risks by having:

- Competent workers with designated duties and responsibilities; AND
- Procedures for the conduct of the activity stating control measures for:
 - Pre activity- planning, preparation and assessment
 - During the activity
 - Post activity
 - Supply of appropriate equipment
 - Emergency procedures; AND
- Ensuring these control measures are implemented and maintained; AND
- Ensuring these control measures are known to all relevant parties; AND
- Ensuring they are reviewed to ensure they remain relevant and appropriate to our recreational dive and snorkel business.

“Business name” commits to establishing measurable health and safety objectives and targets to ensure continued improvement aimed at the minimisation of recreational diving and snorkelling injury and illness associated with our business.

“Business name” recognises that that it is ultimately responsible for the health and safety outcomes arising from its business. In achieving this it commits to compliance with relevant OHS legislation; relevant recreational diving and snorkelling standards; and the standards and procedures of any affiliated recreational diver and snorkeller training organisations:

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(List relevant standards)

The Occupational Health and Safety Act (Victoria) 2004

Australian Standards

- 2030.1 The verification, filling inspection, testing, and maintenance of cylinders for the storage and transport of compressed gases. Part 1: Cylinders for compressed gases other than acetylene
- 2299.3 Occupational Diving Operations. Part 3 Recreational industry diving and snorkelling operations.
- 3848.2 Filling of portable gas cylinders. Part 2 Filling of portable cylinders for SCUBA and SCBA- safe procedures
- 4005 Training and certification of recreational divers
 - 4005.1 Part 1: Minimum entry-level SCUBA diving
 - 4005.2 Part 2: Recreational SCUBA dive supervisor
 - 4005.3 Part 3: Assistant SCUBA instructor
 - 4005.4 Part 4: SCUBA instructor
 - 4005.5 Part 5: SCUBA instructor trainer
- 4801 Occupational health and safety management systems- specifications and guidance for use.

Outdoor Recreation Centre Inc. - Adventure Activity Standards

Snorkelling, SCUBA diving and wildlife swims

Dive Industry Victoria Association

Code of Practice for commercial providers of recreational snorkelling and SCUBA diving services in Victoria. June 2005

Name of affiliated recreational diver and snorkeller training organisations.

Signed (Director/owner):

Position:

Date:

2.2 Risk assessment

This part deals with the principles and procedures to be followed whenever a risk assessment (the “assessment”) is to be undertaken.

It includes:

- Risk assessment principles
- Risk assessment for the normal conduct of recreational diving and snorkelling

2.2.1 Risk assessment principles

OHS Manager

Risk assessment plays an important role in ensuring OHS. It is a logical and systematic approach which aims to eliminate or reduce the incidence of injury or illness from activities, people or plant associated with the diving and snorkelling undertaking.

The five steps to undertaking a risk assessment are:

1. Identify the hazard
2. Assess the risk
3. Determine appropriate control measures
4. Implement the control measure
5. Monitor and review the control measures to ensure they are effective and relevant.

Identify the hazard

Specific hazards associated with the undertaking shall be recorded. Methods to assist in identifying hazards include:

- Consultation with workers
- Observations and inspections of the site using, for example, checklists
- Incident and near miss records
- Equipment manufacturer’s specifications, advice and instructions.
- Published incident data and reports (e.g. from DAN, Project Stickybeak, SPUMS Journal)
- Consultation with employer groups, training agencies and government bodies
- Specialist consultants
- Discussion with prospective clients.

Assess the risk

There are a variety of methodologies for assign the risk from a hazard for a particular activity or undertaking. The person assessing the risk should be competent in the selected methodology. The methodology shall consider:

- The nature of the hazard and associated risks.
- The severity of the risk with regard to injury or illness
- Who will be affected
- The duration and frequency of exposure to the risk
- The probability of the risk occurring.

For recreational diving and snorkelling, it is recommended that a simple risk rating tool of:

- **LOW:** injury requiring first aid, e.g. minor jellyfish sting,
- **MEDIUM:** Bodily harm, e.g. mild decompression illness
- **HIGH:** Serious bodily injury or death, e.g. drowning, severe decompression illness, severe trauma.

Control measures shall be implemented for all risks rated **MEDIUM** or **HIGH** and should be implemented as appropriate for risks rated **LOW**.

Determine appropriate control measures

Where a specific control measure is required by legislation or is stated in another standard being used as a reference, then this control measure shall be used.

Otherwise, decisions regarding control measures should be made with reference to the hierarchy of controls (in order of preference):

1. **Elimination:** The hazard can be removed or the activity not undertaken. E.g. diving is cancelled for an individual or group. This is an important option to consider if the risk cannot otherwise be minimised.
2. **Substitution:** The hazard can be substituted for one that presents a lower risk. E.g. An alternative snorkelling site is used with less environmental risk.
3. **Engineering controls:** The work process or environment is modified to place a barrier or interrupt a flow of energy between a person and a hazard. E.g. a propeller guard on an outboard motor.
4. **Administrative controls:** The hazard is reduced or eliminated by adherence to procedures or instructions. Because these controls rely on human actions, it requires high levels of competence, training, supervision and monitoring to ensure effective implementation.

Note: almost every aspect of dive planning falls into the administrative category.

5. **Personal protective equipment:** People are protected from the hazard by equipment worn as a barrier. E.g. a wetsuit to prevent cold. The success of the control measure is dependent on the selection, use and maintenance of the equipment.

For recreational diving and snorkelling, it is likely that a number of control measures, applied in conjunction will be needed to achieve the desired level of risk reduction. This particularly true when low level control measures, such as administrative controls and personal protective equipment, are selected.

Implement the control measures.

This manual and the SMS give a logical and systematic approach to implementation of control measures.

Care must be taken to ensure that one control measure does not create another hazard. If it does, additional control measures may be required. E.g. a dry suit is effective PPE to

manage cold. However the competency of the user must be reassessed to ensure they are able to use the dry suit without risk.

Monitor and review

Control measures shall be monitored to ensure that they remain in place. Again a reliance on administrative controls creates a larger monitoring burden to ensure these controls are implemented. The SMS give a logical and systematic approach to the monitoring of control measures.

Control measures shall be reviewed periodically to ensure:

- The remain relevant to the undertaking of the business
- They are effective in controlling the risks associated with the undertaking.
- They reflect changing standards and knowledge regarding relevant risks.
- The SMS give a logical and systematic approach to reviewing control measures.

2.2.2 Risk assessment for the normal conduct of recreational diving and snorkelling

The hazards of recreational diving are many, complex and often apply in combination. To begin a risk assessment for the normal conduct of recreational diving and snorkelling, it is useful to make certain categories to simplify the process. However, these categories are not intended to be restrictive or absolute.

Hazards

Diving and snorkelling taking place in a non respirable environment that places a range of physical, physiological and psychological stressors on a person that are not normally present during surface activities. Further the motivation to take part in the adventure of diving and snorkelling should include an understanding of the inherent risks associated with the activity and a conscious choice to accept those risks.

The following classes of hazard, with some examples listed below each heading, may be found whenever recreational diving and snorkelling are conducted:

<p>Participants</p> <ul style="list-style-type: none"> • Fitness • Health • Maturity • Competence • Qualifications • Experience • Psychological factors 	<p>Workers</p> <ul style="list-style-type: none"> • Competence • Numbers • Qualifications • Experience • Health and fitness
<p>Equipment</p> <ul style="list-style-type: none"> • Adequate for task • Good working condition • Properly used 	<p>Environment</p> <ul style="list-style-type: none"> • Breathing compressed gas underwater(risk of DCI, barotraumas)

<ul style="list-style-type: none"> • Uncontaminated 	<ul style="list-style-type: none"> • Sea conditions • Weather • Water temperature • Entry and egress • Marine creatures • Vessel hazards
--	--

One further category of hazard should be considered. This is the hazard caused the failure to have emergency procedures in place to effectively and efficiently manage any reasonable emergency that may occur. Planning for emergencies should be a control measure for all identified hazards.

Risks

The risk presented by each hazard may vary across a risk spectrum from LOW to HIGH. For example the hazard caused by a participant’s health may be classed MEDIUM- some difficulty equalising in aeroplanes; or HIGH- current cardiac disease.

Further the hazards associated with diving and snorkelling may work in combination. For example, the risk of decompression illness is a combination of environmental, equipment and individual hazard factors.

Control measures

The control measures detailed in this manual are normal control measures aimed to minimise risk in most normal diving and snorkelling activities. These shall be applied whenever the activities are conducted.

However when the risks vary outside of the normal operational parameters, additional control measures shall be implemented to control the additional risk.

If the risk cannot be adequately controlled, then hazard shall be eliminated by cancelling the activity.

Example: Diving is scheduled for site A. The dive group consists of both experienced and inexperienced divers. On arrival, an environmental assessment shows conditions are poorer than predicted for diving. The normal control measures are not adequate for the group to dive safely. Additional control measures, (in water supervision by a dive supervisor) are implemented for the experienced divers. Diving is cancelled for the inexperienced divers.

Figure one shows a diagrammatic representation of this model.

Note: The diagram is in colour in the original.

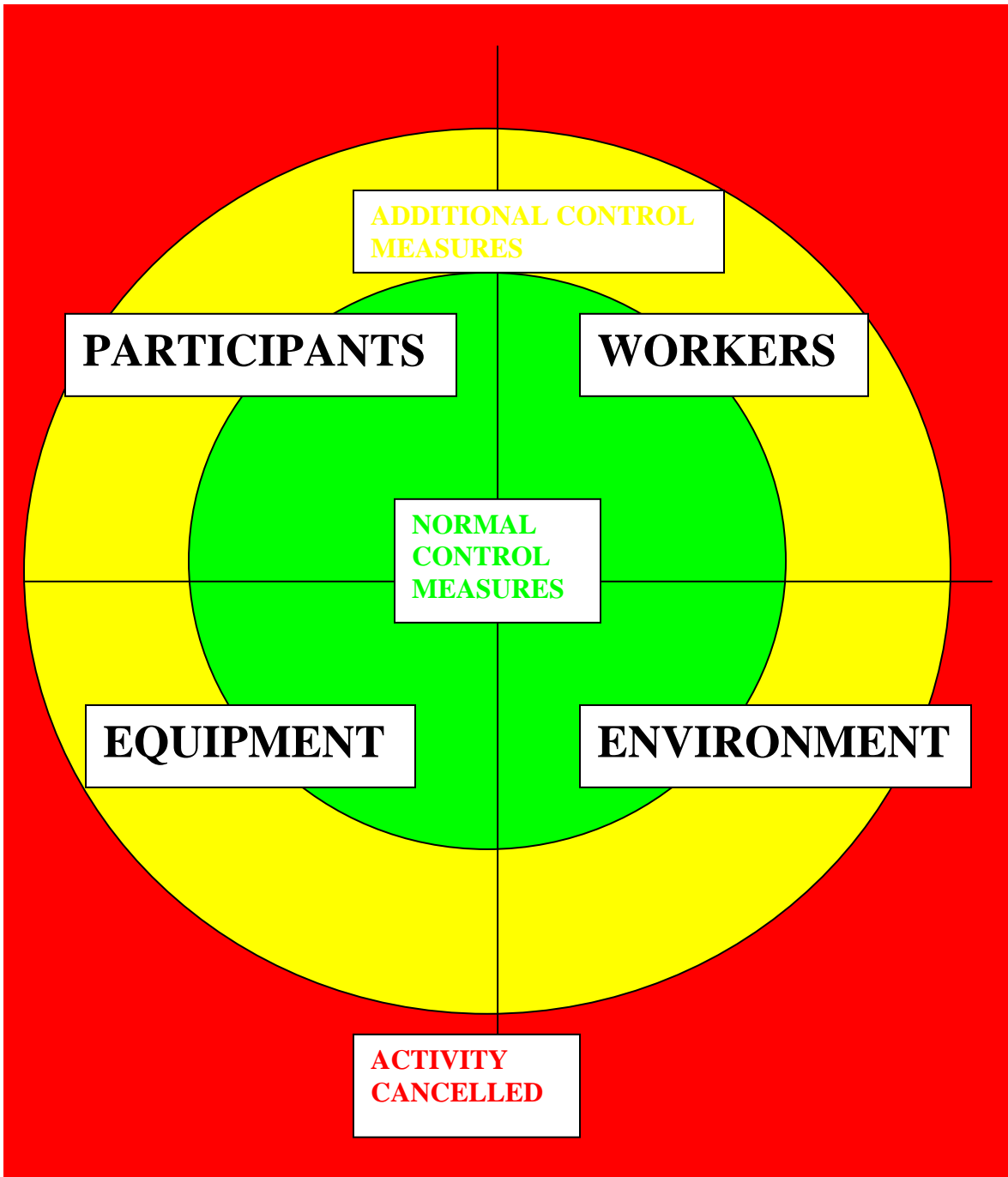


Figure 1: A diagrammatic representation of the simplified application of risk assessment principles for the normal conduct of recreational diving and snorkelling. Note: The diagram is in colour in the original.

The following risk assessment table indicates the hazards controlled by the normal control measures detailed in this manual. It should be noted that some normal control measures require further risk assessment to be undertaken:

- Diver and snorkeller assessments
- Environmental assessments
- General risk assessment

Normal Diving and Snorkelling Risk Assessment Table

Participant Hazards	Who	Risk (H/M/L)	Control measures (including emergency procedures)
Inadequate fitness and health for activity	A	H	O, C ,P ,R, Em(p), Em(e), Em(w), A, T, M, I,
Lack of maturity	A	M	O, C ,P ,R, Em(p), Em(e), Em(w), A, T, M, I,
Lack of competence for activity	A	H	O, C ,P ,R, En, E(a), E(c), E(p),Em(p), Em(e), Em(w), A, T, M, I,
Inadequate qualifications for specific activity	D	H	O, C ,P ,R, E(a), E(c), E(p),Em(p), Em(e), Em(w), A, T, M, I,
Inadequate experience for activity	A	H	O, C ,P ,R, En, E(a), E(c), E(p), Em(p), Em(e), Em(w), A, T, M, I,
Psychological factors- susceptible to panic	A	H	O, C ,P ,R, Em(p), Em(e), Em(w), A, T, M, I,
Inability to comprehend or follow instructions	A	H	O, C ,P ,R, Em(p), Em(e), Em(w), A, I,
Unsafe behaviour	A	H	O, C, G, A
Other			

Environmental Hazards	Who	Risk (H/M/L)	Control measures (including emergency procedures)
Breathing compressed gas underwater (DCI, barotrauma)	D	H	O, C ,P ,R, En, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), DCI, D, B, Ra, Pr, A, DSL, T, M, I,
Sea conditions	A	H	O, C ,P ,R, En, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), D, B, Ra, Pr, A, V, L, T, I,
Weather conditions	A	H	O, C ,P ,R, En, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), D, B, Ra, Pr, A, V, L, T, I,

Entry and egress	A	H	O, C, P, R, En, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), B, Pr, A, V, L, I,
Marine creatures	A	M	O, C, P, En, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), B, Pr, A, V, L, I,
Vessel hazards	A	H	O, C, P, R, En, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), B, Pr, A, V, L, I,
Ensuring persons are accounted for	A	H	O, C, P, En, G, E(a)Em(p), Em(e), Em(w), B, Pr, A, V, L, H, DSL,
Other			

Worker related Hazards	Who	Risk (H/M/L)	Control measures (including emergency procedures)
Lack of competence	D	H	O, C, P, Em(p), Em(e), Em(w), B, Ra, Pr, A, L, T, M, I,
Inadequate staffing levels	A	H	O, C, P, Em(p), Em(e), Em(w), B, Ra, Pr, A, L, T, M, I,
Inadequately qualified to undertake task	A	H	O, C, P, Em(p), Em(e), Em(w), B, Ra, Pr, A, L, T, M, I,
Inexperienced	A	H	O, C, P, Em(p), Em(e), Em(w), B, Ra, Pr, A, L, T, M, I,
Inadequate health and fitness	A	M	O, C, P, Em(p), Em(e), Em(w), M,
Inadequately equipped			O, C, P, En, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), B, Pr, A, V, L, I,
Other			

Plant and equipment related Hazards	Who	Risk (H/M/L)	Control measures (including emergency procedures)
Inadequate for task	A	H	O, C, P, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), DCI, D, A, T,
Not in good working condition	A	H	O, C, P, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), DCI, D, A, T,
Not properly used	A	H	O, C, P, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), DCI, D, A, T,
Contaminated	A	H	O, C, P, G, E(a), E(c), E(p), Em(p), Em(e), Em(w), DCI, D, A, T,

Other			

Key:

Who

A: All divers and snorkellers; D: Divers only;

Risk

H: High; M: Medium; L: Low.

Control Measures

O: Organisation, C: Competent workers, P: Planning and objective; R: Recruitment and assessment; En: Environmental assessment; G: General risk assessment; E(a) equipment (adequate); E(c): Equipment (condition); E(p): Equipment (properly used); Em(p): Emergencies (Procedures); Em(e): Emergencies(equipment); Em(w): Emergency (workers); DCI: Management of decompression illness; D: maximum depths; B: Buddies and groups; Ra: Ratios; Pr: Pre-dive checks; A: Advice and instruction; V: Vessel specific controls; L: Lookouts; H: Headcounts; DSL: Dive safety log; T: following training standards; M: Assessing medical fitness; I: in water supervision of trainees
 Note: All control measures referred to may be found in the relevant parts of this manual.

Monitor and Review

Section 3.5 of the SMS details the actions to be undertaken by the OHS Manager to monitor and review the risk assessment process to ensure it is relevant, current and adequate.

2.3 Duty and Responsibility Statements

Note: The following list of typical duty and responsibility statements aims to address all of the typical duties in a recreational dive or snorkelling business, specifically where the duties are in a referenced standard.

It is important that a person is responsible for ensuring all control measures in the OHS Manual and SMS are implemented.

A person may perform a number of duties, where they are competent and the performance of the duties is not incompatible. For example the dive supervisor may be the master of a vessel.

A business may decide to add, remove, combine or split duties and responsibilities.

Section 3.4 of the SMS details how workers are to be determined competent, with a clear understanding of their duties and responsibilities.

2.3.1 OHS Manager

A competent person to undertake the duties and responsibilities of the OHS Manager shall be appointed for the diving and snorkelling business by the owner or directors. The OHS Manager is responsible for planning, implementing, measuring and reviewing the SMS; and stated parts of the OHS manual. Specific duties may be delegated as required.

He/she reports to the business owner or director.

Competency:

The OHS Manager shall:

- Have significant experience, preferably with appropriate qualifications, in the risk assessment processes.
- Have a sound knowledge of OHS, and other relevant, legislation, and other standards that may be applied to a recreational diving and snorkelling business.
- Have a sound knowledge of safety management systems.
- Have significant experience in the conduct of recreational diving and snorkelling in the local environment.
- Have significant personal diving and snorkelling experience.

Duties and Responsibilities

The OHS Manager is responsible to ensure the implementation of the Safety Management System and control measures delegated to that position. (as detailed in this manual)

These shall include:

- To work as a team leader, supervise and consult with other workers

- To appoint dive and snorkel supervisors for each activity.
- To appoint instructors to undertake training
- To produce an annual OHS and SMS review and report, including an updated version of this manual.
- Review dive plans, checklists, diver and snorkeller assessments, waivers, statements of understanding and dive safety logs to ensure they are completed as required.
- Undertake induction training and assessment for all designated duties and responsibilities to ensure worker competence.
- Monitor certificates and qualifications of workers to ensure competency.
- Undertake competency reviews periodically for all workers.
- Ensure emergency drills are undertaken periodically
- Review incidents, undertake investigations and ensure notification occurs as required.
- Ensure documents are appropriately stored and privacy respected
- Undertake monitoring of the implementation of the control measures. Address failures in conformance.

2.3.2 Dive Supervisor

A competent person to undertake the duties and responsibilities of the dive supervisor shall be appointed for each diving operation by the OHS Manager. The dive supervisor is responsible for dive planning, assessments and the conduct of diving operations on site.

There may be other dive workers at a dive site, including other competent dive supervisors, who shall be under the direction of the appointed dive supervisor.

He/she reports to the OHS manager

Competency:

The supervisor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate in dive operations leadership from a recreational diving training agency; or is competent to lead diving operations under the National Outdoor Recreation Industry Training Package.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have significant experience diving at all designated sites and be able to assess changing marine hazards.
- Have significant personal diving experience and be able to assess diver competence.
- Be able to effectively provide information to and advise divers
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.
- Have the knowledge and skills to identify and respond to the signs and symptoms of diving injuries.

Duties and Responsibilities

The dive supervisor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- To work as a team leader, supervise and consult with other dive workers
- To assist other workers as required, including lookout, rescue and first aid
- Ensure prospective divers complete a waiver and statement of understanding.
- Assess the competence and fitness of prospective divers.
- Conduct a risk assessment for other hazards not otherwise identified.
- Complete a dive plan and checklist prior to diving commencing

- Appoint sufficient persons to be in-water supervisors, lookouts, rescuers and first aid providers.
- Ensure divers are appropriately equipped.
- Ensure equipment, plans and personnel are available for diving emergencies
- Ensure an environmental assessment is conducted for conditions at the dive site.
- Cancel or modify the conduct of diving where existing control measures mean it cannot be conducted safely for any individual or the whole group.
- Remain at the surface of the dive site to control the overall diving operation and ensure all control measures are implemented.
- Provide information and advice to divers, including ensuring all divers are given a pre-dive briefing.
- Ensure divers are arranged in buddy pairs whenever possible.
- Ensure in water supervision is provided when required.
- Ensure headcounts are conducted and a dive safety log is kept.
- Ensure all incidents and injuries are recorded and reported.
- Ensure all trip documentation is returned to the place of business.

2.3.3 Dive Instructor

A dive instructor is responsible for conducting all training of recreational divers on air.

He/she reports to the dive supervisor at the dive site and the OHS Manager at other times.

Competency:

The dive instructor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate as a dive instructor from a recreational diving training agency; or is competent to be a dive instructor under the National Outdoor Recreation Industry Training Package.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have significant experience diving at all designated sites and be able to assess changing marine hazards.
- Have significant personal diving experience and be able to assess diver competence.
- Be able to effectively instruct and train divers
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The dive instructor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- Ensuring all dive training is conducted in accordance with the standards and procedures of one of the following:
 - The current standards and procedures of a recreational diving training agency.
 - In compliance with relevant Australian Standards
 - AS4005 Training and certification of recreational divers
 - AS4005.1 Part 1: Minimum entry-level SCUBA diving
 - AS4005.2 Part 2: Recreational SCUBA dive supervisor
 - AS4005.3 Part 3: Assistant SCUBA instructor
 - AS4005.4 Part 4: SCUBA instructor
 - AS4005.5 Part 5: SCUBA instructor trainer; OR
 - Units of competency under the National Outdoor Recreation Industry Training Package for diving and snorkelling delivered by a registered training organisation resulting in a statement of attainment being issued.

- To work as a part of a team, supervise and consult with other dive workers
- To assist other workers as required, including lookout, rescue and first aid
- Ensure all documentation required for the training and certification process is completed and returned to the place of business.
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.4 Certified assistant

A certified assistant is responsible for assisting a dive instructor as required.

He/she reports to the dive instructor.

Competency:

The certified assistant shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate as a certified assistant from a recreational diving training agency; or is competent to be a certified assistant under the National Outdoor Recreation Industry Training Package.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The certified assistant is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- Providing assistance to the dive instructor in accordance with any training standards being used.
- Supervising divers under instruction to identify prevent or assist in addressing any problems that may occur, including diving emergencies.
- Communicating and consulting with the dive instructor.
- To work as a part of a team, supervise and consult with other dive workers
- To assist other workers as required, including lookout, rescue and first aid
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.5 In-Water Supervisor

An in water supervisor is responsible for supervising certified divers underwater during the conduct of diving operations.

He/she reports to the dive supervisor.

Competency:

The supervisor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate in dive operations leadership from a recreational diving training agency; or is competent to lead diving operations under the National Outdoor Recreation Industry Training Package.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have experience diving at all designated sites and be able to assess changing marine hazards.
- Have personal diving experience and be able to assess diver competence.
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.
- Have the knowledge and skills to identify and respond to the signs and symptoms of diving injuries, including dive accident management and field clinical assessment.

Duties and Responsibilities

The in water supervisor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- To be aware of the fitness, competence and experience of all divers being supervised.
- To supervise pre-dive equipment checks and buoyancy checks are undertaken by the divers being supervised.
- To maintain visual contact with diver's underwater, including during ascents and descents, and be positioned close enough to provide assistance if required.
- To ensure all buddy pairs are maintained throughout the dive.
- To ensure the group being supervised follows the dive plan.
- To terminate the dive for any diver shows behaviours or diving skills indicating the diver cannot complete the dive safely.
- To work as a part of a team and consult with other dive workers

- To assist other workers as required, including lookout, rescue and first aid
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury, behaviour of divers) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.6 EANx Dive Supervisor

The EANx dive supervisor is responsible for assisting EANx divers before and after the conduct of EANx diving operations on site.

A dive supervisor shall also be appointed and remain at the surface at the dive site. The EANx dive supervisor may dive at the site if they are not the dive supervisor.

He/she reports to the dive supervisor

Competency:

The EANx dive supervisor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate in dive operations leadership from a recreational diving training agency; or is competent to lead diving operations under the National Outdoor Recreation Industry Training Package.
- Be qualified as a EANx diver
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have experience diving at all designated sites and be able to assess changing marine hazards.
- Have personal diving experience and be able to assess diver competence.
- Be able to effectively provide information to and advise divers regarding the safe use of EANx
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.
- Have the knowledge and skills to identify and respond to the signs and symptoms of diving injuries.

Duties and Responsibilities

The EANx dive supervisor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- To work as a part of a team and consult with other dive workers
- To assist other workers as required, including lookout, rescue and first aid
- Ensure all EANx divers have analysed their gas mixture
- Ensure O2% and MOD are recorded on the dive safety log and a tag/decal on each cylinder.
- Ensure dives are planned using suitable decompression tables or computers.

- Ensure the pre-dive briefing covers risks and control measures specific to the use of EANx.
- To assist other workers as required, including lookout, rescue and first aid
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury, behaviour of divers) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.7 EANx Rebreather Dive Supervisor

The EANx rebreather dive supervisor is responsible for assisting EANx rebreather divers before and after the conduct of EANx rebreather diving operations on site.

A dive supervisor shall also be appointed and remain at the surface at the dive site. The EANx rebreather dive supervisor may dive at the site if they are not the dive supervisor.

He/she reports to the dive supervisor

Competency:

The EANx rebreather dive supervisor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate in dive operations leadership from a recreational diving training agency; or is competent to lead diving operations under the National Outdoor Recreation Industry Training Package.
- Be qualified as an EANx rebreather diver
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have experience diving at all designated sites and be able to assess changing marine hazards.
- Have personal diving experience and be able to assess diver competence.
- Be able to effectively provide information to and advise divers regarding the safe use of an EANx rebreather.
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.
- Have the knowledge and skills to identify and respond to the signs and symptoms of diving injuries.

Duties and Responsibilities

The rebreather EANx dive supervisor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- To work as a part of a team and consult with other dive workers
- Ensure all EANx rebreather divers have analysed their gas mixture
- Ensure O₂% and MOD are recorded on the dive safety log and a tag/decal on each cylinder.
- Ensure dives are planned using suitable decompression tables or computers, with due regard to any MOD.

- Ensure the pre dive briefing covers risks and controls specific to the use of EANx rebreather.
- To ensure each diver has assembled, checked and tested their rebreather prior to entering the water.
- To assist other workers as required, including lookout, rescue and first aid
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury, behaviour of divers) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.8 EANx Dive Instructor

An EANx dive instructor is responsible for conducting all training of EANx divers on SCUBA.

He/she reports to the dive supervisor at the dive site and the OHS Manager at other times.

Competency:

The EANx dive instructor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate as a dive instructor from a recreational diving training agency; or is competent to be a dive instructor under the National Outdoor Recreation Industry Training Package.
- Hold a current certificate as an EANx dive instructor from a recreational diving training agency.
- Have instructed and certified a minimum of 25 entry level or higher level divers.
- Be qualified as an EANx diver.
- Have completed 20 EANx dives
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have significant experience diving at all designated sites and be able to assess changing marine hazards.
- Have significant personal diving experience and be able to assess diver competence.
- Be able to effectively instruct and train EANx divers
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The EANx dive instructor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- Ensuring all dive training is conducted in accordance with the standards and procedures of one of the following:
 - The current standards and procedures of a recreational diving training agency;
OR
 - Units of competency under the National Outdoor Recreation Industry Training Package for diving and snorkelling delivered by a registered training organisation resulting in a statement of attainment being issued.
- To work as a part of a team, supervise and consult with other dive workers

- To assist other workers as required, including lookout, rescue and first aid
- Ensure all documentation required for the training and certification process is completed and returned to the place of business.
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.9 EANx Rebreather Instructor

An EANx rebreather instructor is responsible for conducting all training of EANx rebreather divers.

He/she reports to the dive supervisor at the dive site and the OHS Manager at other times.

Note: Competencies in the use and instruction of rebreathers are model specific and shall comply with any manufacturer's instructions.

Competency:

The EANx rebreather instructor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate as a dive instructor from a recreational diving training agency; or is competent to be a dive instructor under the National Outdoor Recreation Industry Training Package.
- Hold a current certificate as an EANx rebreather dive instructor from a recreational diving training agency for the model being used.
- Have instructed and certified a minimum of 25 entry level or higher level divers.
- Be qualified as an EANx rebreather diver.
- Have completed 20 dives using a rebreather.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have significant experience diving at all designated sites and be able to assess changing marine hazards.
- Have significant personal diving experience and be able to assess diver competence.
- Be able to effectively instruct and train EANx rebreather divers
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The EANx rebreather instructor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- Ensuring all dive training is conducted in accordance with the standards and procedures of one of the following:
 - The current standards and procedures of a recreational diving training agency;OR

- Units of competency under the National Outdoor Recreation Industry Training Package for diving and snorkelling delivered by a registered training organisation resulting in a statement of attainment being issued; AND
- Any instructions from the manufacturer for the rebreather model being used.
- To work as a part of a team, supervise and consult with other dive workers
- To assist other workers as required, including lookout, rescue and first aid
- Ensure all documentation required for the training and certification process is completed and returned to the place of business.
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.10 Mixed Gas Dive Instructor

A mixed gas dive instructor is responsible for conducting all training of mixed gas divers on SCUBA.

He/she reports to the dive supervisor at the dive site and the OHS Manager at other times.

Competency:

The mixed gas dive instructor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate as a dive instructor from a recreational diving training agency; or be competent to be a dive instructor under the National Outdoor Recreation Industry Training Package.
- Hold a current certificate as a mixed gas dive instructor from a recreational diving training agency.
- Hold a current certificate as a decompression diving instructor from a recreational diving training agency.
- Have instructed and certified a minimum of 25 EANx divers.
- Be qualified as a mixed gas diver.
- Have completed 15 mixed gas dives
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have significant experience diving at all designated sites and be able to assess changing marine hazards.
- Have significant personal diving experience and be able to assess diver competence.
- Be able to effectively instruct and train mixed gas divers
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The mixed dive instructor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- Ensuring all dive training is conducted in accordance with the standards and procedures of one of the following:
 - The current standards and procedures of a recreational diving training agency;
 - OR

- Units of competency under the National Outdoor Recreation Industry Training Package for mixed gas diving delivered by a registered training organisation resulting in a statement of attainment being issued.
- Ensure mixed gas trainee divers are appropriately equipped
- Ensure mixed gas trainee divers have analysed their gas mixture
- Ensure O₂%, N₂%, He%, MOD and minimum operating depths are recorded on the dive safety log and a tag/decal on each cylinder as required.
- Ensure dives are planned using suitable decompression tables or computers, with due regard to any MOD and minimum operating depths.
- Ensure the pre-dive briefing covers risks and controls specific to the use of mixed gas.
- To ensure each diver has assembled, checked and tested their mixed gas equipment prior to entering the water.
- To work as a part of a team, supervise and consult with other dive workers
- To assist other workers as required, including lookout, rescue and first aid
- Ensure all documentation required for the training and certification process is completed and returned to the place of business.
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.11 Mixed Gas Rebreather Instructor

A mixed gas rebreather instructor is responsible for conducting all training of mixed gas rebreather divers.

He/she reports to the dive supervisor at the dive site and the OHS Manager at other times.

Competencies in the use and instruction of rebreathers are model specific and shall comply with any manufacturer's instructions.

Competency:

The mixed gas rebreather instructor shall:

- Be at least 18 years old.
- Hold a current certificate of medical fitness to dive issued by a medical practitioner with training in diving medicine. The certificate shall state that it has been issued in accordance with the medical examination and assessment criteria in AS/NZS2299.1.
- Hold a current certificate as a mixed gas dive instructor from a recreational diving training agency.
- Hold a current certificate as a mixed gas rebreather dive instructor from a recreational diving training agency for the model being used.
- Have instructed and certified a minimum of 25 entry level or higher level divers.
- Have completed 50 dives using a mixed gas rebreather and 20 dives using the model being used for instruction.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have significant experience diving at all designated sites and be able to assess changing marine hazards.
- Have significant personal diving experience and be able to assess diver competence.
- Be able to effectively instruct and train mixed gas rebreather divers
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The mixed gas rebreather instructor is responsible to ensure the implementation of control

measures delegated to that position. (as detailed in this manual)

These shall include:

- Ensuring all dive training is conducted in accordance with the standards and procedures of one of the following:
 - The current standards and procedures of a recreational diving training agency;OR

- Units of competency under the National Outdoor Recreation Industry Training Package for diving and snorkelling delivered by a registered training organisation resulting in a statement of attainment being issued; AND
- Any instructions from the manufacturer for the model being used.
- Ensure mixed gas rebreather trainee divers are appropriately equipped
- Ensure mixed gas rebreather trainee divers have analysed their gas mixture
- Ensure O2%, N2%, He%, MOD and minimum operating depths are recorded on the dive safety log and a tag/decal on each cylinder as required.
- Ensure dives are planned using suitable decompression tables or computers, with due regard to any MOD and minimum operating depths.
- Ensure the pre dive briefing covers risks and controls specific to the use of mixed gas rebreathers.
- To ensure each diver has assembled, checked and tested their mixed gas rebreather prior to entering the water.
- To work as a part of a team, supervise and consult with other dive workers
- To assist other workers as required, including lookout, rescue and first aid
- Ensure all documentation required for the training and certification process is completed and returned to the place of business.
- To request assistance if needed
- Recognise and report relevant hazards (e.g. changing conditions, symptoms of diving injury) to the dive supervisor
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)

2.3.12 Snorkelling Supervisor

The snorkelling supervisor is responsible for snorkel planning, assessments and the conduct of snorkelling operations on site.

He/she reports to the OHS manager

Competency:

The snorkelling supervisor shall:

- Be at least 18 years old.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have significant experience snorkelling at all designated sites and be able to assess changing marine hazards.
- Have significant personal snorkelling experience and be able to assess snorkeller competence.
- Be able to effectively instruct and advise snorkellers.

Examples of this include current snorkel instructor certification from a recreational diving training agency; or competency to deliver training under the National Outdoor Recreation Industry Training Package for snorkelling.

- Be qualified to rescue a snorkeller

Examples of this include a rescue certificate from a recreational diving training agency; or a statement of attainment under the National Outdoor Recreation Industry Training Package for snorkel rescue; or a relevant rescue certificate from an aquatic safety organisation.

- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The snorkelling supervisor is responsible to ensure the implementation of control measures delegated to that position. (as detailed in this manual)

These shall include:

- To work as a team leader, supervise and consult with other snorkelling workers
- To assist other workers as required, including lookout, rescue and first aid
- Ensure prospective snorkellers complete a waiver and statement of understanding.
- Assess the competence and fitness of prospective snorkellers
- Complete a snorkel plan and checklist prior to snorkelling commencing
- Appoint sufficient persons to be guides, lookouts, rescuers and first aid personnel.
- Ensure snorkellers are appropriately equipped.
- Ensure equipment plans and personnel are available for snorkelling emergencies
- Conduct an assessment of environmental conditions at the snorkelling site.
- Cancel or modify the conduct of snorkelling where existing control measures mean it cannot be conducted safely.

- Remain at the snorkelling site to control the overall snorkelling operation and ensure all control measures are implemented.
- Instruct, train and advise snorkellers, including ensuring all snorkellers are given a pre snorkel briefing.
- Enter the water to instruct, guide and supervise from that position if required.
- Ensure snorkellers are arranged in buddy pairs.
- Arrange appropriately sized guided groups as required
- Ensure a headcount is conducted
- Ensure all incidents and injuries are recorded and reported.
- Ensure all trip documentation is returned to the place of business.

2.3.13 Snorkel Guide

The snorkel guide is responsible for providing in-water supervision to snorkellers in the water.

He/she reports to the snorkelling supervisor

Competency:

The snorkel guide shall:

- Be at least 18 years old.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have experience snorkelling at all designated sites.
- Have significant personal snorkelling experience.
- Be able to instruct and advise snorkellers.

Examples of this include current snorkel instructor certification from a recreational diving training agency; or competency to deliver training under the National Outdoor Recreation Industry Training Package for snorkelling; or in house training to provide snorkel instruction.

- Be qualified to rescue a snorkeller

Examples of this include a rescue certificate from a recreational diving training agency; or a statement of attainment under the National Outdoor Recreation Industry Training Package for snorkel rescue; or a relevant rescue certificate from an aquatic safety organisation.

- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The snorkel guide is responsible to ensure the implementation of relevant control measures (as detailed in this manual)

These shall include:

- To work as a team and consult with other snorkelling workers
- To assist other workers as required, including rescue and first aid
- Ensure the guide: snorkeller ratio shall not exceed 1:10.
- Ensure, where there are multiple groups or snorkellers at a site, the snorkelling shall be arranged to minimise the chance of groups becoming disorganised.
- Ensure each guided group has a distinct beginning and end so that snorkellers know when they are under the supervision of the guide.
- Take a flotation device as a rest station for snorkellers
- Conduct headcounts during the guided part of the snorkel
- Ensure guided groups are recorded on each snorkeller's assessment document
- To request assistance if needed

- Recognise and report relevant hazards (e.g. changing conditions) to the snorkelling supervisor
- To identify persons in distress
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)
- Provide higher levels of supervision to person's assessed by the snorkelling supervisor as being of concern

2.3.14 Lookout

The lookout is responsible for scanning the site whenever snorkellers and divers are in the water, monitoring the location of divers and snorkellers, identifying divers and snorkellers in distress, initiating a rescue, and monitoring environmental conditions.

He/she reports to the dive/snorkelling supervisor

Competency:

The lookout shall:

- Be at least 18 years old.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have experience diving or snorkelling at all designated sites and be aware of environmental conditions at the site.
- Have had training in being a lookout and the supervision of persons in water

Examples of this include a rescue certificate from a recreational diving training agency; or a relevant statement of attainment under the National Outdoor Recreation Industry Training Package; or a relevant certificate from an aquatic safety organisation; or documented in house training programs.

Duties and Responsibilities

The lookout is responsible to ensure the implementation of relevant control measures (as detailed in this manual)

These shall include:

- To work as a team and consult with other workers
- To assist other workers as required, including rescue and first aid
- To be positioned where they can see the entire site.
- To request assistance if needed
- To be solely engaged in being the lookout whenever persons are in the water (unless engaged in an emergency response).
- The lookout shall wear distinctive brightly coloured clothing and be equipped with binoculars, polarised sun glasses and communications equipment so that effective communications can be made with the dive/snorkelling supervisor and persons in the water.
- Recognise and report relevant hazards (e.g. changing environmental conditions) to the dive/snorkelling supervisor.
- To identify persons in distress
- To act as rescuer and first aid provider if required (see separate duty and responsibility statements)
- Scan the area effectively and efficiently to observe all snorkellers and divers
- Alert divers and snorkellers moving outside the designated site.

- Provide higher levels of supervision to persons assessed by the dive/snorkelling supervisor as being of concern.

2.3.15 Rescuer

A Rescuer is responsible for undertaking a rescue of a diver or snorkeller.

He/she reports to the dive/ snorkelling supervisor

Competency:

A rescuer shall:

- Be at least 18 years old.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Be qualified to rescue a diver or snorkeller

For surface rescues of divers or snorkellers, examples include a rescue certificate from a recreational diving training agency; or a relevant statement of attainment under the National Outdoor Recreation Industry Training Package; or a relevant rescue certificate from an aquatic safety organisation. Underwater rescues shall only be undertaken by persons holding a certificate in diving operations leadership from a recreational diving training agency.

- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

The rescuer is responsible to ensure the implementation of relevant control measures (as detailed in this manual)

These shall include

- To work as a team and consult with other snorkelling and diving workers
- To assist other workers as required including first aid
- Undertake rescues as required, without placing themselves or others at risk.
- Be equipped and dressed so as to be ready to undertake a rescue quickly.
- To request assistance if needed.

2.3.16 First aid provider

A first aid provider is responsible for providing first aid to a diver or snorkeller.

He/she reports to the dive/snorkelling supervisor

Competency:

A first aid provider shall:

- Be at least 18 years old.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.
- Have the knowledge and skills to identify and respond to the signs and symptoms of diving injuries, including dive accident management and field clinical assessment.

Duties and Responsibilities

A first aid provider is responsible to ensure the implementation of relevant control measures (as detailed in this manual)

These shall include

- To work as a team and consult with other snorkelling and diving workers
- To assist other workers as required including rescue
- Provide first aid as required.
- Check first aid and oxygen equipment daily to ensure it is complete, operational and adequate for the day's activities.
- To request assistance if needed

2.3.17 Vessel Master

A vessel master is responsible for assisting the dive/snorkelling supervisor safely plan and conduct diving and snorkelling with regard to the operation of any vessel used for the conduct of the activity.

He/she reports to the OHS Manager

Competency:

A vessel master shall:

- Be currently qualified in accordance with all relevant marine safety requirements, including any legislative requirements.
- Be at least 18 years old.
- Maintain a level of fitness so that they are able to undertake their duties without risk to their own or other person's health and safety.
- Have significant experience of all designated sites and be able to assess changing marine hazards.
- Hold current certificate(s) to give first aid, including CPR and administer oxygen to a breathing and non breathing person.

Duties and Responsibilities

A vessel master is responsible to ensure the implementation of relevant control measures (as detailed in this manual)

These shall include

- To ensure the vessel is seaworthy, and operated in accordance with all relevant marine safety requirements, including any legislative requirements.
- To work with and consult with other workers
- To assist other workers as required, including lookout, missing persons, rescue, evacuations and first aid
- Monitor environmental conditions at the site and advise the dive or snorkelling supervisor of changing conditions.
- Ensure there is safe entry and egress from the vessel for divers and snorkellers
- Cancel or modify the conduct of snorkelling where existing control measures mean it cannot be conducted safely.
- Ensure a headcount is conducted prior to any departure from a site
- Ensure all incidents and injuries are recorded and reported as required.
- Ensure all trip documentation is returned to the place of business.

2.3.18 Equipment Supervisor

The sale, hire, servicing and use of plant and equipment shall be coordinated by an equipment supervisor.

He/she reports to the OHS manager

Competency:

The equipment supervisor shall be:

- At least 18 years old.
- Competent to undertake their nominated duties. This should combine both significant experience in the assembly, installation, inspection, testing, operation, repair and maintenance of the relevant dive plant and equipment; and relevant certification or qualifications.

Examples of this may include relevant trade certificates, certificates issued by dive equipment manufacturers or suppliers; or other relevant training and certification through a dive training organisation.

Duties and Responsibilities

An equipment supervisor may undertake the following duties or direct another competent person to undertake these duties as required:

These shall include:

- To work as a team leader, supervise and consult with other workers
- To nominate, train, assess and make records to show other workers are competent to undertake their nominated duties with regard to dive equipment and plant.
 - Hire of equipment
 - Sale of equipment
 - Supply of equipment for conducted activities
 - Assembly, inspection repair and maintenance of equipment
 - Supply of compressed air
 - Supply of other compressed gases for breathing.
- Keep current copies of all manufacturer's specifications and instructions and relevant Australian Standards for all plant and equipment hired sold, supplied or operated.
- Ensure all records are kept as indicated, including running logs, inspection, maintenance and testing records.
- Ensure equipment hired and supplied to divers is suitable, in good condition and complete.
- Ensuring gas filling systems are suitably designed, installed, inspected maintained and operated.
- Ensure emergency plans are in place and training given for emergencies associated with cylinder filling.

2.4 Conduct of Recreational Diving

This part deals with the procedures to be followed for the conduct of recreational diving by a business. It includes normal control measures for all diving and additional specific control measures for:

- Certified diving
- Resort diving
- Entry level certificate training
- Other training courses
- EANx diving on SCUBA
- EANx diving using rebreathers
- Mixed gas diving on SCUBA
- Mixed gas diving using rebreathers
- Decompression stop diving

2.4.1 All Diving

Organisation

OHS Manager

All diving will be coordinated by a dive supervisor appointed by the OHS manager for the specific diving activity. Sufficient other persons will be made available to the dive supervisor to undertake the activity. Care must be taken to ensure that the performance of differing duties and responsibilities is not incompatible. The dive plan will assist in determining an appropriate staffing level.

The dive supervisor will remain on the surface on the dive site to control the overall diving operation.

The dive supervisor will nominate one or more competent person(s) to undertake the duties of:

- Lookout
- Rescuer
- First aid provider

If required for a specific diving activity, the dive supervisor will also nominate competent person(s) to undertake the duties of:

- Dive instructors
- Certified assistant
- In water supervisor
- EANx dive supervisor
- EANx rebreather dive supervisor
- EANx dive instructor
- EANx rebreather dive instructor
- Mixed gas dive instructor

- Mixed gas rebreather dive instructor

Note: All dive workers shall advise the OHS Manager of any medical conditions which may affect their ability to safely undertake their duties e.g. back injury, cold, under the influence of alcohol or drugs. Workers shall not undertake diving work if they are not fit to do so.

Should the dive supervisor be required to leave the surface of the dive site, another person shall be nominated by the OHS manager to be dive supervisor during this time.

Dive planning and preparation

Dive supervisor

The dive supervisor shall complete a dive plan and checklist prior to diving commencing.

Note: The purpose of the plan is to ensure that the dive activity is appropriate to the fitness and competence of the participants, the equipment, the number and competence of the supervising workers and the environmental conditions at the dive site. It is based on using risk assessment principles. The plan and checklist are to ensure normal control measures are followed and any additional control measures are identified and implemented.

It is recommended that dive businesses develop standard dive plans and checklists for specific sites and tasks. An example dive plan and checklist is contained in Appendix A

The dive supervisor shall ensure the plan is developed in consultation with other workers and, where possible, is approved by the OHS manager.

The dive plan shall remain at the dive site.

In developing and implementing dive plan, the dive supervisor shall incorporate the following normal control measures:

Recruitment and diver assessment

All prospective divers shall be required to read, acknowledge and sign a public liability release waiver and statement of understanding.

The waiver and statement of understanding form should clearly state the terms and conditions of the contract being entered into by the parties. Therefore this should be done as early in the contractual process as possible, preferably before any payment is made. It is important that all prospective divers are given adequate opportunity to properly read the document, have it explained as necessary and any questions answered. A parent or guardian must read and sign for minors. An example waiver and statement of understanding is attached in Appendix B

Prospective divers will be assessed to determine their competence and fitness prior to diving. The assessment process will vary (see relevant sub sections) depending on the objectives of the diving activity to be undertaken. The process follows risk assessment

principles. The process shall be documented and the assessment form available at the dive site. An example assessment form is attached in Appendix C. The assessment forms shall to be reviewed by the dive supervisor as a part of the dive plan.

Note: The assessment process is subjective and relies on the knowledge and experience of the assessor. Dive businesses may state specific measures of competence to assist dive supervisors in making consistent assessments.

Example. A dive business decides that divers unable to produce valid certification shall not dive. Another dive business decides that an assessment dive to review basic diving skills is required for all divers who have not dived in the last 12 months. Another dive business determines specific levels of certification and experience for particular dive sites.

All diver assessments shall include the diver's:

- Dive training and experience
- experience in similar environmental conditions
- medical and physical fitness to undertake diving

The dive supervisor will review each assessment and determine whether:

- There are specific risks concerning the person and diving cannot be safely conducted for the person; or
- There are specific risks concerning the person and additional control measures are required for the person to dive safely; or
- Diving can be safely undertaken using normal control measures.

Examples of specific risks about a person may include:

1. Age (Minors or older persons)
2. Low levels of training
3. Lack of dive experience (amount and recency)
4. Lack of experience in similar environmental conditions
5. Poor fitness or health problems relevant to diving

Examples of additional control measures may include:

1. In water supervision
2. Reduced ratios
3. Going to a site with improved environmental conditions
4. Seeking and following medical advice.
5. Supervised orientation dives in local conditions
6. Supervised skill assessment or retraining dives

The dive supervisor will record details of any specific risks which will require additional control measures for that person on the dive plan. The dive supervisor will advise all relevant workers of any specific risks about a diver and any additional control measures required.

If the assessment is done prior to the diver travelling to the dive site, the person undertaking the assessment must ensure the dive supervisor at the dive site is advised in writing of any specific risks and control measures determined during the assessment.

Example. A dive shop books a certificated diver onto a dive. The dive shop undertakes an assessment of the dive and decides the diver needs an area orientation dive. This information is recorded and passed on to the dive supervisor at the dive site.

It may assist in planning dives if the assessment is done as soon as possible so that diving can be planned to allow for the control measures to be implemented.

On site the dive supervisor or other workers may observe behavioural indicators that may affect the diver's assessment, e.g. seasickness, nervousness, peer pressure, equipment difficulties, poor dive skills. Other workers shall bring these matters to the attention of the dive supervisor who shall determine whether the control measures being implemented are adequate for the diver. Any changes in the assessment of the diver and additional control measures shall be recorded on the dive plan.

Example: The dive supervisor assesses a diver with some, but limited dive training and experience. The dive supervisor decides initially that the normal control measures are adequate for the diver to dive safely. However on site, the diver appears nervous and has difficulty assembling their equipment. The dive supervisor implements additional control measures, e.g. in water supervision, undertaking an assessment dive, or cancelling the dive, and records this on the dive plan.

Divers are to be assessed individually. It is not acceptable to rely on a buddy's experience to provide in water supervision where the assessment shows concerns with a diver's competence; unless the buddy is competent to provide in water supervision (qualified to the level of dive supervisor and with local environmental experience) and acknowledges this duty.

Environmental assessments

The dive supervisor shall select dive sites based on the diver assessments, any diver training being undertaken and the environmental conditions at the dive site. The selected site and dive plan must allow for the least experienced diver, including trainees, to dive safely.

The dive supervisor shall record the relevant environmental conditions on the dive plan. These should be predicted before departing to the dive site using appropriate local resources e.g. tide tables, weather reports. On site and prior to each dive, the dive supervisor shall review the environmental conditions at the time and determine whether the normal control measures being implemented are adequate for all divers. Any changes in conditions and additional control measures shall be recorded on the plan.

Example: The dive supervisor assesses a diver with some, but limited local diving experience. The predicted environmental conditions are good. The dive supervisor decides initially that the normal control measures are adequate for the diver to dive safely. However on site, the conditions are worse than predicted. The dive supervisor implements additional control measures, e.g. changing the site, in water supervision, cancelling the dive; and records this on the dive plan.

Note: Environmental conditions are a major hazard variable. Dive site selection and ongoing review of environmental conditions are crucial steps in being able to safely implement a dive plan. The dive supervisor shall have a clear understanding of the what environmental conditions shall lead to diving being cancelled for one or more divers, including for the whole dive group,.

General risk assessment

The dive supervisor shall identify other hazards affecting the conduct of the dive not otherwise addressed by the control measures and assessments in this manual. The risks caused by these hazards shall be assessed to determine who is affected and the severity of the risk. These shall be rated low, medium or high.

Control measures shall then be recorded on the dive plan and the measures implemented. Specific controls may be added to checklists on the dive plan if required. Control measures may also include emergency plans and procedures.

All relevant workers shall be consulted to identify hazards and suggest control measures.

In deciding on control measures, where these are not addressed by a legislative or other standard, the hierarchy of controls shall be used; with control measures selected using the following order:

- Elimination: - e.g. cancel diving
- Substitution: - e.g. change sites
- Design: - e.g. outboard propeller guards
- Isolation: - individual person restricted from specific activity
- Administrative controls: - e.g. training, staffing levels
- Personal protective equipment: - e.g. steel capped boots when carrying cylinders

After diving, the dive supervisor shall review the control measures implemented and determine:

- Were they properly implemented?
- Were they effective in controlling the risks?
- How can they be improved?

Entry and egress routes shall be assessed to ensure they are safe. The diver's equipment, the assessment of diver, the objectives of the dive, the environmental assessment and emergency plans shall all be considered with regard to entry and egress.

Note: The general risk assessment provides an opportunity to identify hazards specifically related to the diving activity or less directly associated with it. Specialised types of diving activity, such as cave diving, wreck penetration or competitive free diving require extensive risk assessments relevant to the activity.

To assist the dive supervisor, it may be useful to provide a list of possible hazard categories. However any list should not be restrictive and all workers should be encouraged to identify specific hazards.

Possible hazard categories may include:

Diving related hazards:

- Specialised diving tasks or equipment
- Other marine users, including shipping movements
- Pollution
- Isolation
- Water pressure differentials- e.g. inlets, outfalls
- Entanglements

Associated hazards

- Slips trips and falls
- Falling objects
- Lifting and twisting
- Winches, anchors, moorings and lines

Objectives of the dive

The objectives for each dive or group of divers shall be recorded on the dive plan. This shall include the key safety parameters of the dive which in turn shall form part of the pre-dive briefing.

Equipment for diving

The equipment used for diving shall be prepared in accordance with section 2.7. The dive supervisor shall provide advice and assistance to divers regarding their equipment, during assembly, buddy checks and post dive. No diver shall be allowed to undertake a dive if their equipment is not:

- Complete
- Working properly
- Checked

Emergencies

Diving emergencies shall be prepared for in accordance with section 2.6. The roles or rescuer and first aid provider will be designated to competent person(s). Emergency equipment shall be checked daily prior to diving.

Management of decompression illness (DCI)

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All dives shall be planned conservatively and consistently to one set of recognised dive tables approved by a recreational diving training organisation; or any dive computer used in accordance with the manufacturer's instructions; or proprietary dive planning software

All dives shall be completed with a safety stop where it is safe and practical to do so.

All divers shall be advised to follow the current recommended practice as set out by DAN in regard to flying after diving and altitude exposure; OR follow the advice contained on their dive tables, dive computer or dive planning software.

The decompression system(s) being used should be recorded on the dive plan and checklist.

Maximum depths

Dives shall be planned to depths less than 40m unless the diver holds verifiable training experience or both adequate for deeper diving or is under instruction for diving to deeper depths.

Dive workers shall not dive to depths deeper than 50m or deeper than any limitations on their medical certificate.

Note: Certain recreational diving training agencies teach courses or supervise divers on air to depths over 50m. Dives to these depths should only be conducted strictly in accordance with these standards. Section 2.4.11, decompression stop diving gives further advice relevant to this type of dive.

On site diving operations

Dive supervisor

Whilst at the dive site, the dive supervisor shall ensure:

- That he/she works as a team leader. He/she shall supervise and consult with other workers.
- The dive plan, checklist and dive safety log are completed.
- Control measures as stated in this manual and any additional control measures are implemented.

Buddies and diving groups

All divers shall be arranged in buddy pairs following the assessment of their competency. Whenever possible, threesome or other buddy arrangements should be avoided. If a threesome or other group size is permitted, the divers must be instructed clearly that they are to dive together without any separation unless all divers return to the entry point, leave one (ensuring their safety), and the remainder undertake another dive as a buddy pair.

Solo diving shall only be undertaken by those with appropriate training and equipment.

Pre dive checks

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All divers shall undertake a buddy check prior to every dive. The check shall include: The location and function of buoyancy control devices, weight systems, other equipment releases, gas supply and reserves; and a review of the dive objectives.

Prior to each dive series when a diver is using changed equipment (e.g. hire equipment, new wet or dry suits) or is diving in changed buoyancy conditions (e.g. fresh/salt water), the diver shall undertake a buoyancy check. The check shall take place in full diving equipment (mask on, regulator in) in either standing depth or whilst holding a secure line. The diver shall achieve neutral buoyancy on the surface with buoyancy devices deflated. The diver shall be supervised whilst undertaking this check

Instruction and advice

Prior to diving, all divers shall be given instruction and advice to allow them to safely dive in accordance with the procedures stated in this manual. A checklist with topics that shall be covered is contained in Appendix D.

Note: The advice to be given to divers is extensive. A verbal briefing covering each topic in one session is likely to be long and may not be closely followed by all divers. Techniques that should be employed to give advice should break up how the topics are delivered over time and by using different media, such as written materials, pictures, diagrams.

Immediately prior to each dive, divers shall be given a pre-dive briefing stating the objectives of the dive and key safety advice. Preferably a map or diagram of the dive site should be used. Topics that shall be covered are listed in appendix D. The objectives stated during this briefing shall be recorded on the dive plan.

Note: The pre-dive briefing is a chance to state dive objectives and important safety information. Other more general instruction and advice should be given prior to this.

Prior to giving any advice, the dive supervisor shall assess if any diver cannot adequately comprehend English to safely undertake the dive.

Divers who cannot adequately comprehend English should be:

- Given instruction and advice by a person who can effectively translate English to their language; OR
- Given written advice and instruction in their language: AND
- Assessed as having understood the instruction and advice.

Note: Failure to be able to properly communicate can seriously affect diver safety. Extreme caution must be taken with all non English speakers. If there is any doubt regarding their understanding, a dive supervisor or dive instructor should accompany the diver on one or more dives to determine they have understood the instruction and advice. ANY DOUBTS+ in water supervision.

Diving from vessels

Dive Supervisor

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Note: These are additional controls when diving from a vessel. All other control measures stated in this manual apply to diving from other places e.g. shore diving.
All relevant marine safety requirements, including all legislative requirements, must be met for all vessels.

The dive supervisor shall consult with the vessel master to ensure risks affecting both diving safety and vessel safety are controlled. e.g. weather, sea conditions and vessel traffic. Both parties may terminate or modify a dive plan to ensure safety if required.

A headcount of **all** persons on board shall be performed prior to a vessel leaving for a dive site and recorded on the dive plan. This is an additional accounting system to the dive safety log and applies only to diving from vessels.

The headcount shall be repeated prior to any departure from a dive site and compared with the initial count to ensure they agree. These counts shall be recorded on the dive plan. The preferred method of counting is to actively involve the people being counted e.g. a roll call, or signature sheet.

Entry and egress routes on vessels shall be checked. Particular consideration should be given to:

- Crush and guillotine points where steps and ladders are not properly secured.
- The movement of steps and ladders with regard to the vessel's movement.
- Repair and maintenance of steps and ladders, including non-slip surfaces.
- Entrapment and crush risks during mooring or anchoring

Where possible and appropriate, lines should be deployed to assist divers. These may include:

- Trail lines behind a vessel
- Tag lines from vessel entry point to the dive site
- Ascent/descent lines
- Lazy shots or decompression stop bars (a decompression or safety stop position should be fitted with an alternate air supply)

A suitable diver retrieval system shall be made.

Note: A suitable retrieval system is one that allows for an unconscious diver on the surface to be taken from a position on the surface to a position where effective CPR can be administered within 2-3 minutes. Ideally this will be a powered tender vessel kept in a ready condition to undertake an immediate rescue. Suitable vessels are typically inflatable style vessels equipped with an adequate outboard engine and fitted with a propeller guard. It should be of sufficient size and layout to accommodate an unconscious diver and two rescuers. The main vessel may be the rescue vessel where it is suitable and capable of doing so. Particular attention should be given to the equipment and procedures

needed to lift an unconscious diver from the water onto the vessel, preferably in a horizontal position. See section 2.6 for more details on emergency plans and training.

Wherever it is legal to do so, an adequately sized and displayed dive flag (Code A), or appropriate night lights, shall be displayed where diving is taking place.

Note: These provisions must comply with local maritime safety requirements. These signals are of limited value if they are not readily visible to marine traffic and are not displayed in the immediate vicinity (30m radius) of the divers.

Lookouts

A lookout is on duty whenever persons are in the water. The lookout shall be positioned where they can see the entire site. More than one lookout may be required. This shall be determined by the dive supervisor. The lookout shall be solely engaged in being the lookout (unless engaged in an emergency response).

Note: the lookout may be the dive supervisor where the duties do not conflict. For example, on a small vessel where a single dive group is diving, the dive supervisor briefs and assists divers at the site. When the first diving commences, the dive supervisor assumes the role of lookout. They remain in this role, excepting emergencies, until the last diver returns. They may then resume the role of dive supervisor, assist divers and complete the dive safety log. However conflict of these roles may occur during larger or more complex diving activities.

Dive Safety Log

A dive safety log shall be kept for all diving undertaken. All information on the dive safety log shall be recorded as soon as possible and the log shall be monitored to identify unsafe diving practice or missing diver situations as they may occur. The dive safety log for a particular dive shall be completed prior to a vessel leaving that site.

Each diver must sign the dive safety log after their dive to verify their return. Once all required information is recorded on the dive safety log, the dive supervisor and vessel master (if any) shall sign the log to indicate that it is complete.

The log shall contain the following information about each dive undertaken:

- Date
- Location and any vessel used
- Dive supervisor
- Name of diver
- Buddy and or dive group (clear symbols or other notations may be used to identify buddies)
- Assessment outcome (If the diver's assessment has shown any specific risks requiring additional control measure, a clear symbol or other notation shall be made on the dive safety log to indicate this)
- Cylinder pressure in

- Time in
- Time out
- Max depth
- Dive time or bottom time (as determined by decompression system used)
- Cylinder pressure out
- Repetitive dive information if using tables (e.g. repetitive group, surface interval and repetitive factor)
- Signature of each diver on completion of a dive
- Signature of dive supervisor and vessel master to show dive safety log is complete.

Appendix E shows an example dive safety log.

Post diving

The headcount must be completed and recorded on the dive plan before leaving any site.

The dive safety log shall be completed and signed as required. The document shall be reviewed to determine if the diver is at risk from decompression illness or shows other unsafe dive practices e.g. surfacing low on air.

Note: If the diver is at risk, diving should cease for that person and an incident record completed. Diving may resume for that person following a reassessment and additional control measures to manage the risk, e.g. an extended surface interval without any indications of symptoms of DCI. This may include diver's whose behaviour places them at risk. For example a diver follows an unsafe dive profile or is unable to return with a safe gas reserve. Diving should cease for these people unless a reassessment leads to additional control measures to manage the risk, e.g. in water supervision.

Any incidents or injuries shall be recorded and reported in accordance with Appendix F.

Note: The dive supervisor should remain alert for unreported matters, such as hypothermia or the signs or symptoms of decompression illness

All diving equipment shall be accounted for, inspected for damage, cleaned, sanitised and stored in preparation for its next use.

The control measures used for the diving shall be reviewed and any comments or recommendations recorded on the dive plan.

All dive workers shall maintain a record of their diving in a suitable log book. Other divers should be advised to keep this record to assist future assessments of their diving experience.

Relevant documents shall be checked for completion and returned to the business for review and storage. The following shall be kept:

- Diver assessments
- Waiver and statement of understanding forms for each diver
- Dive plan and checklist
- Dive safety log
- Any incident reports

Additional control measures for specific diving activities

2.4.2 Certified diving

Organisation

Dive Supervisor

When additional control measures are required for a certified diver, such as in water supervision, an orientation dive, or a skills assessment dive; the dive supervisor shall ensure that the worker undertaking these dives is competent as either an in-water dive supervisor or a dive instructor.

Recruitment and diver assessment

Dive supervisor

During the diver assessment for a certified diver, the dive supervisor shall sight proof of certification and experience e.g. certification cards, log books or other means. The assessment of competence will be affected by:

- Level of certification
- Recency of certification
- Relevance of certification to dives being undertaken. E.g. wreck diver speciality
- Number of dives
- Recency of dives (how many in last 12 months)
- Relevance of dive experience (number and recency of dives relevant to dives being undertaken) e.g. how many recent dives in similar environmental conditions

Note: accepting a diver as a certified diver without any proof of certification and experience should only be undertaken with extreme caution. In water supervision should be provided until the diver has demonstrated their knowledge and skills sufficient for unsupervised diving to be undertaken

The assessment shall also consider the diver's medical fitness to dive. If there are doubts as to the diver's medical fitness, medical advice should be sought and followed or in water supervision provided. Some medical risk factors may be observed in addition to any declaration made by a diver, e.g. obesity, smoking, age.

Note: Inexperience, unfamiliarity with environmental conditions and a lack of medical fitness are major risk factors for certified divers. Identifying at risk divers and controlling these risks is a major factor in ensuring the diver's safety.

2.4.3 Dive Training- General Training standards

OHS Manager

All dive training shall be conducted in accordance with the standards and procedures of one of the following:

- The current standards and procedures of a recreational diving training agency;
AND
- In compliance with relevant Australian Standards:
AS4005 Training and certification of recreational divers
AS4005.1 Part 1: Minimum entry-level SCUBA diving
AS4005.2 Part 2: Recreational SCUBA dive supervisor
AS4005.3 Part 3: Assistant SCUBA instructor
AS4005.4 Part 4: SCUBA instructor
AS4005.5 Part 5: SCUBA instructor trainer; OR
- Units of competency under the National Outdoor Recreation Industry Training Package for diving and snorkelling delivered by a registered training organisation resulting in a statement of attainment being issued.

Note: Adherence to one of these training standards is minimum standard. Where there are variations between these standards on particular issues e.g. medical assessments, minimum ages; adopting the safest standard may assist in demonstrating best practice and a duty of care.

Note: “In accordance with the training standards and procedures” includes all record keeping and registration requirements associated with the standard

Organisation

OHS Manager

All dive training shall be undertaken by a current dive instructor. Specific additional competencies may be specified by the training standard used.

Recruitment and diver assessment

Dive Instructor

Medical fitness assessment to undertake dive training courses should comply with the standards and procedures of the selected training standards.

For example, an open water course standard may not require a prospective diver to be examined by a medical practitioner trained in diving medicine. However the relevant Australian Standard, AS4005.1, states that the diver shall be assessed by a suitable medical practitioner. A dive business achieves compliance with both the training agency standard and the Australian Standard by following the latter.

DCI prevention

OHS Manager

Dive instructors shall not be required to run dive courses involving emergency ascent training for more than one class (as set out in AS4005.1) of students in any 24 hour period. This will assist in avoiding the risk of a dive instructor developing decompression illness as a result of excessive numbers of ascents.

Dive instructors and in water supervisors should be allowed adequate surface intervals and rest days to reduce their risk of DCI.

Maximum depths

Dive Instructor

Maximum depths for dive training courses should comply with the standards and procedures of the selected training standard, where this is stated.

Buddies, groups and ratios

Dive Instructor

All groups of student shall be arranged in buddy pairs. Where there is an odd number of divers, the remaining diver should be buddied with the dive instructor.

Supervision of each group of students for open water parts of all dive training courses should comply with the standards and procedures of the selected training standard, where this is stated. Where the dive instructor provides in water supervision, this should as a minimum, comply with the following:

- The dive instructor shall have close personal supervision of all students at all times during the dive, so that they are able to render immediate physical assistance if required.
- Particular consideration should be given to training that may result in separation including ascent training, compass swims and tours.

Unless a lower maximum ratio is stated by a training standard, the maximum ratios for recreational divers in training shall not exceed:

Instructor: certified assistant: student

1:0:8

1:1:10

1:2:12

Note: all ratios stated above are maximums. These shall be reduced according to the degree of risk associated with the dive site, the training being undertaken and the competence of the dive students. For example, poor visibility, currents, poor surface conditions, deep diver training, or young age of a student may all increase the risk to a diver which may be controlled, in part, by reducing the group size. The dive planning process, specifically the dive objectives, the diver assessment and the environmental assessment, will assist dive supervisors and dive instructors identify when ratios should be reduced and to what extent. This shall be recorded on the dive plan.

2.4.4 Resort diving

Recruitment and diver assessment

Dive Instructor

The student shall complete a medical declaration (see appendix AD). If the student indicates a medical condition the Dive Instructor shall assess whether the person may dive using appropriate medical advice. Any advice given shall be recorded on the medical declaration.

Environmental assessment

Dive Supervisor

The environmental assessment undertaken should have due regard to the high degree of risk caused by the lack of competence of resort divers. Stress from current, rough surface

conditions, and separation in poor visibility have been factors in resort dive incidents. Resort dives should only take place in good conditions. If the assessment shows that environmental conditions are good, but less than ideal, then additional control measures suitable for resort diving may include reducing ratios to 2:1 or 1:1 and holding hands throughout the dive.

Maximum depths

Dive Instructor

The maximum depth shall not exceed 12m.

Buddies, groups and ratios

Dive Instructor

Supervision of each group of resort divers should comply with the standards and procedures of the selected training standard, where this is stated. A dive instructor shall provide in water supervision that, as a minimum, shall comply with the following:

- The dive instructor shall have close personal supervision of all resort divers at all times during the dive, so that they are able to render immediate physical assistance if required.
- Resort divers shall be arranged either directly to each side of the instructor or in a close arc behind the instructor with the instructor facing the students and swimming backwards.
- Indian file shall not be used except when a certified assistant is behind the last resort diver and the whole group can be seen by the instructor.
- Wherever possible, divers should hold hands or link arms whilst swimming
- The instructor shall stop regularly to allow divers to catch up.
- The group should not travel far from surface support.
- Certified assistants should be used whenever possible.

Maximum student ratios per instructor: certified assistant: student

1:0:4- initial dive

1:1:6- initial dive

1:0:6 – subsequent dives within 30 days of initial dives

Note: All ratios stated above are maximums. These shall be reduced according to the degree of risk associated with the dive. Dive supervisors and dive instructors all have the duty to identify when ratios should be reduced and to what extent. This shall be recorded on the dive plan.

Instruction and advice

Dive Instructor

Instruction shall be given strictly in accordance with the documented procedures of a dive training organisation. Instruction on the surface shall include:

- Equalisation techniques
- Hand signals
- Emergency ascent procedures, including exhaling on ascent and maintaining buoyancy on the surface.

The following skills shall be taught, as a minimum, in water:

- Mask clearing
- Regulator removal and replacement

2.4.5 Entry level certificate training

Recruitment and diver assessment

Dive Instructor

The person shall be assessed as fit to dive in accordance with the fitness criteria found in AS4005.1. The assessment shall be made by a doctor with experience in diving medicine. This standard states that the minimum age for dive training is 14 years old, although students aged 12 or older may be permitted with the consent of the parent/guardian and examining doctor.

Maximum Depths

Dive Instructor

The maximum depth shall not exceed 18m.

2.4.6 Other training courses

Recruitment and diver assessment

Dive Instructor

Trainees shall be medically fit to dive. Where this is not specified in the selected training standard, the persons should be certified as fit to dive in accordance with the fitness criteria found in AS4005.1.

For dive supervisor and dive instructor training, the person shall hold a certificate of medical fitness to dive within the last 12 months, issued in accordance with the medical criteria of AS/NZS2299.1 and issued by a medical practitioner with training in underwater medicine.

2.4.7 EANx diving on SCUBA

Organisation

OHS Manager

An EANx dive supervisor will be appointed by the OHS manager. The role of the EANx dive supervisor is to provide advice and instruction, pre and post dive, to divers using EANx on SCUBA.

If it is not incompatible with other assigned duties, the EANx dive supervisor may dive at the site. E.g. The EANx dive supervisor cannot dive if they are also the (air) dive supervisor.

Training in the use of EANx shall be undertaken by a competent EANx diving instructor.

Recruitment and assessment

EANx Dive Instructor

Trainees shall be medically fit to dive. Where this is not specified in the selected training standard, the persons should be certified as fit to dive in accordance with the fitness criteria found in AS4005.1.

Before a trainee undertakes a course in recreational SCUBA diving using EANx, the trainee shall:

- Be a certified recreational SCUBA diver.
- Have a minimum of 20 logged SCUBA dives

Prior to issuing a certificate, the trainee shall have completed a course in EANx diving and completed two open water training dives using EANx.

Only certified EANx divers will be allowed to dive using EANx unless they are undergoing training or are on an EANx resort dive accompanied by an EANx dive instructor.

Equipment

EANx Dive Supervisor

The equipment used for diving shall be prepared in accordance with section 2.7. Before using a breathing mixture, the diver shall conduct an analysis to verify the oxygen content of the gas. The result shall be recorded on the dive safety log and on the cylinder.

Decompression management

EANx Dive Supervisor

Supervisor

Only tables specifically designed for EANx, EANx dive computers, or air tables and computers using equivalent air depths, shall be used for an EANx dive.

Maximum depths

EANx Dive Supervisor

The maximum operating depth (MOD) of a dive shall be based on the partial pressure of oxygen (ppO₂) for the EANx mixture being used, and not exceed a ppO₂ of 1.6 bar and generally should not exceed 1.4 bar.

Oxygen partial pressure exposure times shall not be exceeded.

Instruction and advice

EANx Dive Supervisor

The EANx dive supervisor shall ensure, in addition to the advice given to all divers, that the divers are advised of:

- The maximum operating depths for the gas mixture.
- Loss of breathing gas procedures.

Dive safety logs

EANx Dive Supervisor

The dive safety log for EANx diving shall also record:

- Oxygen content of the breathing gas used.
- Maximum operating depth

2.4.8 EANx diving using rebreathers

Note: Competencies and training for rebreathers are model specific. The manufacturer's specifications and instructions shall be followed in addition to these listed control measures.

Organisation

OHS Manager

An EANx rebreather dive supervisor (or an EANx dive supervisor if the former is not available) shall be appointed by the OHS manager. The role of these dive supervisors is to provide advice, pre and post dive, to divers using EANx rebreathers.

If it is not incompatible with other assigned duties role, the EANx rebreather dive supervisor may dive at the site. E.g. The EANx rebreather dive supervisor cannot dive if they are also the (air) dive supervisor.

Training in the use of EANx rebreathers shall be undertaken by a competent EANx rebreather instructor.

Only certified EANx rebreather divers shall be allowed to dive using EANx rebreathers unless they are undergoing training accompanied by an EANx dive instructor. EANx rebreathers shall not be used for resort dives.

Recruitment and assessment

EANx Rebreather Instructor

Trainees shall be medically fit to dive. Where this is not specified in the selected training standard, the persons should be certified as fit to dive in accordance with the fitness criteria found in AS4005.1.

Before a trainee undertakes a course to use an EANx rebreather, the trainee shall:

- Be a certified EANx diver.
- Have a minimum of 5 logged EANx dives

Prior to issuing a certificate, the trainee shall have completed a course in EANx rebreather diving, have completed at least one confined water session and four open water training dives using the rebreather

Equipment

EANx rebreather dive supervisor

The equipment used for diving shall be prepared in accordance with section 2.7. Before using a breathing mixture, the diver shall conduct an analysis to verify the oxygen content of the gas. The result shall be recorded on the dive safety log and on the cylinder.

When an EANx dive supervisor is assigned the duties of an EANx rebreather dive supervisor, prior to each dive they shall use the checklist in Appendix G to ensure the EANx rebreather diver has undertaken appropriate equipment checks. An EANx rebreather dive supervisor should use the same checklist.

DCI management

EANx rebreather dive supervisor

Only tables specifically designed for EANx, EANx dive computers, or air tables and computers using equivalent air depths, shall be used for a dive.

Maximum depths

EANx rebreather dive supervisor

The maximum operating depth (MOD) of a dive shall be based on the partial pressure of oxygen (ppO₂) for the EANx mixture being used, and not exceed a ppO₂ of 1.6 bar and generally should not exceed 1.4 bar.

Oxygen partial pressure exposure times shall not be exceeded

Instruction and advice

EANx rebreather dive supervisor

The EANx rebreather dive supervisor shall ensure, in addition to the advice given to all divers, that the EANx rebreather divers are advised of:

- The maximum operating depths for the gas mixture
- Loss of breathing gas procedures
- To follow the manufacturers requirements and recommendations in respect to pre-dive checks, emergency procedures, carbon dioxide scrubber procedures for the model being used.

Dive safety logs

EANx rebreather dive supervisor

The dive safety log for EANx rebreather diving shall also record:

- Oxygen content of the breathing gas used.
- Maximum operating depth

2.4.9 Mixed gas diving on SCUBA

Organisation

OHS Manager

A dive supervisor shall be present on the surface at the dive site.

Only certified mixed gas SCUBA divers will be allowed to dive using mixed gas on SCUBA, unless they are undergoing training accompanied by a mixed gas dive instructor. Mixed gas shall not be used for resort dives.

Training in mixed gas on SCUBA shall be undertaken by a competent mixed gas diving instructor

Recruitment and diver assessment

Mixed gas dive instructor

Trainees shall be medically fit to dive. Where this is not specified in the selected training standard, the persons should be certified as fit to dive in accordance with the fitness criteria found in AS4005.1.

Before a trainee undertakes a course to use mixed gas on SCUBA, the trainee shall:

- Be a certified EANx diver.
- Be a certified decompression diver
- Have a minimum 150 logged dives of which 50 were at a depth greater than 30m
- Have completed a minimum of 10 logged decompression dives within the last 12 months.
- Have completed a minimum of 30 dives using EANx.

Equipment

Dive supervisor

The equipment used for diving shall be prepared in accordance with section 2.7. Before using a breathing mixture, the diver shall conduct an analysis to verify the oxygen content of the gas(es). The result(s) shall be recorded on the dive safety log and on the cylinder.

DCI management

Dive supervisor

Only tables specifically designed for mixed gases or mixed gas dive computers, shall be used for a dive.

Maximum and minimum depths

Dive supervisor

The maximum depth (MOD) of a dive shall not exceed the depth where the partial pressure of oxygen (ppO₂) for the mixed gas being used, does not exceed a ppO₂ of 1.4 bar whilst diving and 1.6 bar during a decompression stop. Nitrogen in the mixture being breathed shall not exceed a partial pressure of 4.0 bar.

The minimum depth of a dive shall not exceed the depth where oxygen in the mixture currently being breathed is less than a ppO₂ of 0.16 bar.

Oxygen partial pressure exposure times shall not be exceeded

Instruction and advice

Dive supervisor

The supervisor shall ensure, in addition to the advice given to all divers, that the divers review:

- The maximum and minimum operating depths for the gas mixture
- Gas change over depths
- The sequence and role of each diver
- Gas turn around pressures
- Run times
- Omitted decompression procedures
- Loss of breathing gas procedures
- Buddy separation procedures
- Loss of ascent path procedures
- The need to undertake buddy checks, including in water checks for leaks, regulator location, valve location and correct operation.

Dive safety logs

Dive supervisor

The dive safety log for mixed gas diving shall also record:

- The content of each gas used in each mix.
- Maximum operating depth
- Minimum operating depth of the bottom mix

2.4.10 Mixed gas diving using rebreathers

Organisation

OHS Manager

Only certified mixed gas rebreather divers will be allowed to dive using mixed gas rebreathers, unless they are undergoing training accompanied by a mixed gas rebreather instructor. Mixed gas rebreathers shall not be used for resort dives.

Training on mixed gas rebreathers shall be undertaken by a competent mixed gas rebreather diving instructor. Both the training and the instructor's qualifications shall be specific to the model being used.

Organisation

OHS Manager

A dive supervisor qualified in decompression stop diving shall be appointed and remain on the surface at the dive site whenever decompression stop diving takes place.

The dive supervisor shall:

- Ensure a person on the surface is competent to use all emergency equipment
- Be fully aware of each dive plan.
- Ensure the vessel master remains on duty where diving takes place from a boat.

Recruitment and diver assessment

Dive supervisor

Divers undertaking decompression stop diving on gases other than air shall hold certification stating that they are competent to undertake the dive.

Divers undertaking decompression stop diving on air to depths <40m shall have either:

- Successfully completed a course in decompression stop diving; or
- Logged 10 decompression stop dives under the supervision of a dive supervisor or dive instructor competent in decompression stop diving on air; or
- Be under the supervision of a dive supervisor or dive instructor competent in decompression stop diving on air.

Divers undertaking decompression stop diving on air to depths >40m shall have either:

- Successfully completed a course in decompression stop diving; or
- Be under instruction by an appropriately qualified dive instructor competent in decompression stop diving on air to depths >40m.

Dive planning and preparation

Dive supervisor

The dive supervisor shall ensure the dive plan assesses any specific risks associated with the planned decompression stop diving. This shall include:

- The maximum numbers of divers in the water at any time
- The environmental conditions relevant to undertaking decompression stops.
- The location and nature of the dive site
- Competence of the divers

The dive supervisor shall ensure the following preparations are made:

- Oxygen therapy and resuscitation equipment shall be assembled and be immediately available at the dive site.
- Emergency breathing gas (drop tanks) shall be positioned for use at each decompression stop.
- An ascent line or other device to control and monitor ascent and descent is deployed.

Each dive team shall provide a written copy of their dive plan to the dive supervisor. The plan shall include gas consumption calculations.

Note: For overhead environments, at least 33% of the total gas requirement shall be calculated to be in reserve at the end of the dive. For other decompression stop dives, at least 25% of the total gas requirement shall be calculated to be in reserve at the end of the dive.

Equipment

Dive supervisor

The equipment used for diving shall be prepared in accordance with section 2.7.

Maximum and minimum depths

Dive supervisor

The maximum depth (MOD) of a dive shall not exceed the depth where the partial pressure of oxygen (ppO₂) for the gas being used does not exceed a ppO₂ of 1.6 bar and generally should not exceed 1.4 bar.

Nitrogen in the mixture being breathed does not exceed a partial pressure of 5.0 bar for air diving.

2.5 Conduct of Recreational Snorkelling

This part deals with the procedures to be followed for the conduct of recreational snorkelling by a business or undertaking. It includes:

- snorkelling conducted for a group, including novice participants
- breath hold diving.
- snorkel training.

Organisation

OHS Manager

All snorkelling will be coordinated by a snorkelling supervisor appointed by the OHS manager for the specific snorkelling activity. Sufficient other persons will be made available to the snorkelling supervisor to undertake the necessary duties. The snorkel plan will assist in determining an appropriate staffing level.

The snorkelling supervisor will nominate one or more person(s), where the performance of the roles is not incompatible, to undertake the roles of:

- Lookout
- Rescuer
- First aid provider
- Snorkel guide (if required)

Note: All snorkel workers shall advise the OHS Manager of any medical conditions which may affect their ability to safely undertake their duties e.g. back injury, cold, under the influence of alcohol or drugs. Workers shall not undertake snorkelling work if they are not fit to do so.

Should the snorkelling supervisor be required to leave the site, another person shall be nominated by the OHS manager to be snorkelling supervisor during this time.

Snorkel planning

Snorkelling Supervisor

The snorkelling supervisor shall complete a snorkel plan and checklist prior to diving commencing.

Note: The purpose of the plan is to ensure that the snorkel activity is appropriate to the fitness and competence of the participants, the equipment, the number and competence of the supervising workers and the environmental conditions at the snorkel site. It is based on using risk assessment principles. The snorkelling plan and checklist are to ensure normal control measures are followed and any additional control measures are identified and implemented.

It is recommended that snorkel businesses develop standard snorkel plans and checklists for specific sites and tasks. An example snorkel plan and checklist is contained in appendix H.

The snorkel supervisor shall ensure the plan is developed in consultation with other workers and, where possible, is approved by the OHS manager.

In developing and implementing snorkel plan, the snorkelling supervisor shall incorporate the following normal control measures:

Recruitment and assessment

All prospective snorkellers will be required to read, acknowledge and sign a waiver and statement of understanding.

Note: This forms an important statement of the terms and conditions of the contract being entered into by the parties. Therefore this should be done as early in the contractual process as possible, preferably before any payment is made. It is important that all prospective snorkellers are given adequate opportunity to properly read the document, have it explained as necessary and any questions answered. A parent or guardian must read and sign for minors. An example waiver and statement of understanding is attached in appendix B.

Prospective snorkellers will be assessed to determine their competence and fitness prior to diving. The process follows risk assessment principles. The process shall be documented and the assessment form available at the dive site to be reviewed by the snorkelling supervisor.

Note: The assessment process is subjective and relies on the knowledge and experience of the assessor. Snorkelling businesses may agree on specific measures of competence to assist snorkelling supervisors if required.
Example. A snorkel business decides that snorkellers with certain medical conditions shall not snorkel. A snorkel business decides that a snorkeller with limited snorkelling experience must wear a personal flotation device.

An example snorkeller assessment is contained in Appendix I.

The assessment shall include the person's:

- snorkelling and swimming experience
- experience in similar environmental conditions
- medical and physical fitness to undertake snorkelling

The snorkelling supervisor will review each assessment and determine whether:

- There are specific risks concerning the person and snorkelling cannot be safely conducted for the person; or
- There are specific risks concerning the person and additional control measures are required for the person to snorkel safely; or
- Snorkelling can be safely undertaken using normal control measures.

Examples of specific risks about a person may include:

1. Age (Children or older persons)
2. Obesity
3. Lack of snorkelling or swimming experience
4. Lack of experience in similar environmental conditions
5. Poor fitness or health problems relevant to snorkelling

Examples of additional control measures may include:

1. Increased supervision
2. Reduced ratios
3. Going to a site with improved environmental conditions
4. Medical advice
5. Use of additional buoyancy devices
6. Prohibiting breath hold diving.

The snorkelling supervisor will record details of any specific risks which will require additional control measures for that person on the snorkel plan. The plan shall be available at the snorkelling site.

If the assessment is done prior to the snorkeller travelling to the snorkelling site, the person undertaking the assessment must ensure the snorkelling supervisor at the site is advised in writing of any hazards, risks and control measures determined during the assessment.

Example. A dive shop books a snorkeller onto a conducted snorkelling tour. The dive shop undertakes an assessment of the snorkeller and decides the snorkeller needs to wear a personal floatation device and be guided whilst snorkelling. This information is recorded and passed on to the snorkelling supervisor at the snorkel site.

It may assist in planning snorkelling if the assessment is done as soon as possible so that activity can be planned to allow for any additional control measures to be implemented.

Environmental assessment

Environmental conditions are a major hazard variable. Site selection is crucial to being able to safely implement a snorkel plan. The snorkel plan shall record a range of relevant environmental conditions that shall be assessed before snorkelling commences. The assessment shall use appropriate local resources e.g. tide tables, weather reports, and be reassessed on site immediately before the activity commences.

The assessment shall include:

- Water depth, temperature, surface conditions, currents
- Marine animals
- Vessel hazards
- Other hazards

The snorkelling supervisor will review each assessment and determine whether:

- There are specific risks concerning the environment and snorkelling cannot be safely conducted for some or all of the persons; or
- There are specific risks concerning the environment and additional control measures are required for some or all of the persons to snorkel safely; or
- Snorkelling can be safely undertaken using normal control measures.

Examples of specific risks about the environment may include:

1. strong currents
2. surface swell
3. shark sightings

Examples of additional control measures may include:

1. Increased supervision
2. Deploying lines to assist snorkellers return to the vessel
3. Going to a site with improved environmental conditions
4. Waiting until conditions improve
5. Use of additional buoyancy devices
6. Use of devices to increase snorkeller visibility

The snorkelling supervisor will record details of the environmental conditions assessed and any additional control measures on the snorkel plan. The plan shall be available at the snorkelling site.

Entry and egress routes, including alternatives, shall be assessed to ensure they are safe. The snorkeller's equipment, the snorkeller assessment, the environmental assessment and emergency plans shall all be considered with regard to entry and egress.

Wherever it is legal to do so, an adequately sized and displayed dive flag (Code A) and appropriate lights at night shall be displayed where snorkelling is taking place.

Note: These provisions must comply with local maritime safety requirements. These signals are of limited value if they are not readily visible to marine traffic and are not displayed in the immediate vicinity (30m radius) of the snorkellers.

General risk assessment

The snorkelling supervisor shall identify other hazards affecting the conduct of the snorkel trip not otherwise addressed by the control measures and assessments in this manual. The risks caused by these hazards shall be assessed to determine who is affected and the severity of the risk. These shall be rated low, medium or high.

Control measures shall then be recorded on the snorkel plan and the measures implemented. Specific controls may be added to checklists on the snorkel plan if required. Control measures may also include emergency plans and procedures.

All relevant workers shall be consulted to identify hazards and suggest control measures.

In deciding on control measures, where these are not addressed by a legislative or other standard, the hierarchy of controls shall be used; with control measures selected using the following order:

- Elimination: - e.g. cancel snorkelling
- Substitution: - e.g. change sites
- Design: - e.g. outboard propeller guards
- Isolation: - individual person restricted from specific activity
- Administrative controls: - e.g. training, staffing levels
- Personal protective equipment: - e.g. thermal protection

After diving, the snorkelling supervisor shall review the control measures implemented and determine:

- Were they properly implemented?
- Were they effective in controlling the risks?
- How can they be improved?

Note: This process provides an opportunity to identify hazards specifically related to the snorkelling activity or less directly associated with it. Specialised types of snorkelling activity, such as competitive free diving require extensive risk assessments relevant to the activity.

To assist the snorkelling supervisor, it may be useful to provide a list of possible hazard categories. However any list should not be restrictive and all workers should be encouraged to identify specific hazards.

Possible hazard categories may include:

Snorkelling related hazards:

- Specialised snorkelling tasks or equipment
- Other marine users, including shipping movements
- Pollution
- Isolation
- Water pressure differentials- e.g. inlets, outfalls
- Entanglements

Associated hazards

- Slips trips and falls
- Falling objects
- Lifting and twisting
- Winches, anchors, moorings and lines

Equipment for Snorkelling

The equipment used for snorkelling shall be prepared in accordance with section 2.7. The snorkelling supervisor shall provide advice and assistance to snorkellers regarding

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the selection and use of their equipment. No snorkeller shall be allowed to undertake a dive if their equipment is not:

- Complete
- Working properly

Emergencies

Snorkelling emergencies shall be prepared for in accordance with section 2.6. The roles of rescuer and first aid provider will be designated to competent person(s). Emergency equipment shall be checked daily.

On site snorkelling operations

Snorkelling supervisor

Whilst at the snorkelling site, the snorkelling supervisor shall ensure:

- That they work as a team leader. They shall supervise and consult with other snorkelling workers.
- The snorkel plan and checklist is completed.
- Control measures as stated in this manual and those decided on following assessments are implemented.

Buddies and guided groups

The snorkelling supervisor shall arrange all snorkellers into buddy pairs or threesome if a pair arrangement is unavailable. Buddies shall be recorded on each snorkeller's assessment document which shall be available at the snorkelling site.

Where in-water snorkel guides are used, the guide: snorkeller ratio shall not exceed 1:10. The ratio is a maximum and should be reduced if required following the snorkeller and environmental assessment.

Where there are multiple groups or snorkellers at a site, the snorkelling shall be arranged to minimise the chance of groups becoming disorganised. Guided groups shall be recorded on each snorkeller's assessment document which shall be available at the snorkelling site.

Instruction, training and advice

Prior to snorkelling, all snorkellers shall be given instruction and advice to allow them to safely snorkel in accordance with the procedures stated in this manual. This may be through formal training or an in house program to allow snorkellers to undertake a snorkelling experience whilst supervised.

The instruction and advice given to snorkellers during an in house program shall include the topics contained in Appendix J.

<p>Note: The advice to be given to snorkellers is extensive. A verbal briefing covering each topic in one session may be long and may not be closely followed by all snorkellers. Where possible topics should be covered at different times and by using different media,</p>
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such as written materials, pictures, diagrams. There should be practical training where possible and skills should be assessed.

All formal snorkel training shall be conducted in accordance with the standards and procedures of one of the following:

- The current standards and procedures of a recreational diving training agency.
- Units of competency under the National Outdoor Recreation Industry Training Package for snorkelling delivered by a registered training organisation resulting in a statement of attainment being issued.

Immediately prior to snorkelling, snorkellers shall be given a pre-snorkel briefing, preferably with a map or diagram of the site. Topics that shall be covered are listed in Appendix J.

Note: The pre-snorkel briefing is a chance to re state important safety information and advice. To ensure comprehension, some questions should be asked of the snorkellers to ensure they understand important information. For example, snorkellers could be asked to demonstrate a distress signal

Prior to giving instruction or advice, the snorkelling supervisor shall assess if any snorkeller cannot adequately comprehend English to a level to safely undertake the activity.

Snorkellers who cannot adequately comprehend English should be:

- Given instruction and advice by a person who can effectively translate English to their language; OR
- Given written advice and instruction in their language: AND
- Assessed as having understood the instruction and advice.

Note: Failure to be able to properly communicate can seriously affect safety. Extreme caution must be taken with all non English speakers. If there is any doubt regarding their understanding, the snorkelling supervisor should ensure the snorkellers are guided in the water. ANY DOUBTS = in water supervision.

Snorkelling from vessels

Note: These are additional controls when snorkelling from a vessel. All other control measures stated in this manual apply to diving from other places e.g. snorkelling from the shore.

All relevant marine safety requirements, including all legislative requirements, must be met for all vessels.

The snorkelling supervisor shall consult with the vessel master to ensure risks affecting both snorkelling safety and vessel safety are controlled. e.g. weather, sea conditions and vessel traffic. Both parties may terminate or modify a snorkel plan to ensure safety if required.

Entry and egress routes on vessels shall be checked. Particular consideration should be given to:

- Crush and guillotine points where steps and ladders are not properly secured.
- The movement of steps and ladders with regard to the vessel's movement.
- Repair and maintenance of steps and ladders, including non slip surfaces.

Where possible and appropriate, lines should be deployed to assist snorkellers. These may include:

- Trail lines behind a vessel
- Tag lines from vessel entry point to the snorkelling site

Lookout

A lookout shall be on duty whenever persons are in the water. More than one lookout may be appointed if required.

Note: the lookout may be the snorkelling supervisor where the duties do not conflict. For example the snorkelling supervisor briefs and assists snorkellers at a site. When the first snorkelling commences, the snorkelling supervisor assumes the role of lookout. They remain in this role, excepting emergencies, until the last snorkeller returns. They may then resume the role of snorkelling supervisor.

Headcounts

A headcount of all snorkellers shall be undertaken to ensure no person is left behind. On a vessel, all persons on board shall be counted. On shore, all persons who enter the water shall be counted. The initial count shall be done before snorkelling commences. The headcount shall be repeated when the snorkelling is completed and prior to any departure from a snorkelling site. This final count shall be compared with the initial count to ensure they agree. These counts shall be recorded on the snorkel plan. Each record shall be signed by the person conducting the count. The preferred method of counting is to actively involve the people being counted e.g. a roll call, or signature sheet.

Breath hold diving

Breath hold divers using weight belts should be carefully weighted to ensure that they are neutrally or positively buoyant whilst at the surface. The weight belt should have a quick release mechanism and divers should be familiar with its operation.

Breath hold diving shall be conducted in buddy pairs with a strict "one up, one down" system. The "one up" shall observe the "one down". Where possible, breath hold diving shall be undertaken adjacent to a shot line or similar device.

Post snorkelling

Snorkelling supervisor

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The headcount must be completed and recorded before leaving any site.

Any incidents or injuries shall be recorded and reported in accordance with Appendix F

Note: The snorkelling supervisor should remain alert for unreported injuries, such as hypothermia.

The control measures used for the snorkelling shall be reviewed and any comments or recommendations recorded on the snorkel plan.

All snorkelling equipment shall be accounted for, inspected for damage, cleaned, sanitised and stored in preparation for its next use.

Relevant documents shall be checked for completion and returned to the business for review and storage. The following shall be kept:

- Snorkeller assessment
- Waiver, statement of understanding for each snorkeller
- Snorkel plan and checklist
- Any incident reports

2.6 Emergency Procedures

This part deals with the planning, personnel and equipment required to enable efficient and effective handling of emergency situations.

Note: There may be local marine safety and/or OHS legislation regarding emergency and first aid requirements. These shall be reviewed and complied with as required.

2.6.1 Organisation and plans

OHS Manager

The OHS manager shall ensure that there are documented emergency plans, including details of contacts, for the following emergency situations:

- Missing diver/snorkeller
- Rescue
- First Aid
- Evacuation

Note: Example emergency plans are contained in appendices K, L, M, N. These examples should be adapted to the specific situations in which they shall be applied.

Advice on first aid plans may be obtained from diving and first aid training providers.

The first aid plan should include specific reference to diving injuries and illnesses. An example of this, the five minute neurological exam is attached in appendix O.

Advice on evacuation plans may be obtained from local emergency services.

In developing these plans, the following factors shall be taken into account:

- There must be consultation with all workers required to implement a plan. This should also include vessel masters, contractors and local emergency services.
- The plans must take into account the number of participants, the activities being conducted, the environment and isolation of the site, the number and competence of available workers; and the available emergency equipment.
- Dive and snorkel supervisors shall review the emergency plans as a part of the dive and snorkel plan. The emergency plans shall be available on site. Personnel and equipment shall be checked prior to each diving or snorkelling activity.

2.6.2 Personnel

OHS Manager

The OHS manager shall ensure that there are sufficient competent workers available to the dive or snorkel supervisor for emergency planning and procedures.

The OHS Manager will ensure competencies remain current by ensuring qualifications are renewed as required and there is sufficient in-house training so that all workers clearly understand and are able to undertake their duties in an emergency.

Note: the nature of diving and snorkelling emergencies makes practical training appropriate. Example: a practical rescue drill.

Dive and snorkel supervisors shall nominate, in their dive and snorkel plans, the following competent personnel with duties and responsibilities in the event of an emergency:

- Lookout(s)
- Rescuer(s)
- First aid provider(s)
- Vessel master (if appropriate)

2.6.3 Equipment

OHS Manager

The OHS manager shall ensure that there is sufficient equipment available to allow the implementation of the emergency plans.

The dive and snorkel supervisor shall inspect and, if appropriate, test all emergency equipment in preparation for each diving or snorkelling activity. Example: Making a test call on a radio.

After any emergency equipment is used, it shall be inspected and maintained as required to ensure it is in working order. Example: an oxygen cylinder is replenished after use, a disposable mask is discarded after use, or a non disposable mask and regulator is cleaned and sterilised.

The dive and snorkel supervisor shall ensure all emergency equipment is ready to be immediately deployed prior to the activity commencing.

The equipment shall include:

- Rescue equipment
 - Suitable rescue equipment is required to allow rescuers to take an unconscious person on the surface to a position where effective CPR can be administered with a minimum delay and preferably within 2-3 minutes. Particular consideration should be given to equipment required to safely allow the unconscious person to be removed from the water.

Example: rescue equipment may include rescue boards, floats, ropes or tenders. A powered tender vessel kept in a ready condition to undertake an immediate rescue is a suitable choice. Suitable tender are typically inflatable style vessels equipped with an adequate outboard engine and fitted with a propeller guard. It should be of sufficient size and layout to accommodate an unconscious person and two rescuers. The main vessel may be a rescue vessel where it is suitable and capable of doing so.

- A first aid kit
 - Appendix P shows the contents of typical first aid kit. The kit shall be stored so that it remains clean and dry. It shall be inspected prior to each

diving and snorkelling activity, including after each use, and checked against a content's list.

- Oxygen resuscitation and therapy equipment,
 - The system shall be able of delivering 100% oxygen (or as near as possible 100%) to a breathing person and an elevated level (>50%) of oxygen to a non breathing person.
 - There shall be adequate oxygen available for a reasonable estimate of the time required to reach a medical facility or emergency services; and for a reasonable estimate of the number of possible patients.

Example: Where two patients and a 60 minute evacuation time are reasonable estimates for the range of operations; and the oxygen delivery system uses 15 l/min per patient, a business needs to carry 1800l of oxygen.

- Communications equipment
 - Communications equipment will be carried adequate for both internal communications between workers, and with emergency services. Appendix Q contains an example contact list. This shall be kept current and be available at each site as a part of the emergency plan.

Example: VHF radio equipment, an appropriate phone

2.6.4 Incident reporting and notification

OHS Manager

General

All incidents where first aid is given shall be reported. Near miss incidents shall also be reported, for example, searches for divers. An example incident report form is attached in Appendix F.

Reporting incidents provides a major resource to monitor and review the effectiveness of all control measures designed to manage risk.

The detail of report should reflect the seriousness of the incident.

Regulatory requirements to notify relevant government agencies exist in all states. Notification requirements for Worksafe Victoria are attached in appendix R. There may be a requirements to notify several agencies, for example OHS, police and marine safety agencies.

Most dive training agencies and insurers also have incident notification requirements.

Organisation and notification

OHS Manager

The OHS Manager shall ensure that there are reporting forms available to dive/ snorkel supervisors and that these are completed as required.

The OHS manager, unless another person is specified by regulation, shall complete and submit notification to government agencies as required within the specified timeframes.

Incident report

Dive/snorkel supervisor

The dive/snorkel supervisor shall:

- Ensure blank reporting forms are available at the dive/snorkel site.
- Complete forms as required.
- Submit completed forms to the OHS Manager

2.7 Equipment and Plant for Diving and Snorkelling

This part deals with the sale, hire, servicing and use of plant and equipment required for the conduct of recreational diving and snorkelling. It does not address the operation of hydrostatic test stations.

It includes:

- Hire of equipment
- Sale of equipment
- Supply of equipment for conducted activities
- Assembly, inspection repair and maintenance of equipment
- Supply of compressed air
- Supply of other compressed gases for breathing.

Note: There is OHS legislation regarding plant in all states. There are specific requirements regarding the filling, storage, transport and use of pressure vessels,. The equipment supervisor shall ensure any statutory requirements are met.

2.7.1 Organisation

OHS Manager

The OHS manager shall ensure a competent person is appointed as the equipment supervisor. The sale, hire, supply, assembly inspection repair and maintenance of plant and equipment shall be coordinated by the equipment supervisor. The equipment supervisor may undertake these duties or direct another competent person to undertake these duties as required.

2.7.2 Ensuring other workers are competent

Equipment supervisor

Note: this section should be read in conjunction with section 3.4 of the SMS.

The equipment supervisor shall nominate, train and assess other workers to be competent to undertake their nominated duties with regard to dive equipment and plant. Specifically workers shall need be competent to undertake the following tasks:

- Hire of equipment
- Sale of equipment
- Supply of equipment for conducted activities
- Assembly, inspection repair and maintenance of equipment
- Supply of compressed air
- Supply of other compressed gases for breathing.

Competence shall be determined by:

- A knowledge of the relevant parts of this manual
- A knowledge of the relevant legislation
- Demonstrated practical skills relevant to the task

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- Keeping appropriate records
- Demonstration of emergency procedures if applicable.

Persons supplying compressed gases shall also be competent in:

- Safe handling and storage of compressed gases
- Cylinder types, gas and pressure markings and identification
- Pre-filling checks
- Operating of the filling system
- Leak testing
- Packaging
- Batch control documentation
- Equipment maintenance procedures
- Emergency procedures.

Competence shall be assessed. The assessment may be theoretical but should be practical where possible. Examples of assessments may include knowledge quizzes, demonstrations of filling procedures, problem solving and emergency drills.

Training and qualifications from other organisations may assist in determining competency. However the person's competency should still be assessed to ensure their skills are current and applicable to the relevant workplace.

Note: Certain manufacturer's and suppliers of dive equipment and plant may require certain training and certification to undertake specific tasks relevant to their equipment.

Records shall be kept to demonstrate competence on a worker's personnel file. An example competence assessment record is attached in Appendix S.

2.7.3 Sale of Equipment

Equipment Supervisor

Where assembly is required, the equipment supervisor shall ensure all dive and snorkel equipment sold to persons is properly assembled in accordance with manufacturer's instructions by a competent person.

When appropriate, general advice regarding aquatic safety and the advisability of obtaining appropriate training should be given by the competent person when diving and snorkelling equipment is sold. The manufacturer's instructions may give guidance on appropriate warnings or cautions.

2.7.4 Hire of equipment

Equipment supervisor

Where dive and snorkel equipment is hired to persons for use not associated with the conduct of diving and snorkelling activities by a business, the equipment supervisor shall ensure a competent person undertakes the hire service.

The competent person shall:

- Ensure the hired equipment is suitable for the stated purpose.
- Ensure all items are the appropriate size and fit.
- Inspect the equipment before hire to ensure all items are in safe working condition and clean.
- Ensure the equipment has been maintained and kept in good repair in accordance with the manufacturer's specifications.
- If appropriate, has assembled or installed the equipment in accordance with the manufacturer's specifications.

Note: Further advice on these duties can be found in section 2.7.5 "supply of equipment for conducted activities"

SCUBA equipment should only be hired to certified divers able to show a c-card or diver's able to demonstrate that they are undergoing training.

A record should be kept of any equipment hired and its return.

Note: Some recreational diving training agencies provide template documents for equipment hire agreements and an associated waiver. These should be used after checking the appropriate waiver wording with regard to local law.

When appropriate general advice regarding aquatic safety and the advisability of obtaining appropriate training should be given by the competent person when diving and snorkelling equipment is hired. The manufacturer's instructions may give guidance on appropriate warnings or cautions.

2.7.5 Supply of equipment for conducted activities

Equipment supervisor

Where dive and snorkel equipment is supplied to persons for the conduct of diving and snorkelling activities, the equipment supervisor shall ensure dive and snorkel supervisors or other workers are competent person to undertake the supply.

General

Equipment supervisor

Note: There should be consultation between the OHS manager, equipment supervisor and other relevant workers regarding the purchase of equipment to be supplied to divers and snorkellers to ensure it is suitable for the activities being undertaken and of sufficient quality to ensure it performs effectively for the wearer.

The equipment supervisor shall ensure all equipment supplied or hired to divers and snorkellers shall be:

- an appropriate size for the wearer
- Inspected to ensure it is in safe working condition; and

- The inspection shall ensure the equipment is complete and functional
- Equipment that is not serviceable shall be labelled, placed aside and not put back into service until repaired.
- Clean. Shared equipment with a risk of transmission of infectious disease shall be cleaned using an appropriate disinfectant and sanitising procedure.

Example: The equipment is scrubbed in soapy water, dried, soaked in an appropriate disinfecting solution of the required strength and for the required time, rinsed and then dried again between uses.

Further advice can be found in the NOHSC 2010 guide.

- Maintained and kept in good repair in accordance with the manufacturer's specifications.
- Assembled and installed in accordance with the manufacturer's specifications.

2.7.6 Required equipment for conducted diving or snorkelling activities

Dive/snorkel supervisor

The dive/snorkel supervisor shall ensure all divers and snorkellers are equipped with the following equipment:

Snorkelling participants

- Mask, fins and snorkel; and
- Thermal protection; and

Where appropriate, snorkellers should be supplied with:

- A personal flotation device;
- Surface floats or rest stations;
- Signalling devices
- Weight belts

Note: Weight belts should only be supplied to breath hold divers if they are carefully weighted to ensure that they are neutrally or positively buoyant whilst at the surface. The weight belt should have a quick release mechanism and divers should be familiar with its operation.

Snorkelling workers

The snorkelling supervisor and any guides in the water shall, in addition to the snorkelling equipment listed above, be equipped with:

- A suitable whistle
- Identifiable clothing/equipment
- A flotation device able to act as a rest station for at least one snorkeller.
- A knife or cutting tool if appropriate.

Resort divers

- Mask and fins
- Compressed air SCUBA cylinder and valve
- BCD with a power inflator
- Regulator fitted with an alternate air source or redundant air supply

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- Depth and cylinder pressure gauges
- Weight system, quick release mechanism and suitable weights
- Appropriate exposure protection

Entry level certificate divers in training

- All equipment specified for resort course participants
- Snorkel (attached or attachable to the mask)
- A timing device or dive computer
- Knife, dive tool, or shears where there is a risk of entanglement

Certified divers

- All equipment specified for entry level divers in training
- Emergency signalling equipment, including a high visibility signalling device, e.g. a safety sausage, and an audible signalling device, e.g. a whistle
- A lighted signalling device if diving is to take place close to dusk or after dark, e.g. a torch
- A torch if night diving

Other dive training

- All equipment specified for certified divers
- If specified by the dive training organisation, any additional equipment required for the training

EANx diving using SCUBA

- All equipment specified for certified divers
- All Equipment in contact with EANX shall be used in accordance with the manufacturer's specifications for the oxygen %.
- All cylinders shall be marked "NITROX" in letters 60mm or greater
- A tag or adhesive label shall be attached to the cylinder showing:
 - Oxygen %
 - MOD of the gas mixture
 - Cylinder serial number

EANx diving using rebreathers

- Mask and fins
- EANx rebreather unit
 - For dive training, a monitor for the oxygen partial pressure of the inspired gas that can be read by the diver
- BCD with a power inflator
- Redundant breathing supply
- Depth gauge and timing device or dive computer
- Cylinder pressure gauges for each cylinder
- Weight system, quick release mechanism and suitable weights
- Appropriate exposure protection

- Knife, dive tool, or shears where there is a risk of entanglement
- Emergency signalling equipment, including a high visibility signalling device, e.g. a safety sausage, and an audible signalling device, e.g. a whistle
- A lighted signalling device if diving is to take place close to dusk or after dark, e.g. a torch
- A torch if night diving
- All equipment in contact with EANX shall be used in accordance with the manufacturer's specifications for the oxygen %.
- All cylinders shall be marked "NITROX" "AIR" "DILUENT" or OXYGEN" as appropriate in letters 60mm or greater
- A tag or adhesive label shall be attached to each cylinder containing gases other than air showing:
 - Oxygen %
 - MOD of the gas mixture
 - Cylinder serial number

Divers using mixed gases other than EANx on SCUBA

- All equipment specified for certified divers
- All equipment in contact with mixed gases shall be used in accordance with the manufacturer's specifications for the oxygen %.
- At least one regulator second stage attached to the bottom mix shall have a hose at least 1.5m in length.
- Two depth gauges and timing devices: or two dive computers.
- A redundant gas breathing system sufficient to meet all decompression requirements.
- Two copies of the dive team's dive plan.
- Where cylinders are manifolded, an isolation valve fitted to the manifold.
- An alternative ascent system.
- A guideline where direct access to the surface is not possible
- All cylinders shall be marked "NITROX", "TRIMIX", "OXYGEN" "AIR" or otherwise as appropriate in letters 60mm or greater
- A tag or adhesive label shall be attached to each cylinder showing:
 - Oxygen %
 - Calculated nitrogen %.
 - Calculated helium or other gas %.
 - MOD of the gas mixture
 - Minimum operating depth of the gas mixture
 - Cylinder serial number

Divers using mixed gases other than EANx on rebreathers

- Mask and fins
- Mixed gas rebreather unit
- BCD with a power inflator
- Redundant breathing supply
- Two depth gauges and two timing devices; or dive computer

- Cylinder pressure gauges for each cylinder
- Weight system, quick release mechanism and suitable weights
- Appropriate exposure protection
- Knife, dive tool, or shears where there is a risk of entanglement
- Emergency signalling equipment, including a high visibility signalling device, e.g. a safety sausage, and an audible signalling device, e.g. a whistle
- A lighted signalling device if diving is to take place close to dusk or after dark, e.g. a torch
- A torch if night diving
- A redundant gas breathing
- Two copies of the dive team's dive plan.
- An alternative ascent system.
- A guideline where direct access to the surface is not possible
- All cylinders shall be marked "NITROX", "TRIMIX", "OXYGEN" "AIR" or otherwise as appropriate in letters 60mm or greater
- A tag or adhesive label shall be attached to each cylinder showing:
 - Oxygen %
 - Calculated nitrogen %.
 - Calculated helium or other gas %.
 - MOD of the gas mixture
 - Minimum operating depth of the gas mixture
 - Cylinder serial number

Decompression stop diving

- All equipment for the type of diving being under e.g. EANx on SCUBA
- An alternative ascent system
- A redundant gas system
- A copy of the dive plan

Diving Workers using air

- All equipment specified for the type of diving being undertaken.
- A slate and writing instrument
- Dive tables unless equipped with a dive computer

2.7.7 Equipment supplied by participants for the conducted diving or snorkelling activities

Dive/snorkel supervisor

The dive/snorkel supervisor shall inspect equipment supplied by divers or snorkellers and be satisfied that it is complete, in good condition and appropriate for the activity.

It shall include all of the items normally supplied for the conducted activity by the business. Diving or snorkelling should not be conducted for persons who are inappropriately equipped.

2.7.8 Assembly, inspection repair and maintenance of equipment

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Equipment Supervisor

Where dive and snorkel equipment is assembled, inspected, repaired or maintained, the equipment supervisor shall ensure persons undertaking this work are competent to undertake the work.

The competent person shall ensure all equipment is:

- Maintained and kept in good repair in accordance with the manufacturer's specifications.
 - Manufacturer's specifications and instructions of all plant and equipment shall be kept on file.
 - A stock list should be kept of all equipment. As a minimum the equipment description, any serial numbers, date of purchase, any stock takes and date of disposal should be recorded.
 - Specified periodic inspection and maintenance programs shall be established for all relevant equipment. As a minimum this shall include all cylinders, regulators and BCDs.
 - Equipment shall be tested after repair and maintenance to ensure it performs in accordance with the manufacturer's specifications.
 - Records shall be kept of all repair and maintenance. As a minimum the inspection period, date, equipment serial number, description of repair or maintenance, testing and person(s) undertaking the work shall be recorded. In addition for cylinders, the record shall include the date of original pressure test, the manufacturer's test certificate (if available), the original mass, dates and outcomes of each inspection and hydrostatic test; and the date and details of any re-heat treatments.
- Assembled and installed in accordance with the manufacturer's specifications.
 - The manufacturer or supply agent shall determine who is competent to install or assemble equipment and plant.
 - Where manufacturer's specifications are not available, the equipment supervisor shall identify and follow appropriate Australian Standards or develop documented procedures for assembly and installation.

2.7.9 Supply of compressed air

Equipment supervisor

Note: This section deals with filling cylinders with air. This section may be considered to be the filling system operation's manual.

The equipment supervisor shall ensure the compressed air filling system is appropriately designed, manufactured, installed, operated, inspected, repaired, maintained and tested. The supply of compressed air shall only be undertaken by competent persons. Emergency procedures shall be developed and implemented.

In general, the supply of compressed air shall be undertaken in accordance with any manufacturer's instructions, AS2030.1, AS3848.2 and ISO12209 Parts 1 to 3. Copies of these documents should be available as references at the filling location

The filling system.

Note: The equipment supervisor shall provide a description and diagram of the filling system, labelling all component parts, safety features and warnings appropriately. This diagram should be available as a reference at the filling location.

Compressors

Any compressor used for producing compressed gases for diving shall:

- Be designed for supplying compressed air for breathing.
- Be tested for air quality as set out below
- Be installed in a suitable location with regard to air intake contamination, temperature and humidity. Intake screens or filter shall be fitted. Particular care shall be taken with the location of the air intake if the compressor is driven by a combustion engine.
- Undergo pre-use checks in accordance with the manufacturer's instructions. As a minimum these shall include checks of oil levels and an inspection of the air intake line.
- Have oil and filter changes done according to the manufacturer's specifications
- Be operated and maintained by a competent person. The manufacturer may specify how a person may be determined to be competent.
- Have a record, the compressor running log, kept including dates, running hours, pre use checks, maintenance (including oil and filter changes) and any repairs. An example record is attached in appendix T.

Decanting systems

Any decanting (cylinder to cylinder) filling system shall:

- Have a pressure reducing regulator fitted upstream of the pressure relief device if the maximum working pressure of the cylinder being filled is lower than that of the supply cylinder. If a single cylinder to cylinder system is used and the receiving cylinder has a test pressure equal to or greater than the supply cylinder, a pressure relief valve may be fitted instead of regulator. The pressure relief valve shall be set at 80% of the receiving cylinder's test pressure.

Gas delivery system

The gas delivery system shall:

- Be designed, assembled and installed from appropriate component parts by a competent person.
- Operated and maintained by a competent person. The manufacturer may specify how a person may be determined to be competent.
- Be situated in a well ventilated space and be appropriately secured. Persons other than the operator should not have access to the filling area whilst a cylinder is being filled.
- Have an industrial gauge, >60mm diameter, in accordance with AS1349, fitted to indicate fill pressures.
- Have all flexible hoses and end fittings restrained or guarded to prevent injury from whipping or other movement in the event of a failure.

- Have flexible hoses suitable for high pressure air, with a safety factor of 4:1 (burst pressure to system working pressure). Also the assembled hoses and fittings should be tested to 1.5 times the maximum system pressure annually. The test date shall be recorded and written on a tag fitted to the hose or adjacent fittings. An example record is attached in Appendix U.
- Ensure loose or other items that could be moved by a high pressure air leak are firmly fixed or removed from the vicinity of the high pressure gas system.
- Have a pressure relief valve fitted set to a pressure between 0.8 and 0.85 times the receiving cylinder's test pressure. The discharge capacity of the relief valve must exceed the output capacity of the compressor or decanting cylinder supply.
- Have all manifolds, pressure connections, supply pipes and fittings hydrostatically tested to at least 1.5 times the maximum working pressure at not greater than 10 year intervals. The test data shall be recorded and engraved on a metal tag showing the test pressure and test date. An example record is attached in Appendix U.
- Filling valves shall be fitted. These shall be used to control filling rates. Quick acting types should not be used.
- Bleed valves shall be fitted to allow for cylinder disconnection
- A non return valve shall be fitted to prevent gas passing back to the supply source.
- All cylinders, including supply cylinders shall be supported or cradled or restrained to prevent their ready movement, specifically should a burst disc or other safety relief feature be used.
- Where a supply tube may flex, it shall have at least one loop of at least 150mm diameter.

Pressure gauge calibration

- Gauges shall be checked to ensure they are within the accuracy limits of AS1349
- Gauges shall be checked against a master gauge of a test gauge grade complying with AS1349, at least once every 12 months or 500 hours of running time.
- Inaccurate gauges shall be recalibrated or replaced.
- An example record is attached in appendix U.

Air quality

- Each air compressor shall have its air analysed at intervals not exceeding three months. This may be undertaken using suitable testing equipment operated in accordance with its manufacturer's instructions.
- The air quality shall comply with the contamination limits stated in AS/NZS2299.1
 - No objectionable or nauseous odour
 - 20-22% by volume oxygen (unless gas other than air)
 - <12mg/m³ carbon monoxide at 15C and 100KPa (10 ppm by volume).
 - <901mg/m³ carbon monoxide at 15C and 100KPa (480 ppm by volume).
 - <101mg/m³ water at 15C and 100KPa (130 ppm by volume).
 - <1 mg/m³ of oil at 15C and 100KPa when sampled from a cylinder filled to a pressure at least 12MPa.
- The current air analysis certificate shall be displayed at the fill station.

- Residual water content should not exceed 50mg/m³ at 225bar to ensure proper drier and filter performance. The dewpoint temperature of the air shall be less than the minimum ambient temperature of the cylinder at the maximum working pressure, to prevent condensation within the cylinder.

Cylinders

The following general advice shall be followed regarding compressed gas cylinders:

- Ensure cylinders are inspected tested and marked by a certificated hydrostatic test station at least annually.
- Ensure any repair or maintenance of cylinder valves or safety devices is done in accordance with the manufacturer's instructions and by a competent person.
- Handle with care. Do not drop on hard surfaces, throw, strike, use as rollers.
- Take care not to damage valves.
- Keep cylinders at ambient temperature and away from heat sources, including solar, thermal sources over 65C and welding.
- Fill only with dry atmospheric air. Ensure moisture does not enter by never emptying the cylinder.
- Do not use lubricants unless in accordance with the cylinder and valve manufacturer's specifications.
- Do not use cylinders with leaking or suspect valves.
- Do not tamper or alter any safety device, including burst discs.
- Do not cover or alter any stamped cylinder markings.
- Do not fill with any gas other than air unless it is in accordance with the manufacturer's specifications. This may result in explosion.
- Keep cylinders away from aggressive chemical or industrial environments.

Signage

Appropriate safety signage shall be displayed in the cylinder filling area. These shall include the following statements:

- Cylinders are to be in test prior to filling
- Cylinders that are damaged or their condition suspect will not be filled.
- Customers are to keep clear of the fill station area while filling is being conducted
- Smoking is prohibited
- The use of oil or grease is prohibited in the immediate filling area
- Danger- high pressure gas cylinder filling. risk of explosion or hazardous release of gas under pressure.
- Warning: Danger of explosion. Severe incompatibility will cause problems if oxygen enriched mixtures are introduced into equipment previously used for breathing air. These may result in the instantaneous release of extremely large amounts of energy.
- Warning: Flexible connections may whip if disconnection occurs whilst pressurised. Flexible connections should be suitably restrained or restricted.
- Warning: For decanting from single supply cylinder to single receiving cylinder without a relief valve, the operator is to ensure the regulator setting does not

- exceed the maximum allowable filling pressure stamped on the cylinder to be filled. (if appropriate)
- Warning: The operator is to ensure that the cylinder to be filled has a test pressure equal or greater than the supply cylinder. (if appropriate)

Appropriate coloured markings and labels should also be used to clearly identify and parts of the filling system that can transfer or store gases other than air.

Filling cylinders

Before filling

- Check the person filling is competent to fill cylinders
- The owner's permission must be obtained. The owner shall be asked if the cylinder has previously been filled with any gases other than air; and what are the cylinder, valve and any regulator's working pressure. These shall correspond with the markings on the cylinder and valve. If there is any discrepancy between these, the cylinder shall be filled to the lowest working pressure for any component of the breathing system.
- Hearing and eye personal protective equipment shall be worn by the operator.
- Only cylinders that are currently marked as in test (previous 12 months) shall be filled. Cylinders subject to severe service (>500 fills/annum) may require more frequent testing. Advice should be sought from the manufacturer.
- The cylinder shall be correctly identified.
- There shall be an external examination for defects such as dents, gouges, abrasion. Cylinders showing serious damage or are suspected of containing water or rust shall be inspected and tested before filling. AS 2337.1 provides advice on external damage.
- All cylinder valves shall be checked that they are fitted with a burst disc.
- If the filler has a suspicion that a cylinder may be contaminated, the cylinder must be emptied and purged or evacuated. If the cylinder is contaminated with foreign matter, such as oil or grease, the cylinder shall not be filled unless specialist advice has been sought from the manufacturer.
- Where a pressure reducing regulator is required, the regulator setting shall be set by the filler to not exceed the maximum working pressure of the cylinder being filled.
- Valve o rings shall be checked prior to connecting the filling hose.

Filling procedures

- Cylinders should be filled in accordance with the recommendations of the filling equipment manufacturer.
- Open face cylinders shall not be filled to pressures above 207 Bar unless the valve and cylinder are marked to indicate a higher working pressure.
- Cylinders shall be filled slowly so that the cylinder temperature does not exceed 50C. (too hot to touch)

- Cylinders shall not be overfilled above the working pressure at 15⁰C to allow for cooling. Careful and slow filling will allow will allow the working pressure to be reached without overfilling.
- After filling the cylinder shall be leak tested, e.g. sprayed with water and detergent

Cylinder filling records

- A batch control document should be completed by the cylinder filler. Appendix V contains an example batch control document.
- A new record should be commenced whenever the information being recorded changes. For example, an employee of a dive business filling its own cylinders with air to the same pressure only requires one batch control document per day.

Cylinder filling for gases other than air

Equipment supervisor

The equipment supervisor shall ensure that:

- Gas mixing and cylinder filling with gases other than air shall only be undertaken by a competent person. The person will be competent to fill cylinders with gases other than air if the person holds a certificate or qualification that states the person is competent to fill cylinders using the relevant filling equipment for the relevant gas mixes. A copy shall be kept of the person's certificate or qualification. .
- All plant associated with the filling of cylinders with gases other than air shall be suitable for use with the relevant gas and designed, installed, used, inspected maintained and repaired strictly in accordance with the manufacturer's instructions and specifications. The plant shall all be kept clean and systems used to prevent contamination of the filling system. "Soft " parts of dive equipment (o rings, seats etc) may need to be replaced.
- The filling system design should avoid the use of sharp corners in gas lines and quick opening valves.
- Air and other gases to be mixed with oxygen, such as EANx, should not contain a condensable hydrocarbon level above 0.1mg/m³. Normally this is achieved through the use of an appropriate hyper filtration system.
- In general, gas mixes with oxygen up to 40% may be handled as if they were air. Any equipment used to deliver 100% oxygen or equipment using >40% oxygen must be oxygen compatible, use oxygen compatible lubricants, and be cleaned for oxygen service.
- Oxygen cleaning of equipment should follow a documented procedure and be recorded on a service record. The equipment shall then be marked as oxygen cleaned and kept from contamination, including contamination from air from an

oil using compressor. All relevant parts of the gas mixing system, cylinders, valves, diving equipment (regulators, hoses, gauges etc), storage cylinders, pipes and filling equipment shall all be cleaned if in contact with >40% oxygen.

- Cylinders will be marked “NITROX”, “TRIMIX”, “OXYGEN” “AIR” or otherwise as appropriate in letters 60mm or greater.
- A tag or adhesive label shall be attached to each cylinder showing:
 - Oxygen %
 - Maximum operating depth of the gas mixture
 - Cylinder serial number
 - Calculated nitrogen %. (Trimix only)
 - Calculated helium or other gas %.(Trimix only)
 - Minimum operating depth of the gas mixture.(Trimix only)

Note: If the cylinder serial number is not recorded on the tag or label and the tag or label becomes detached from the cylinder, the gas should be re-analysed and a new tag or label attached to the cylinder.

Emergency procedures

Equipment Supervisor

The equipment supervisor shall develop an emergency plan which shall be displayed at the filling station. The plan shall address the following.

- Actions to take in the event of an uncontrolled release of gas
- Actions to be taken in the event of a fire
- Action to be taken in event of an explosion
- Evacuation and assembly
- First Aid.

In developing this plan, the equipment supervisor should consult with local emergency services. All relevant workers shall be given practical training in implementing the plan. An example emergency plan is contained in appendix W.

Note: Gases under pressure may be classed as dangerous goods and/ or hazardous substances. The equipment supervisor shall ensure any statutory requirements regarding these hazards are met.

Part B

Recreational Diving and Snorkelling Occupational Health and Safety Management System (SMS)

This part of the manual details a step by step management system to implement the control measures contained in the OHS manual, review them and achieve continuous improvement of the SMS.

The OHS Manager is responsible for planning, implementing, measuring and reviewing the SMS. Specific duties may be delegated as required.

An annual SMS review shall be undertaken and reported to the business owner or director. A checklist for the review is attached in Appendix X. All workers should have access to this report and be consulted in its preparation.

An SMS activity planner is attached in Appendix Y to provide an example schedule for implementing the SMS.

3.1 Recreational diving and snorkelling occupational health and safety policy

The OHS policy is proof that the business has made a commitment to health and safety. It can be used as a driving force to progress the health and safety of workers and clients.

It shall be signed by the director(s) or owners of the business to demonstrate the business commitment from the top down.

It shall be displayed publicly at the business and be given to workers and clients if and when needed.

The OHS manager shall review the policy as a part of the annual review of the SMS; or when there is a significant change to the undertaking of the recreational diving and snorkelling business; whichever is sooner.

An example policy is contained in section 2.1 of the OHS manual.

3.2 Identification of hazards, assessments and control of risks

The OHS manager shall ensure systematic identification of hazards, assessment and control of risks across all areas of the dive or snorkel business. This shall take place on three schedules:

- Immediately when required.
 - An incident, near miss or other circumstances reported by a worker or client may identify a hazard that is inadequately controlled.
- Periodic meetings, e.g. monthly,
 - Workers shall be consulted formally to identify hazards, help assess risks and comment on control measures. These meetings are also an opportunity for relevant OHS information to be given to workers. Typically this should not be a special meeting but be as an agenda item on a routine staff meeting.
- Annual Review
 - The OHS manager shall undertake, as a part of the annual review, a review of the existing hazards identified to determine that all risks are controlled.

Whenever a hazard is identified, its risk shall be assessed and control measures implemented. A record of this process shall be kept. An example hazard identification form is attached in Appendix Z.

The OHS Manager is responsible for the implementation of the control measures. Typically this will involve an amendment to the documented procedures contained in the OHS manual.

It may be that the introduction of a single control measure results in several changes within the manual. For example a new control measure may include changes to duties and responsibilities, emergency procedures and equipment required.

Appendix AA contains an example OHS manual review memorandum. This shall be completed whenever a new control measure is introduced or changed.

During the annual review each OHS manual review memorandum shall be incorporated into the updated manual.

3.3 Objectives and targets

The OHS manager shall ensure that the dive and snorkel business has specific and relevant OHS objectives to achieve. They shall specify targets for each objective. The targets shall be:

- Specific
- Measurable where practical
- Attainable and realistic
- Time constrained

The OHS manager shall determine the objectives and targets in consultation with workers and where appropriate, clients.

The OHS manager shall record the objectives, targets and report on whether they were achieved as a part of the annual review.

Example: An objective may be to ensure all dive workers maintain current competency for their assigned duties. The target may then be that “all personnel files will be reviewed annually to ensure copies of any required qualifications are kept and current.”

3.4 Training and competency

The OHS manager shall develop and implement three programs to ensure the competence of all workers regarding their duties and responsibilities:

- Induction
- Ongoing review
- Emergency drills

Induction

When a worker is employed or assigned a new duty and responsibility, they shall be inducted and assessed. This process should be undertaken as quickly as possible and the person should not be assigned the duty until assessed as competent.

This shall include:

- Obtaining copies of any current certifications or qualifications required.
- Obtaining other evidence of experience, such as CVs, dive logs, letters from previous employers.

Any competency gaps relevant to the specific duties and responsibilities shall be identified.

External or in house training and assessment shall then be undertaken. The training and assessment may be theoretical or practical as is relevant to the duty. Most diving skills are practical.

Example assessment methods include:

- Theoretical assessments of knowledge may be assessed by quizzes.
- Practical skills may be assessed by demonstration

As a minimum, induction training and assessment should cover:

- The organisation and business activities undertaken by the business.
- The structure and application of the OHS manual and SMS with regard to the person's duties
- Specific hazards associated with the duty and responsibility.
- How to do the job safely by implementing relevant control measures.
- Emergency procedures.
- Safe use of plant and equipment
- Reporting hazards and incidents.
- The use of safety equipment
- Records required to be kept.

Ongoing review

On a periodic basis, at least annually, existing workers shall be reviewed to ensure their current competency. This shall include:

- Checking current copies of certifications or qualifications are on file.
- Recording any other relevant training or experience obtained.
- Reviewing current competency. The review may be theoretical or practical as is relevant to the duty. Most diving skills are practical. It may be conducted in a similar way as the induction assessment or by witnessing competency being demonstrated on the job.

Emergency drills

On a periodic basis, for example monthly, workers assigned specific duties and responsibilities during emergencies should be reassessed as competent by undertaking emergency drills. These should consist of realistic practice scenarios based around the documented emergency plans. They should be practical. Different emergency procedures scenarios and workers should be rotated.

Training records

Records shall be kept of any training and assessment on the worker's personnel file.

Records shall include:

- The duties and responsibilities being trained and/or assessed
- Any certificates, qualifications or other documents demonstrating competency
- Any training given
- The method and outcome of any assessment.
- The completion date.
- Signature of the candidate and assessor.

An example record is contained in Appendix S. A summary of training and assessment shall be included in the annual report.

3.5 Measurement and evaluation

The OHS manager shall monitor the implementation of the OHS manual and SMS in a systematic and ongoing manner. A number of strategies may be used:

- Client feedback and casual observation (ongoing)
- Inspections or audits (quarterly) of:
 - Work sites e.g. filling systems, vessels
 - Systems e.g. diver assessment
 - Plant e.g. regulator servicing
- Incident investigation (see sections 2.6.4 and 3.6)(as required)

Primarily measurement and evaluation shall determine whether:

- Relevant existing control measures are being implemented
- The existing control measures effectively managed the risk

Preventative or corrective action shall occur if control measures are not being implemented or hazards are not adequately controlled. The actions taken may include.

- Reassessment of risks and control measures
- Competency reassessment or retraining
- Disciplinary action.

Alternatively where measurement and evaluation shows effective implementation of existing control measures, recognition and reward should be given..

Records shall be kept of any actions and outcomes to monitor the implementation of the OHS manual and SMS. These shall be summarised in the annual review.

An example record of a monitoring and inspection checklist is attached in Appendix AC

3.6 Incidents and notifications

The OHS manager shall review all incident reports immediately on receipt (see section 2.6.4). Further investigation shall be undertaken if necessary. The investigation is about understanding the factors that contributed to the incident rather than finding fault. Its aim is to identify contributing factors so that appropriate control measures can be put in place to prevent or minimise recurrence. It is likely that any incident is the outcome of multiple factors including:

- The actions or inactions of workers or clients
- The features of equipment being used
- The environment

It is exceedingly rare for an incident to be caused solely by an “Act of God”.

The OHS manager shall collate and review incident reports at in the annual report. This may identify any incident trends.

3.7 Document and data control

The OHS manager shall ensure all OHS Manual and SMS documents used for the conduct of the undertaking are collated and stored for a minimum of seven years. The method of storage should be logical and sequential. E.g. diver assessments by date for a calendar year.

For example, a business might allocate a four drawer filing cabinet to its OHS manual and SMS system. For a given period, e.g. one year, the cabinet might be arranged:
Drawer 1: Current OHS Manual and SMS, SMS activity planner, SMS annual review, hazard identification forms, OHS manual review memoranda, Table of OHS objectives, targets and performance indicators, monitoring and inspection checklist, incident reports and investigations.

Drawer 2: Personnel records including copies of qualifications, training and assessments.
Drawer 3: Dive and snorkel plans, dive safety logs, diver/snorkeller assessments, waivers and statement of understanding

Drawer 4: Plant records, purchase, inspection, maintenance and repair records, manufacturer's specifications.

Obsolete documents shall be removed from circulation but copies kept for reference purposes.

Privacy laws shall be applied regarding any personal information

Appendix A

Dive plan and checklist

To be completed by the dive supervisor. The document shall remain at the dive site and then be returned for review and archiving to the business premises

Business conducting recreational diving	
Date	
Location and vessel	
Objectives	

Organisation

Dive supervisor	
Lookout(s)	
Rescuer(s)	
First aid provider(s)	
Others <i>eg Vessel master, dive instructors</i>	

Diver assessment, statement of understanding and waiver

All divers assessed and completed statement of understanding and waiver?		(Tick)
At risk diver name	Specific risk	Additional control measure(s)
<i>E.g. John Diver</i>	<i>No dives in Victoria</i>	<i>In water supervision during orientation dive</i>

Environmental assessment

		Dive 1	Dive 2
Water depths at site(m)			
Temperature (°C)			
Surface conditions and viz. (describe)			
Currents (strength and direction)			
Wind (strength and direction)			
Visibility underwater			
Other vessels			
Other hazards?(e.g. marine animals)			
Environmental hazard	Specific risk factor	Additional control measure(s)	
<i>E.g. Current</i>	<i>Moderate SE current</i>	<i>Deploy lines from vessel. All divers in guided groups</i>	

General Risk Assessment

Consider diving related hazards (e.g.: Specialised diving tasks or equipment, Other marine users, including shipping movements, Pollution, Isolation, Water pressure differentials- e.g. inlets, outfalls, Entanglements) and associated hazards (e.g.: Slips trips and falls, Falling objects, Lifting and twisting, Winches, anchors, moorings and lines)

Hazard	Who	Risk (H/M/L)	Control measures (including emergency procedures)
E.g. injury from falling cylinders	Trainees	Low	Trainees instructed to secure or lay cylinders down. Monitored by DS. General first aid if required.

Preparation checklist

Item	(Yes/No comments)
Dive equipment supplied to divers checked (with appropriate spares)	
Rescue equipment, first aid kit, oxygen equipment, communications and emergency plans checked	
Access and egress checked and suitable?	
Decompression system selected and appropriate?	
Dive site(s) generally appropriate for objectives?	
Dive vessels safe and appropriate?	
Other	

Dive objectives

	<i>E.g. Group 1 or Dive 1</i>	Dive#/group#	Dive#/group#
Objective	<i>Resort dive</i>		
Directions	<i>NE <50m from vessel</i>		
Maximum depth	<i>8m</i>		
Maximum time	<i>35 min</i>		
Minimum air	<i>50 bar</i>		
Decompression	<i>Safety 5min/3m</i>		
Other notes			

On site checklist

Item	Dive 1 Yes/no- comments	Dive 2
Dive safety log commenced with buddy pairs and dive groups recorded?		
Advice and instruction given to all divers?		
Pre-dive briefing given?		
Lookout on duty?		
Diver's reassessed for competence, health and nervousness		
Buddy and buoyancy checks completed?		
All control measures in place?		
Other		

Headcount

	Number	Signature
Total prior to diving commencing	Dive 1	
	Dive 2	
Total after diving concludes (prior to departure)	Dive 1	
	Dive 2	

Post dive

Item	Dive 1 Yes/no- comments	Dive 2
Dive safety log completed and advice given regarding decompression.	(tick- comments)	
Incident report completed if required? Unsafe behaviours noted and addressed?		
Control measures reviewed? Do they work and are they adequate?		
Records completed and returned (Diver assessments, dive safety log, incident reports, this plan)		

The dive plan and checklist has been completed as required?		
	Signature (dive supervisor)	Date

**Appendix B
Statement of Understanding and Waiver**

Diver or snorkeller to complete after reading carefully. Discuss any issues and ask any questions before signing

Please read and initial each of the following dot points

I

- Acknowledge that I am aware of the risks, inherent and otherwise, involved in undertaking diving activity in the sea and that my participation may result in my death or serious injury. I understand that these risks include the risk of drowning, injuries caused by vessels and other perils of the sea, and (divers only) pressure injuries including decompression illness and gas embolism.
- I knowingly and voluntarily agree to accept these risks.
- I have been warned of these risks and, to my knowledge, been given adequate information with respect of these risks.
- I acknowledge that I have a legal duty or obligation at this workplace to behave safely and follow health and safety instructions that I have been given with regard to the activity.
- I acknowledge that I will be restricted from participating if I am deemed to be under the influence of alcohol or drugs or if I am unable or unwilling to follow instructions.
- I authorise any relevant medical treatment as a result of any injury I may suffer during this activity.
- Have answered any assessments honestly.
- Any equipment supplied by me for diving or snorkelling is in good working order and appropriate for the activity. I am trained, or am being trained, and am familiar in the use of this equipment and will use it appropriately.
- Will terminate any dive or snorkel if the environmental conditions are worse than those in which I am experienced or my level of fitness places me at risk. I will try not to overexert myself.
- Will follow the buddy system throughout every dive or snorkel, including on the surface. I will follow buddy separation procedures if required.
- My weights will remain clear for easy removal in an emergency.
- (divers only) I will commence each dive by undertaking a buddy check and each dive series by performing a buoyancy check to ensure I am neutrally buoyant at the surface.
- (divers only) I will follow the agreed dive plan, including directions, dive times, maximum depths, minimum air reserves, ascent rates, and decompression requirements including safety stops.
- (divers only) I will maintain neutral buoyancy underwater and positive buoyancy at the surface.

Signature	Date
Signature of parent or guardian if under 18	Date

Waiver of the right to sue- Diver or snorkeller to complete

EXCLUSION OF CERTAIN RIGHTS TO SUE

The purpose of this agreement is to exclude the liability of the Provider for any personal injury or death to the Participant and other people in the care and control of the Participant howsoever caused, who signed this form as acknowledgment of the terms and conditions of this agreement. By signing this form you are waiving your rights to sue the Provider for losses relating to personal injury or death arising from the provision of Recreational Services to you and your participation in the event, activity or competition (hereinafter referred to as “the recreational activity”). Under the provisions of the Trade Practices Act and Various State Laws conditions are implied into contracts that mean that the Provider of Recreational Services, noted below, is required to ensure that the Recreational Services it provides to you are rendered with due care and skill, are fit for the purpose for which they are commonly bought as it is reasonable to expect in the circumstances or might reasonably be expected to achieve the result you have made known to the Provider.

Name and address of Provider

--

The Participant acknowledges that the recreational activity being undertaken is an activity being undertaken for the purposes of recreation, enjoyment or leisure that involves a significant degree of physical risk. The Provider acknowledges that they are providing the Recreational Services detailed below. This may entail providing facilities for participation in a recreational activity, or training a person to participate in a recreational activity, or supervising, adjudicating, guiding or otherwise assisting a person’s participation in a recreational activity.

The Participant hereby acknowledges that in participating in the recreational activity that there are risks involved to him or her or other people in his or her care and control. The Participant also acknowledges that the purpose of the recreational activity is for the benefit of the Participant and for the benefit of those people in the care and control of the Participant and that at all times the Participant is responsible for his or her own actions and the actions of those other people in his or her care and control.

Description of Recreational Services

Recreational diving and snorkelling and associated activities

Steps taken by Provider to avoid the danger of personal injury or death (NOTE: This list of not intended to be exhaustive. The Provider may have taken other steps not listed, herein, to avoid the danger of personal injury or death.

Recreational diving and snorkelling is conducted using documented procedures developed through a process of risk assessment. The control measures selected include:

- Competent workers with designated duties and responsibilities
- Procedures for the conduct of the activity:
 - Pre activity- planning, preparation and assessment
 - During the activity
 - Post activity
- Supply of appropriate equipment
- Emergency procedures

The Participant acknowledges that during all times while he or she is participating in the recreational activity he or she does so at his or her own risk. The Participant and other people in the care and control of the Participant will not hold the Provider or any of its employees or agents liable for any personal injury or breach of contract whether caused by the negligence of the Provider its employees or agents howsoever caused or otherwise. The Participant acknowledges that in the event that he or she or any of the other people in his or her care and control find either or any of them is in difficulty during participation in the recreational activity, that he or she are to stop the activity or request that the activity be stopped if appropriate, and seek help and/or assistance and advice.

Declaration and signature

By signing this agreement I understand that the Recreational Services about to be sold to me as set out in this form may result in personal injury or death to me or the persons in my care and control. By signing this agreement I understand that I am waiving my rights and the rights of the persons in my care and control, to sue the Provider for losses relating to personal injury or death to me or to the persons in my care and control, which are sustained as a result of my participation in the recreational activity, whether caused by the negligence of the Provider its employees or agents howsoever caused or otherwise.

Signature of Participant

Printed name

Signature of parent or guardian (minors)

Address

 State PostCode

Date:

**Appendix C
Diver Assessment**

Participant to complete

Name	
Address	
Age	
Emergency contact name and telephone	

Assessment

Please circle an answer the following questions accurately regarding your fitness and diving experience relevant to the dives to be undertaken.

Since completing your last dive medical assessment (if any), have you suffered any illness or injury that may affect your ability to dive safely?	YES/NO	DESCRIBE	
Are you currently suffering any illness or injury?	YES/NO	DESCRIBE	
Are you currently taking any prescription medication, other than the contraceptive pill?	YES/NO	DESCRIBE	
Certification (highest level achieved)	AGENCY	LEVEL	DATE
Specific relevant certification (e.g. night dive, EANx)	AGENCY	LEVEL	DATE
	AGENCY	LEVEL	DATE
Dive experience	TOTAL DIVES	LAST 12 MONTHS	
Specific relevant experience (e.g. current, poor visibility, rebreather use)	EXPERIENCE	TOTAL	12 MTHS
	EXPERIENCE	TOTAL	12 MTHS
	EXPERIENCE	TOTAL	12 MTHS
Have you dived in Victorian or similar sea conditions?	YES/NO	NUMBER	LAST DIVE

Dive supervisor to complete

Diver fitness and experience assessed?	YES	NO
Specific risks and additional controls recorded on dive plan?	YES	NO
Dive buddy name		
In water supervisor/ instructor name		

Appendix D

Instruction and advice to divers

- Assessment of English language skills of participants

Duties of participants

- All persons at this workplace have a legal duty or obligation to behave safely and follow health and safety instructions.
- The business may terminate any diving arrangements in its control if the participants do not follow health and safety instructions or behave in an unsafe manner towards themselves or others.

General diving OHS

- Introduction of dive supervisor, lookout, first aid personnel and other relevant persons, including how to identify and locate these persons.
- Location of emergency equipment and facilities, including nearest recompression facility.
- Emergency procedures- including recall, signalling distress (include signalling devices), and rescue procedures
- Divers may only dive when all required diving equipment is in place.

Advice on safe diving practices

- Allow an appropriate amount of air, or other breathing gas, for a safe ascent to the surface including safety stops.
- Regularly monitor their own and their buddy's breathing gas throughout the dive. Consider depth and currents affecting breathing gas consumption. Actions to take if breathing gas is lost.
- Stay close to their buddy(s) throughout the dive and on the surface. Provide sufficient supervision of their buddy(s) to provide assistance if required.
- Buddy separation procedures (including threesome or other group arrangements)
- Undertake a buddy check before each dive. Ask divers to identify if they are unfamiliar with any equipment they are using, including speciality or emergency equipment.
- Ensure all divers perform a buoyancy check on the surface when required. Each diver should be neutrally buoyant on the surface with any buoyancy devices deflated.
- Pay particular attention to buoyancy control during the dive, especially during the ascent.
- Do not exceed depths greater than you have been trained to or have experience.
- Head count and dive safety log procedures to be followed

Decompression management

- All divers shall consistently and conservatively follow one decompression model:
 - a recognised dive table; or

- a dive computer or
- a dive planning software.
- Particular care shall be taken to not exceed the maximum ascent rate of the decompression model. No ascents should exceed 18m/minute.
- Multiple ascents, multiple dives and multi day diving may increase the risks of DCI. Divers should show increased caution and reduce exposure in these situations.
- Drink water before and after each dive to remain hydrated
- All dives shall conclude with a safety stop where possible and it is safe to do so. However divers should be aware of circumstances when, if a conservative dive profile has been followed, they may omit a safety stop if undertaking the stop may create a further risk. E.g. low on breathing gas or drifting in a current.
- All planned decompression stops will be completed where it is safe to do so.
- Follow recommended practices for flying after diving and altitude exposure
- Risks from nitrogen narcosis
- Risks from decompression stop diving (risk of DCI, gas consumption, cold, drift)
- Risks of exertion after diving (DCI)
- Risks associated of diving whilst ill (e.g. colds, flu)

EANx diving

- The maximum operating depths for the gas mixture
- Loss of breathing gas procedures
- For an EANx rebreather, to follow the manufacturers requirements and recommendations in respect to pre-dive checks, emergency procedures, carbon dioxide scrubber procedures for the model being used.

Mixed gas diving- SCUBA

- The maximum and minimum operating depths for the gas mixture
- Gas change over depths
- The sequence and role of each diver
- Gas turn around pressures
- Run times
- Omitted decompression procedures
- Loss of breathing gas procedures
- Buddy separation procedures
- Loss of ascent path procedures
- Buddy checks, including in water checks for leaks, regulator location, valve location and correct operation.

Mixed gas diving- closed circuit rebreathers

- Omitted decompression procedures
- Loss of breathing gas procedures
- Buddy separation procedures
- Loss of ascent path procedures

- Buddy checks, including in water checks for leaks, equipment location and correct operation.
- To follow the manufacturers requirements and recommendations in respect to pre-dive checks, emergency procedures, carbon dioxide scrubber procedures for the model being used.

Pre- dive briefing

- Objectives of the dive
- Boundaries and description of the dive site, including depths
- Location of any lines on the surface of or to the dive site
- Navigation advice, including compass bearings and effects of currents if relevant
- Maximum depth limits
- Maximum dive time limits
- Minimum cylinder pressure to commence ascent
- Minimum surfacing cylinder pressures
- Decompression procedures
- Actual environmental conditions (depth, terrain, currents, visibility, marine creatures)
- Specific site hazards e.g. risks during entry and exit

Appendix E
Dive Safety Log (Air)

Dive Business:							Date:					
Dive supervisor:							Location and vessel:					
Name	Buddy/ group	Assess.	Gas in	Time in	Time out	Max depth	BT/DT	Gas Out	Pr Group	SI	Rp Factor	Signature
Dive supervisor's signature							Vessel Master's signature					
Completed?		Y/N	Sign:				Completed?			Y/N	Sign:	

Appendix F Incident report

General

- The dive/snorkel supervisor shall ensure this report is completed as required. All incidents where first aid is given shall be reported. Near miss incidents shall also be reported, for example, searches for divers.
- The detail of reports should reflect the seriousness of the incident. When appropriate statements should be given by all workers and other witnesses, including any buddies.
- To allow reporting to regulatory agencies, the OHS Manager shall be advised of any incident as soon as possible.
- Any other notes taken shall be attached to this report, e.g. running log

Date and time of incident	
Location	
Environmental conditions on site	
Vessel	
Activity being undertaken	
Dive/snorkel supervisor	
Other workers and duties	
Other workers and duties	
Other workers and duties	
Other workers and duties	
Other workers and duties	
Injured party name	
Address	
Age	
Next of kin	
Dive profile details	
Injury description	
Buddy name and address	
Equipment worn by injured person (detail)	
Rescue procedure followed (describe)	
Missing person procedure followed	
First aid given	
Evacuation procedure followed	
Emergency contacts (name, time,	

organisation)	
Incident description:	

Appendix G

Rebreather diver checklist

When a diver is using a rebreather, any dive supervisor should use the following list to check the rebreather diver has assembled and tested the equipment properly. This list does not replace any advice or instruction from a rebreather manufacturer or supplier.

The rebreather diver shall:

- Check the rebreather's scrubber unit is operational and not expired.
- Check the unit's gas flow rate
- Tested mouthpiece check valves
- Checked any bypass valves for function
- Conducted a positive pressure test
- Conducted a negative pressure test
- Analysed the gas supply
- Checked the analyser is in test
- Checked any redundant gas breathing system is working
- Check any oxygen partial pressure monitors

When appropriate the diver shall in addition:

- Check all electronic oxygen injection solenoids are working
- Check manual oxygen injection is working
- Check any diluent injection system is working

Appendix H
Snorkelling plan and checklist

To be completed by the snorkelling supervisor. The document shall remain at the snorkelling site and then be returned for review and archiving to the business premises

Business conducting recreational snorkelling	
Date	
Location	
Objectives	

Organisation

Snorkelling supervisor	
Lookout(s)	
Rescuer(s)	
First aid provider(s)	
Snorkel guide(s)	

Snorkeller assessment, statement of understanding and waiver

All snorkellers assessed and completed statement of understanding and waiver?		(Tick)
At risk snorkeller name	Risk factor	Additional control measure(s)

Environmental assessment

		Site 1	Site 2
Water depths (m)			
Temperature (°C)			
Surface conditions (describe)			
Currents (strength and direction)			
Hazardous marine animals			
Other vessels			
Other hazards?			
Environmental hazard	Specific risk factor	Additional control measure(s)	
<i>E.g. Current</i>	<i>Moderate SE current</i>	<i>Deploy lines from vessel. All snorkellers in guided groups</i>	

General Risk Assessment

Consider diving related hazards (e.g.: Specialised snorkelling tasks or equipment, Other marine users, including shipping movements, Pollution, Isolation, Water pressure differentials- e.g. inlets, outfalls, Entanglements) and associated hazards (e.g.: Slips trips and falls, Falling objects, Lifting and twisting, Winches, anchors, moorings and lines)

Hazard	Who	Risk (H/M/L)	Control measures (including emergency procedures)
E.g. slipping on rocks	All	M	Best entry/exit routes identified. Snorkellers advised to slide into water. Monitored by SS. General first aid if required.

Preparation checklist

	(Yes/No comments)
Snorkelling equipment supplied and checked (with appropriate spares)	
Rescue equipment, first aid kit, oxygen equipment, communications and emergency plans checked	
Access and egress checked and suitable?	
Site(s) generally appropriate for objectives?	
Vessels safe and appropriate?	
Other	

Headcount

	Number	Signature
Total prior to snorkelling commencing	Snorkel 1	
	Snorkel 2	
Total after snorkelling concludes (prior to departure)	Snorkel 1	
	Snorkel 2	

On site checklist

Item	Snorkel 1 Yes/no comments	Snorkel 2
Advice and instruction given to all snorkellers?		
Pre-snorkel briefing given?		
Lookout on duty?		

snorkellers reassessed for competence, health and nervousness		
All control measures in place?		
Other		

Post snorkel

Item	Snorkel 1 Yes/no- comments	Snorkel 2
Head count completed?		
Incident report completed if required? Unsafe behaviours noted and addressed?		
Control measures reviewed? Do they work and are they adequate?		
Records completed and returned (Snorkeller assessments, incident reports, this plan)		

The snorkel plan and checklist has been completed as required		
	Signature (snorkelling supervisor)	Date

**Appendix I
Snorkeller Assessment**

Participant to complete

Name	
Address	
Age	
Emergency contact name and telephone	

Assessment

Please circle an answer the following questions accurately regarding your fitness and snorkelling experience

Rate your swimming ability	POOR	AVERAGE	GOOD
Rate your snorkelling ability	POOR	AVERAGE	GOOD
Rate your fitness	POOR	AVERAGE	GOOD
Have you snorkelled in Victorian or similar sea conditions?	YES		NO
Are you intending to breath hold dive?	YES		NO
Are you suffering from any medical condition that may be made worse by exertion, e.g. heart conditions, asthma, some lung diseases?	YES (describe)		NO
Are you suffering from any condition liable to affect your consciousness, e.g. epilepsy, diabetes?	YES (describe)		NO
Are you suffering from asthma that can be brought on by cold water or salt water mist?	YES (describe)		NO

Snorkelling supervisor to complete

Snorkeller fitness and experience assessed?	YES	NO
Specific risks and controls recorded on snorkel plan?	YES	NO
Snorkel buddy name		
Snorkel guide name		

Appendix J

Instruction, training and advice for snorkellers

The Snorkelling supervisor should ensure appropriate information and advice is provided to all snorkellers. The assessment of the snorkellers should assist in determining what information is appropriate. If in doubt, all information should be provided.

Introduction

All snorkellers

- Assessment of English language skills of participants
- Introduction of activities coordinator, lookout, guides and other relevant persons, including how to identify these persons.
- That snorkelling is a potentially strenuous water-based activity that carries inherent risks including the risk of death or serious injury.
- All snorkellers must honestly complete the snorkeller assessment, statement of understanding and waiver document.
- All persons at this workplace have a legal duty or obligation to behave safely and follow health and safety instructions.
- The business may terminate any snorkelling arrangements in its control if the participants do not follow health and safety instructions or behave in an unsafe manner towards themselves or others.
- Snorkellers should be advised that they should discuss any concerns about snorkelling with the snorkelling supervisor prior to snorkelling. Particularly the snorkelling supervisor needs to know who are weak or inexperienced swimmers and snorkellers, those with age or medical concerns and those who intend to breath hold dive.

Medical conditions

All snorkellers

- Snorkelling is a strenuous activity and may increase the risks to health of persons suffering from:
 - Medical conditions that may be made worse by physical exertion such as heart disease, high or low blood pressure, asthma, some chronic lung complaints, shortness of breath, emphysema; or
 - Medical conditions that may result in a loss of consciousness such as some forms of recent head injury of concussion, diabetes, fainting, fits or epilepsy; or
 - Asthma that can be brought on by cold water, inhalation of salt water mist, anxiety, exercise and other factors.
 - Under the influence of alcohol or drugs.
- If you suffer from any of these conditions, or are an older person, please advise the activities coordinator.
- Advise these persons of the additional risk.
- If they still intend to snorkel, they should be advised to:

- Snorkel in an area which allows the lookout or activities coordinator to offer closer supervision
- Wear a personal flotation device able to support them in a relaxed state
- Snorkel closely with a buddy.

Snorkelling environment

All snorkellers

- The area in which snorkelling is to take place, boundaries, times and relevant environmental conditions, for example boating channels, temperatures, marine animals, wind and tide strength and direction.
- Location of lookouts and the activities coordinator
- Location and use of any flotation devices in the water, such as lines or buoys

Dealing with certain problems

All snorkellers

- Signals and other communications. Include distress and recall signals.
- How to rest by lifting your face clear and relaxing on your back
- Maintaining the buddy system. Advise buddies to remain close, actively check their buddy and advise the lookout if they are unable to locate their buddy.
- No alcohol prior to snorkelling.
- Managing heat and cold by wearing appropriate protection both in and out of the water.
- Head counting procedures to be followed.

Snorkelling techniques

Inexperienced snorkellers

- Selecting and using snorkelling equipment
- How to adjust and fit mask, snorkels and fins
- How to clear water from the masks and snorkel
- How to use the mask, snorkels and fins
- Location and availability of personal flotation devices and the advisability that they be worn by inexperienced snorkellers, swimmers, children, older persons and those with medical conditions.
- What to do in the case of equipment failure

Dealing with certain problems

Inexperienced snorkellers

- Inexperienced snorkellers should practice close to the vessel or shore first.
- Be aware of your own limitations and take these into account whilst snorkelling
- Lie on your back and signal for assistance if experiencing difficulty or distress in the water.

Breath hold diving

Breath hold divers

- The additional risk posed by hypoxic blackout which can lead to unconsciousness and death.

- The risk is increased significantly by hyperventilating before diving by taking repeated (more than 3 or 4) deep breaths before descending; OR by doing deep dives. Consequently breath hold divers should not hyperventilate in this manner.
- Experienced breath hold divers are at particular risk in that they do longer and deeper dives.
- Breath hold divers should always dive in buddy pairs where one buddy remains on the surface and observes the other buddy whilst they are diving. Using a line or other object to provide orientation will assist in this.
- Breath hold divers using weight belts should be carefully weighted to ensure that they are neutrally or positively buoyant whilst at the surface. The weight belt should have a quick release mechanism and divers should be familiar with its operation.

Pre-Snorkel briefing

All snorkellers

Immediately before snorkelling commences, and using site diagrams or photos as appropriate, the snorkeller supervisor should emphasise the following points:

- On-site environmental conditions
- Boundaries of the snorkelling area
- Times when snorkelling is being conducted
- Specific site hazards
- Location of lookout
- Emergency and recall signals
- Buddy and guided group procedures
- Advisability of wearing personal flotation devices
- Buoyancy check for divers using weight belts.

Appendix K

Example missing diver or snorkeller plan

General

In the event of any type of accident or emergency:

- Do not risk further injury to any other person under any circumstances
- Contact Emergency Services as soon as possible for assistance
- DO NOT PANIC, WORK AS A TEAM, COMMUNICATE

Duties

Dive/snorkel supervisor

- Dive/snorkel supervisor notified of missing person
- Advise vessel master and lookout
- Assess degree of urgency (Consider: Time Overdue, dive plan and objectives, possible decompression & air status)
- Record where and when last seen; and dive details (question buddy)
 - Any obvious problem
 - When & where last seen, what diver was doing, direction swimming
 - Maximum depth reached
 - Last known gas pressure and likely gas consumption rate
 - Divers likely action in the event of a buddy separation
 - Where you surfaced relative to the position you last saw the other diver
- Mark last known location (GPS and shot line)
- Deploy current/drift marker
- Recall other divers and snorkellers
- Organise as appropriate
 - Surface search using snorkel pairs
 - Underwater search using buddy pairs.
 - Note: An underwater search should only be undertaken where there is both a reasonable chance of being able to rescue a diver and where there is no additional risk to the rescuing divers. Examples of unacceptable risks include insufficient gas supply, hypothermia, wreck penetration, solo diving, grossly exceeding decompression limits
- Complete incident records
- Assume appropriate duties of the vessel master when shore diving (see below)

Lookout:

- Continue searching surface for bubbles, along the shoreline, floats, signalling devices or divers.
- Use binoculars and returned customers to assist.
- Observe current/drift marker and record bearing and speed of drift
- Scan 360 Degrees
- Consider current movement and possible changes.

- Once the Diver is spotted, do not lose sight of the diver.
- Report to dive/snorkel supervisor

Vessel Master (or dive/snorkel supervisor if no vessel master)

- Notify emergency services and local vessels for assistance
 - VHF Ch 16 Pan Pan
 - 000 Rescue Coordination Service and Water Police
 - (refer to Emergency Contacts list)
- Check that the Diver has not left the area or boarded near by Boats.
- Assist with or undertake search as directed.
- Maintain a running log of events and times in the Ship's log
- Liaise with dive/snorkelling supervisor
- Advise emergency services and assisting vessels at conclusion

Appendix L

Example rescue plan

General

In the event of any type of accident or emergency:

- Do not risk further injury to any other person under any circumstances
- Contact Emergency Services as soon as possible for assistance
- DO NOT PANIC, WORK AS A TEAM, COMMUNICATE

Duties

Dive snorkel supervisor

- Assist rescuer.
- Recall divers/snorkellers.
- Undertake headcount.
- Set up O2 and get first aid kit.
- Assist egress & commence/assist first aid as necessary
- Complete incident records.
- Assume appropriate duties of the vessel master when shore diving (see below)

Rescuer

Assess rescue options- SAFE, QUICK, EFFECTIVE

- Tender
 - Rescuer and one other crew in tender
 - Take radio and resuscitation mask
 - Proceed to person
 - Remove weight belt and Scuba unit if necessary
 - Egress into dive tender – horizontal if possible
 - Assess and return- airway maintenance and commence CPR if required.
- Main vessel
 - Assist master of vessel to do rescue from main vessel- as from tender
- Throw/swim
 - Rescuer throws float line to assist in pulling person to main vessel; OR
 - Rescuer enters water & assists person to main vessel.
 - Rescuer Assess injuries and advise vessel
 - Return to main vessel giving first aid if required
 - Maintain airway and provide rescue breaths as necessary
 - Rescuer and other persons lift person onto main vessel- horizontal if possible
- Move to assessment and first aid position
(If practical retrieve scuba unit for any investigations)

Lookout

- Advise dive/snorkel supervisor and others a rescue is required.
- Attempt to determine if conscious or unconscious.

- Keep the person in sight at all times
- If the boat has to manoeuvre, advise the master of any snorkellers/divers and warn them to keep clear of the boat.
- Look out for divers and snorkellers surfacing
- Assist as directed.
- Commence running log.
- Reassure & direct other passengers.

Master of vessel

- Main vessel used for rescue:
 - Attach a float to the mooring line to act as a datum and for others in the water; or deploy a shot line if anchored.
 - When approaching the person, remember the following:
 - Sound air horn to alert people to move clear of the boat and motors
 - Approach at a safe speed. Be careful not to run into anyone
 - Approach from downwind if possible, so the boat is not blown over victim.
 - Be careful boat is not blown or swept by current into a dangerous area.
 - Place the motor into neutral when you are close to and are recovering the person. (Or any other Divers / Snorkellers)
- Assist rescuer.
- Contact emergency services. (refer to Emergency Contacts list)
- Prepare vessel for evacuation/ transfer.

Appendix M

Example First Aid Plan

General

In the event of any type of accident or emergency:

- Do not risk further injury to any other person under any circumstances
- Contact Emergency Services as soon as possible for assistance
- DO NOT PANIC, WORK AS A TEAM, COMMUNICATE

Note: Most first aid training organisations and diver training organisations publish first plans and flow charts. These should follow the current resuscitation guidelines from the Australian Resuscitation Council. These plans should be adapted for use with diving and snorkelling first aid by including procedures for first aid the following matters. Advice for diving injuries can be obtained through the Divers Emergency Service hotline- 1800-088200.

- Conscious persons suffering from diving injuries or illness should be kept horizontal wherever possible, including during rescue and evacuation. An appropriate stretcher may assist in this. Unconscious persons should be kept in the recovery position.
- Oxygen should be administered for all diving and snorkelling related injuries or illnesses using an appropriate delivery device.
- Cases of possible decompression illness should be referred to the nearest recompression chamber as soon as possible.
- Signs and symptoms of decompression illness may not be obvious and may appear some time after diving ceases. They may include:
 - Pain in joints and muscles
 - Unusual fatigue
 - Pins and needles (pricking and itching)
 - Numbness
 - Headache
 - Weakness or paralysis
 - Dizziness and nausea
 - Difficulty breathing
 - Unconsciousness
- The 5 minute neurological exam is attached in to the first aid plan to assist in determining signs and symptoms of decompression illness.
- If hypothermia is suspected, avoid any further cooling by removing wet clothing (with the possible exception of wet suits) and insulating the diver with warm, wind-proof material(s). The head should be covered. Oral fluids should be warmed, but should only be given to fully conscious persons. A cold diver who has stopped shivering or who is unconscious represents a medical emergency and requires careful handling and urgent evacuation to the nearest appropriate treatment facility.
- The first aid kit and training should include responses for any local marine envenomation risks.

Duties

Dive/snorkelling supervisor

- Liaise with first aid provider
- Ensure emergency services are notified if required. Seek general or specialised medical advice. (refer to Emergency Contacts list)
- Prepare incident information (dive profile, symptoms etc) to accompany victim.
- Complete incident records and secure equipment

First aid provider

- Give first aid as required
- Monitor and reassure person
- Request assistance if required.
- Liaise with supervisor

Appendix N

Example Evacuation Plan

General

In the event of any type of accident or emergency:

- Do not risk further injury to any other person under any circumstances
- Contact Emergency Services as soon as possible for assistance
- DO NOT PANIC, WORK AS A TEAM, COMMUNICATE

Duties

Dive/ snorkel supervisor

- Liaise with vessel master
- Recall all persons to the vessel or shore
- Conduct a headcount and ensure no persons are left behind.
- Prepare incident information (dive profile, symptoms etc) to accompany victim.
- Complete incident records and secure equipment
- Assume appropriate duties of the vessel master when shore diving

First aid provider

- Give first aid as required
- Monitor and reassure person

Master of Vessel

- Liaise with dive/snorkel supervisor
- Contact emergency services
 - VHF Ch 16 Pan Pan
 - 000 Rescue Coordination Service and Water Police
 - (refer to Emergency Contacts list)
- Contact Divers Emergency Services hotline for advice. 1800-088200
- Advise the following
 - Your Location
 - Number of casualties
 - Nature of injuries e.g., life threatening, DCI, cuts
 - First aid currently being conducted e.g.. CPR , bleeding control
 - Assistance required
- Follow advice of emergency services
- Proceed to nearest rendezvous with ship or shore EMS
- Prepare for helicopter transfer
 - Manoeuvre as directed.
 - Secure loose items
 - Drop aerals if possible
 - Do not attach winch cable from helicopter to any object
 - Allow the helicopter winch cable to earth before touching

Appendix O

Five Minute Neurological Examination

Examination of an injured diver's central nervous system soon after an incident, and thereafter at regular intervals, may provide valuable information to the physician responsible for treatment. The Five-Minute Neuro Exam is easy to learn and can be performed by individuals with no medical experience. The examination can be done whilst reading from this manual. Perform the following steps in order, and record the time, and the results for each test.

1. Orientation

- Does the diver know his/her name and age?
- Does the diver know the present location?
- Does the diver know what time, day, year it is?

Even though an individual may appear alert, the answers to these questions can reveal confusion. Do not omit them.

2. Eyes

Have the diver count the number of fingers you display, using two or three different numbers of fingers. Check each eye separately and then together. Have the diver identify a distant object. Tell the diver to hold head still – or you gently hold it still – while placing your other hand slightly less than a half metre in front of the face. Ask the diver to follow your hand. Now move your hand up and down, then side to side. The diver's eyes should follow your hand and should not jerk to one side and return (called nystagmus). Check that the pupils are equal in size.

3. Face

Ask the diver to whistle or purse their lips. Look carefully to see that both sides of the face have the same expression whilst whistling. Ask the diver to grit their teeth. Feel their jaw muscles to confirm that they are contracted equally.

Instruct the diver to close his/her eyes while you lightly touch your fingertips across their forehead and face. Confirm that sensation is present and normal, and feels the same everywhere.

4. Hearing

Evaluate the diver's hearing by holding your hand about two feet from the individual's ear and rubbing your thumb and finger together. Check both ears by moving your hand closer until the diver hears it. Check several times and compare with your own hearing. N.B. If the surroundings are noisy, this test is difficult to evaluate. If necessary, ask any bystanders to be quiet and turn off unneeded machinery.

5. Swallowing Reflex

Instruct the diver to swallow while you watch their "Adam's apple" to be sure it moves up and down.

6. Tongue

Instruct the diver to stick out their tongue. It should come out straight in the middle of the mouth without deviating to either side.

7. Muscle Strength

Instruct the diver to shrug their shoulders while you bear down on them, to observe for equal muscle strength. Check the diver's arms by bringing their elbows up level with their shoulders, hands level with the arms, and touching their chest. Instruct the diver to resist while you pull their arms away, push them back, and move them up and down. The strength should be approximately equal in both arms in each any direction. Check leg strength by having the diver lie flat and raise and lower their legs while you resist the movement.

8. Sensory Perception

Check on both sides by touching lightly as was done on the face. Start at the top of the body and compare sides while moving downwards to cover the entire body. The diver's eyes should be closed during this procedure. The diver should confirm the sensation in each area before you move to another area.

9. Balance and Coordination

Not to be attempted if a diver has cerebral signs/symptoms of DCI within 30 minutes of surfacing or on a rocking boat.

Be prepared to protect the diver from injury when performing this test. Have the diver stand up with feet together, close their eyes and stretch out their arms. The individual should be able to maintain balance if the platform is stable. Your arms should be around, but not touching the individual, in case they fall.

Be prepared to catch a diver who starts to fall.

Check coordination by having the diver move an index finger back and forth rapidly between their nose and your finger – held slightly less than a half meter from their face. In another test of coordination, instruct the diver to slide the heel of one foot down the shin of the other leg while lying down.

Conduct these tests on both right and left sides, and observe carefully for differences between the two sides. Tests 1, 7, and 9 are the most important, and should be given priority if not all tests can be performed.

The diver's condition may prevent the performance of one or more of these tests. Record any omitted test, and the reason. If any of the tests appear abnormal, injury to the central nervous system should be suspected.

The tests should be repeated at frequent intervals while awaiting assistance, to determine if any change occurs. Report the results to the emergency medical personnel responding to the call.

Good diving safety habits would include practicing this examination on normal uninjured divers, to become proficient in the test.

Appendix P

Example First Aid Kit

1. Container

The container should protect the contents of the kit from dust and damage. If any modules are to be included, the containers should be large enough to hold them, preferably in separate compartments. The container should be easily recognisable, for example, a white cross on a green background prominently displayed on the outside, and should not be locked.

2. Contents

Note: Appropriate first aid facilities will vary from one workplace to the next. Businesses should ensure that first aid kits contain contents in quantities appropriate for their workplace, taking into consideration the outcomes of the assessment conducted

In most workplaces the following items are likely to be included in a basic first aid kit:

- Emergency Services telephone numbers and addresses
- Name and telephone number of workplace first aid providers
- Basic first aid notes that follow current Australian Resuscitation Council protocols.
- Individually wrapped sterile adhesive dressing
- Sterile eye pads
- Sterile covering for serious wounds
- Triangular bandages
- Safety pins
- Small sterile unmedicated wound dressing
- Medium sterile unmedicated wound dressing
- Large sterile unmedicated wound dressing
- Adhesive tape
- Rubber thread or crepe bandage
- Disposable gloves
- Scissors

ADDITIONAL MODULES

The business should assess the need for additional modules for the first aid kit where particular hazards exist. Some examples of commonly needed modules in the workplace are as follows:

Remote Locations.

In workplaces where people work in remote locations, it is likely that the first aid kit will include the following items:

- emergency reference manual
- broad crepe bandages (for snake bites)
- cervical collar (for spinal/neck injuries)
- large clean sheeting (for covering burns)

- thermal blanket (for treatment of shock)
- whistle (for attracting attention)
- torch/flashlight
- note pad and pencil (for recording treatment given)

Diving and snorkelling

Oxygen resuscitation and therapy equipment (see section 2.6.3 of the OHS manual)

Consideration should be given to provision of the following first aid equipment.

Note: These items may require specific training and ongoing inspection and maintenance.

- Automatic external defibrillator
- Advanced resuscitation equipment including airways

**Appendix Q
Emergency Contact List**

IF IN DOUBT DIAL 000 OR VHF 16 "PAN PAN"

Missing person/Evacuation	Phone	Radio
Water Police		
Coastguard		
VMR		
Ambulance/emergency helicopter		

Medical	Phone	Radio
DES	1800 088 200	
Local hyperbaric		
Local hospital		
Diving GP		

Dive Business	Phone	Radio
OHS Manager		

Appendix R

Notification to Worksafe Victoria

OHS Manager

When

The OHS manager must ensure Worksafe Victoria is immediately notified when they become aware of an incident at the workplace which results in:

- (a) the death of any person; or
- (b) a person requiring medical treatment within 48 hours of exposure to a substance; or
- (c) a person requiring immediate treatment as an in-patient in a hospital; or
- (d) a person requiring immediate medical treatment for—
 - (i) the amputation of any part of his or her body; or
 - (ii) a serious head injury; or
 - (iii) a serious eye injury; or
 - (iv) the separation of his or her skin from underlying tissue (such as degloving or scalping); or
 - (v) electric shock; or
 - (vi) a spinal injury; or
 - (vii) the loss of a bodily function; or
 - (viii) serious lacerations; or
- (e) any other injury to a person or other consequences prescribed by the regulations

Site Preservation

The incident site must not be disturbed until an inspector arrives or until directed by an inspector except to protect the health and safety of a person; or provide aid to an injured person involved in the incident; or to take essential action to make the site safe or prevent a further incident.

Notification

The Occupational Health and Safety Act 2004 requires you to:

1. Notify WorkSafe immediately on 13 23 60. Record the reference number to confirm this action on the approved incident notification form.
2. Keep a copy of the form for at least 5 years;
3. Send this Incident Notification Form to WorkSafe within 48 hours:
 - by post to the WorkSafe Incident Notification Coordinator GPO Box 4306, Melbourne 3001; or
 - by facsimile to (03) 9641 1091; or
 - to WorkSafe, 222 Exhibition Street, Melbourne 3000

Appendix S
Example competency assessment record
Dive plant and equipment

Worker's name:

Specific competencies (Additional sheets maybe used. Specific equipment types may be specified)	Tick one
Hire of equipment	
Sale of equipment	
Supply of equipment for conducted activities	
Assembly, inspection repair and maintenance of equipment	
Supply of compressed air	
Supply of other compressed gases for breathing.	
Other (describe)	

Assessment of competency	Theory	Practical	Method(s) of assessment
A knowledge of the relevant parts of this manual			
A knowledge of the relevant legislation			
Demonstrated practical skills relevant to the task			
Keeping appropriate records			
Emergency procedures if applicable.			

Relevant certificates or other qualifications (list and attach copies to file)

Declaration

(Name) has been trained and assessed as competent to undertake the specific competencies as stated above.

.....
 Equipment supervisor

.....
 Date.

.....
 Candidate

Example Assessment methods- Cylinder filling

Theory questions

1. What Australian Standards apply to the filling of SCUBA cylinders?
2. What documents should be available at the filling station?
3. Describe and interpret the cylinder markings found on a typical alloy cylinder?
4. What questions should be asked of the cylinder owner prior to filling a cylinder?
5. Under what circumstances would you refuse to fill a cylinder?
6. Sketch and describe the filling system, including safety features and shut off valves.

Practical Demonstrations

1. Demonstrate actions to be undertaken to inspect and check a cylinder prior to filling.
2. Demonstrate the safe filling of a cylinder
3. Demonstrate the completion of the batch filling record
4. Demonstrate the actions to be under in the event of:
 - An uncontrolled release of gas
 - An explosion
 - A fire
 - Evacuation

**Appendix T
Compressor Operation Log**

Make	
Model	
Serial Number	

Date	Hours	Oil	Visual	Date	Hours	Oil	Visual

Filter Change			Oil Change		
Due (hours)	Done (date)	Next due	Due (hours)	Done (date)	Next due

Service			
Due (hours)	Done (date)	Next due	Work done:

Maintenance and repair	
Date	Work done:

Appendix U
Filling system inspection and test records

Flexible high pressure hose and fittings annual test (1.5 times max. system pressure)			
Due	Done	Next due	Test pressure and notes

Manifold, pressure connections, supply pipes and fittings 10 yearly hydrostatic test (1.5 max system pressure)			
Due	Done	Next due	Test pressure and notes

Gauges checked against a master gauge of a test gauge every 12 months or 500 hours (see compressor log for hours)				
Due date	Due hours	Done	Next due date	Next due hours

Appendix V
Cylinder filling batch control document

Air- Complete for each similar batch filled

Date	
Filler's name	
Batch identification (e.g. owner's name)	
Cylinder code (ADG code)	
Number of cylinders filled	
Fill pressure	
Gas used	

Date	
Filler's name	
Batch identification (e.g. owner's name)	
Cylinder code (ADG code)	
Number of cylinders filled	
Fill pressure	
Gas used	

Date	
Filler's name	
Batch identification (e.g. owner's name)	
Cylinder code (ADG code)	
Number of cylinders filled	
Fill pressure	
Gas used	

Date	
Filler's name	
Batch identification (e.g. owner's name)	
Cylinder code (ADG code)	
Number of cylinders filled	
Fill pressure	
Gas used	

Date	
Filler's name	
Batch identification (e.g. owner's name)	
Cylinder code (ADG code)	
Number of cylinders filled	
Fill pressure	
Gas used	

Gases other than air (Complete for each cylinder)

Date	
Filler's name	
Cylinder owner's name	
Cylinder serial number	
Fill pressure	
Gas designation (Oxygen, EANx, Trimix)	
O2 % (tested by customer)	
Maximum operating depth (m)	
Calculated N2 % (trimix)	
Calculated He % (trimix)	
Minimum operating depth (m)	
Customer's signature	

Date	
Filler's name	
Cylinder owner's name	
Cylinder serial number	
Fill pressure	
Gas designation (Oxygen, EANx, Trimix)	
O2 % (tested by customer)	
Maximum operating depth (m)	
Calculated N2 % (trimix)	
Calculated He % (trimix)	
Minimum operating depth (m)	
Customer's signature	

Date	
Filler's name	
Cylinder owner's name	
Cylinder serial number	
Fill pressure	
Gas designation (Oxygen, EANx, Trimix)	
O2 % (tested by customer)	
Maximum operating depth (m)	
Calculated N2 % (trimix)	
Calculated He % (trimix)	
Minimum operating depth (m)	
Customer's signature	

Appendix X

SMS Annual Review checklist

The OHS Manager shall produce an annual SMS review report for the business owners or directors. It should also be made available to workers.

It should include:

- An updated version of the OHS manual, current for the next 12 months
- A review of the OHS policy.
- A summary of all hazards identified, risks assessed and changes made to control measures stated in the OHS Manual.
- A review of OHS objectives, targets and report on whether they were achieved.
- A summary of all OHS training and assessments undertaken, including emergency drills.
- A summary of actions and outcomes to monitor the implementation of the OHS manual and SMS.
- A review of incident reports and investigations. This may identify any incident trends.
- Any recommendations, future objectives and targets regarding the OHS Manual and SMS.

On receipt of the review documents, the business owners and directors shall endorse or amend the findings in consultation with the OHS Manager.

GOAL: CONTINUOUS IMPROVEMENT IN OHS

Appendix W

Filling Station Emergency Plan

Note: This plan shall be displayed at the filling stations and relevant workers instructed on its implementation. A diagram of the air filling system showing relevant, gas lines, on/off valves, regulators, safety relief valves and other safety features shall also be displayed at the filling station.

Note: There may be specific relevant legislative requirements regarding the storage and use of compressed gas, particularly gases that are hazardous substances or dangerous goods.

General

In the event of any type of accident or emergency at a filling station:

- Do not risk further injury to any other person under any circumstances
- Contact Emergency Services as soon as possible for assistance (000)
- DO NOT PANIC, WORK AS A TEAM, COMMUNICATE
- If in doubt- SHUT DOWN THE SYSTEM.

Actions to take in the event of an uncontrolled release of gas

Person(s): Equipment supervisor or cylinder filler

Duties:

- Shut down the filling system from as close as possible to the leak source.
- Identify source of leak.
- Give first aid if necessary
- Do not operate again until system is repaired and tested by a competent person

Actions to be taken in the event of a fire

Person(s): Equipment supervisor or cylinder filler

Duties:

- Shut down the filling system from as close as possible to the gas source. Isolate storage cylinders.
- If minor, attempt to fight fire.
- If not minor, evacuate premises
- Give first aid if necessary
- Do not operate again until fire source is identified, the system is repaired and tested by a competent person.

Action to be taken in event of an explosion

Person(s): Equipment supervisor or cylinder filler

Duties:

- Shut down the filling system from as close as possible to the gas source. Isolate storage cylinders.
- Give first aid if necessary
- Evacuate premises

- Do not operate again until explosion source is identified, the system is repaired and tested by a competent person.

Evacuation and assembly

Person(s): Equipment supervisor or cylinder filler

Duties:

- Shut down the filling system from as close as possible to the gas source. Isolate storage cylinders.
- Evacuate premises- ensure all persons are accounted for, including clients.
- Advise neighbouring persons
- Assemble in a safe place, with due regard to the risks of fire and explosion.

Reports and notification

Person(s): Equipment supervisor and OHS manager

Duties: See sections 2.6.4 and 3.6 of the OHS manual and SMS.

Appendix Y
SMS activity planner

SMS activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Annual review									x			
Monthly worker OHS consultation	x	x	x	x	x	x	x	x	x	x	x	x
Induction training	As required											
Worker reviews								x				
Emergency drills	x	x	x	x	x	x	x	x	x	x	x	x
Internal inspection and audits		x			x			x			x	
Incident investigation	As required											

Appendix Z
Hazard Identification Form

Description of hazard:
Who is affected?

Risk assessment			
Severity of injury	Duration and frequency	Probability of occurrence	Risk score (L/M/H)

Control measures (consider immediate measures, hierarchy of controls, multiple control measures and emergency responses)	
Control measure 1	
Control measure 2	
Control measure 3	
Control measure 4	

Implementation of control measures	
Responsible person:	
Implementation actions	
Implementation time frame	

Review				
Control measures successfully minimise risk? (comment)				
Are new risks created by control measures?				
Implementation complete	Date		Signature	

Appendix AA
OHS manual review memorandum

Date of implementation	
Responsible person for implementation	

Section reference	Add/ amend/ delete	New wording

Relevant persons instructed regarding changes		
Name	Date	Signature

OHS manual updated?	Y/N
Date	
Responsible person	

Appendix AC
Example monitoring and inspection checklist

Diving operations

Date	
Activity inspected	
Location	
Dive Supervisor	

Dive supervisor appointed and competent	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Risk plan completed prior to diving	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Diver's assessed. Waiver and statement of understanding completed. Additional control measures if required	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Environmental assessment undertaken and updated. Additional control measures if required	
Observations	
Hazard adequately controlled?	
Remedial actions required	

General risk assessment undertaken. Additional control measures if required	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Equipment supplied adequate, in good condition and clean	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Diver's given instruction and advice, including objectives in a pre dive briefing	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Consistent decompression management system used	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Emergency plans in place. Competent workers in place for lookout, rescue and first aid. Equipment checked.	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Headcounts undertaken and recorded Dive safety log completed and signed as required	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Incidents and hazards reported if required	
Observations	
Hazard adequately controlled?	
Remedial actions required	

Appendix AD
Medical declaration for a resort dive

Surname:		Given name:	
Address:			
Phone:		DOB	
HAVE YOU SUFFERED FROM OR DO YOU NOW SUFFER FROM ANY OF THE FOLLOWING? IF YES PLEASE COMMENT	NO	YES	COMMENT
Asthma or wheezing			
Brain, spinal cord or nervous disorder			
Internal chest surgery			
Chronic bronchitis or persistent chest complaint			
Chronic sinus condition			
Collapsed lung (pneumothorax)			
Tuberculosis or other long term lung disease			
Diabetes mellitus (sugar diabetes)			
Ear surgery			
Perforated ear drum			
Epilepsy			
High blood pressure			
Fainting, seizure or blackouts			
Heart disease of any kind			
ARE YOU PRESENTLY SUFFERING FROM-			
Breathlessness			
Nasal discharge or infection			
Cough			
Hangover			
PLEASE ALSO ANSWER THE FOLLOWING-			
Do you currently have grommets fitted?			
Do you have recurrent ear problems when flying?			
Have you had any illness or operation in the last 6 months not mentioned elsewhere on this form?			
Are you currently taking any medicine or drug other than the contraceptive pill?			
Are you pregnant?			
Have you ingested any alcohol within 8 hours prior to diving?			
Do you understand SCUBA diving can involve heavy physical exercise?			
How do you rate your fitness?	-	-	Poor Fair Good Excellent
How do you rate your swimming ability?	-	-	Poor Fair Good Excellent
Do you understand that by concealing any condition, you might put your life or health at risk?			
Signature:		Date:	
Witness/guardian			
If you are under 18 years of age this form should be checked and signed by a guardian			