

Recreational Caving

Adventure Activity Standards (AAS)

for
Organisations, Guides & Leaders
Conducting Adventurous
Activities for Participants
(Commercial or Non-Commercial)

Supported by



Government of South Australia
Office for Recreation and Sport



Introduction to AAS

The South Australian Adventure Activity Standards (AAS) have been developed to assist organisations, guides and leaders to plan and undertake outdoor adventure activities with dependent participants. This document should be used as part of your organisation's risk management program.

Participants undertaking adventure activities may already have a degree of skill and experience in a particular adventure activity, and as such may be less dependent upon the group leader for guidance and instruction. In these situations, the AAS should be adapted to reflect the experience of group members and the particular situation of the adventure activity.

Regardless of the extent to which the AAS is adopted, each organisation, guide and leader has a duty of care to its participants to have completed a risk analysis of the activity, and developed a risk management approach to address potential and unexpected situations.

The AAS have been prepared with the involvement of a wide cross-section of South Australia's and Victoria's outdoor industry, and reflects minimal acceptable standards of behavior expected when planning and undertaking outdoor adventure activities with inexperienced and dependent participants.

Acknowledgement

In the development and implementation of AAS in South Australia, Recreation SA acknowledges the work of the Outdoor Recreation Centre Inc. in initiating, coordinating and developing AAS through many outdoor recreation groups within Victoria.

These AAS can now be adapted nationally across a number of outdoor adventure activities, and Recreation SA has reviewed and amended the content, in consultation with South Australian outdoor industry representatives, to reflect South Australia's legal, government, environmental, social, education and industry conditions.

The implementation of the AAS in South Australia is recognition of the State's commitment to national minimum industry standards for outdoor adventure activities.

Important disclaimer

The information contained in this publication has been gathered through widespread industry consultation. All reasonable attempts have been made to ensure that it is accurate, relevant and current at the date of publication. Nevertheless, the Adventure Activity Standards (AAS) are only advisory and general in nature and should not be relied upon to meet individual or specific requirements. They are recommendations for voluntary application to adventure activity providers and participants. They are not binding on any person or organisation and have no legal force.

The AAS will not cover each and every circumstance of an adventure activity. Nor can they, when adhered to, entirely eliminate the risk or possibility of loss or injury. Consequently they should be used as a guide only. Whenever using the information contained in this publication or any AAS, all adventure activity providers should carefully evaluate the specific requirements of the intended adventure activity and the persons participating in it. If necessary, advice should be obtained from a suitably experienced and qualified professional person.

This publication and the information and the AAS it contains are made available on the express condition that the Government of South Australia (Office for Recreation and Sport) and Recreation SA, together with the authors, consultants and advisors who have assisted in compiling and drafting this publication and the AAS are not rendering professional advice to any person or organisation and make no warranties with respect thereto and to the maximum extent permitted by law disclaim all liability and responsibility for any direct or indirect loss, damage or liability which may be suffered or incurred by any person as a consequence of reliance upon anything contained in or omitted from this publication.

Supported by members of Recreation SA's Outdoor Standing Committee representing:

- Department for Environment and Heritage
- Operation Flinders
- Bushwalking Leadership SA
- Wilderness Escape Outdoor Adventures
- Venture Corporate Recharge
- BCS Adventure Services
- Scouts SA
- The Association for Horsemanship Safety and Education
- Rock Solid Adventure
- With Good Company
- TAFE SA, Adelaide North

Managed by the AAS Steering Committee representing:

- Department of Education and Children's Services
- Department for Environment and Heritage
- Department for Families and Communities—Office for Youth
- Department for Families and Communities—Youth Adventure and Recreation Service
- Office for Recreation and Sport
- Recreation SA
- TAFE SA, Adelaide North
- Wilderness Escape Outdoor Adventures
- Venture Corporate Recharge
- South Australian Rock Climbing Education Association (SAREA)

Content provided by and endorsed by:

- Australian Speleological Federation (ASF), Caving Leadership and Cave Diving Commissions
- Cave Exploration Group of SA
- Scouts Australia SA Branch, Scout Caving Group
- Flinders University Speleological Society
- Department for Families and Communities—Youth Adventure and Recreation Service

Adventure Activity Standards: why have standards?

AAS are voluntary guidelines for undertaking adventure activities in a manner designed to promote:

1. **Safety** for both participants and providers
2. **Information** for providers against legal liability claims and criminal penalties
3. **Assistance** in obtaining insurance cover.

These AAS are **not** statutory standards imposed by law.

Basis of legal liability

Legal liability for personal injuries or property damage is primarily governed by the law of:

1. Contract
2. Negligence.

Although provisions of statutes such as the *Trade Practices Act 1974 (Cth)* and the *Recreational Services (Limitation of Liability) Act 2002* are also relevant.

Claims in contract

For there to be a claim in contract there must be a legally enforceable agreement (i.e. a contract) between the person who has suffered injury or loss and the provider against whom the claim is being made. For example, there is a contract between a provider and a client, where the provider agrees to provide services for payment. The contract can be in writing or oral, or both. The claim in contract can only be made by one party to the contract against the other party, unlike a claim in negligence, which is not so limited.

Apart from the express terms of the contract, the law will usually imply certain terms into a contract that require a service provider to do a number of things when providing that service. Those implied terms might include a requirement to provide competent guides and instruction, safe equipment, and a general requirement to exercise the degree of reasonable skill and care which is to be expected of a competent provider. Some of these terms will be implied by sections of the *Trade Practices Act 1974 (Cth)* and the *Recreational Services (Limitation of Liability) Act 2002*.

If injury or damage occurs because the provider did not exercise reasonable care in the provision of the service, a Court can find there was a breach of the contract entitling a party to claim compensation (damages) for the loss or injury suffered.

Claims in negligence

Over recent years the law of negligence has undergone substantial legislative change in South Australia. These changes are set out in the *Civil Liability Act 1936 (SA)*.

The essential elements of a claim in negligence are:

1. a duty of care being owed by the provider to take reasonable measures for the safety of their clients/participants

2. a breach of this duty of care
3. the breach of the duty of care being a cause of the harm suffered by the participant.

A successful claim in negligence against a provider will result in an award of damages against that provider to compensate for the loss or injury thereby suffered.

Although the law does not automatically impose a duty of care, it is likely such a duty will be imposed when one party (the provider) assumes responsibility for another in the provision of adventure activities.

The duty of care is a legal requirement imposed by the courts on a provider to take reasonable care to protect a client or participant from foreseeable harm or loss.

If a claim is made and a court finds that a duty of care is owed, the court must then decide what is the appropriate level or standard of that duty of care, to determine if the provider has acted reasonably or alternatively has breached the duty of care. The standard of care is determined by all the relevant circumstances and the particular facts of each case. A court will have regard to the experience of the providers and the clients, the conditions at the time, and ultimately may seek the guidance from experts in the field. A court will find that the standard of care has not been met, (i.e. there has been a breach of the duty of care) if the evidence, on the balance of probabilities, establishes that the provider has not acted reasonably in the circumstances. If that conduct has caused loss and damage the provider will be liable to pay damages to compensate the party who has been injured or has suffered a loss.

For example, in an outdoor recreation activity some participants could find themselves in a situation suited to more advanced participants. There may be persons in the group who have been lead to believe by the provider that a certain skill level was not required and enrolled to join a group mis-described as being for 'beginners'.

If an accident occurred due to their inexperience, and these 'novice' participants were injured, it is possible that a legal action to recover damages might be based as follows:

- in the law of contract, against the provider, if it can be demonstrated that the provider incorrectly described the group as being for 'beginners'
- in the law of negligence, against the leader and guide, as well as the provider because of a failure to adequately instruct, advise and perhaps supervise the group.

The duty of care of the provider is higher than that placed on the ordinary citizen because the provider has agreed to provide services for a reward or assumed a responsibility of care for others, e.g. by holding him/herself out as experts or specialists who have agreed to take participants into potentially dangerous or remote situations.

Whilst not an exclusive list the following is a guide to the standards that should be addressed by any provider, guide, instructor, teacher or staff member:

- ensure the activity is appropriate for the skills and experience of the intended participants
- ensure the intended activity is appropriate given the known, expected and forecast conditions

- provide adequate staff/leader supervision
- provide competent and appropriately trained staff/leaders
- provide safe and properly functioning and adjusted equipment
- provide reasonable food and safe shelter (if relevant to the activity)
- provide reasonable guidance, instruction and direction to participants
- depending on the activity, have an adequate knowledge of the area in which it is to take place and be able to provide reasonable first aid, emergency backup and rescue.

The law will require the provider to protect participants from known hazards, but also from those risks that could arise (that is, those that the provider, instructor, teacher or staff member guide should reasonably have foreseen) against which reasonable preventative measures could be taken.

In these circumstances, in order to limit potential for legal liability and to minimise the risk of injury, each organisation needs to implement risk and safety management processes, which have identified foreseeable risks and put in place measures to control such hazards. For the same reasons, all providers, leaders or guides ought, as a minimum, to have completed appropriate first aid and activity specific training.

This is particularly so where the activity is a specialised one. In these circumstances, as a participant will be seen as relying on the expertise of the provider, leader or guide, a high duty of care will be imposed because they will be considered as having a responsibility for the control, guidance and protection of the participant.

Defences against claims by participants

No Negligence

The most obvious defence to a claim in negligence is for the operator to establish that he/she acted with all reasonable care in the circumstances: that is, was not negligent.

In attempting to do so the following questions must be considered:

- was the risk of harm foreseeable?
- was the risk not insignificant?
- would a reasonable operator have taken additional precautions that would have prevented the harm?

In determining whether a reasonable operator would have taken additional precautions a court will consider the following (amongst other relevant things):

- the probability that harm would occur if care were not taken
- the likely seriousness of the harm
- the burden of taking precautions to avoid the risk of harm
- the social utility of the activity that creates the risk of harm.

Voluntary Assumption of Risk

If it can be proved, on the balance of probabilities, that a participant was fully aware of and freely accepted the risk of suffering injury in an activity then this will be a defence to a claim in negligence. It will not be a defence, however, if the injury was caused by the inexperience or incompetence of the provider, defective equipment, inadequate supervision or instruction as it is highly unlikely that any participant would have consented to accept such risks.

If the risk of harm was an obvious one then there is a rebuttable presumption that the person who suffered the harm was aware of the risk.

Duty to Warn

A person who owes a duty of care to another person to give a warning, or other information in respect of a risk, satisfies that duty if reasonable care is taken to give that warning, or other information. This is potentially very important in the context of an Adventure Activity where it may be prudent for the provider to give all participants printed instructions and warnings (where appropriate) and obtain signed acknowledgements.

However, section 38 of the *Civil Liability Act 1936 (SA)* prescribes that there is no duty to warn of an 'obvious risk', or if there is an applicable code of practice in force under the *Recreational Services (Limitation of Liability) Act 2002*. Further to this, the section does not apply if the plaintiff has requested advice or information about the risk from the defendant or if the defendant is required to warn the plaintiff of the risk either by law or pursuant to the code in force under the *Recreational Services (Limitation of Liability) Act 2002*.

Contributory Negligence

If the accident was caused or contributed to by lack of reasonable care on the part of the participant then this will be a partial defence, according to the apportionment of responsibility made by the court between the provider and the participant. In cases of extreme acts of negligence by the participant, contributory negligence can be very high (e.g. 80–90%) and sometimes a complete defence.

Inherent Risks

A person is not liable in negligence for harm suffered by another person as a result of an inherent risk. An inherent risk is a risk of something occurring that cannot be avoided by the exercise of reasonable care.

Waiver to Sue/Exclusion of Liability Agreements

Amendments to the *Recreational Services (Limitation of Liability) Act 2002*, and the *Trade Practices Act 1974 (Cth)* enables providers of 'recreational services' to modify or exclude a duty of care owed to a consumer by the use of a waiver or limitation of liability. This will only apply where there is no registered code in relation to the recreational service. The amendment will only apply until 1 August 2007, after which time the only manner in which liability will be able to be modified with respect to a recreational service will be in accordance with a registered code.

Good Samaritans, Volunteers, Apologies

Good Samaritans

Under the *Civil Liability Act 1936 (SA)* (as amended) an individual who provides assistance, advice or care to another person in an emergency, where there is no expectation of payment by money or other means, will not be able to be sued for any injury or harm he/she causes if acting in good faith without recklessness (provided the good Samaritan's ability was not significantly impaired by alcohol or drugs).

Volunteers

Pursuant to the *Volunteers Protection Act 2001 (SA)* volunteers are protected from liability for injury to another when they are acting in good faith and without recklessness in the course of carrying out community work for a community organisation. This immunity does not operate if the volunteer's ability to carry out the work properly was impaired by drugs or the volunteer was acting outside the scope of activities authorised by the community organisation or contrary to instructions given by the community organisation.

Expressions of Regret

The *Civil Liability Act 1936 (SA)* provides that no admission of liability or fault is to be inferred from the fact that a person expressed regret in respect of the incident relating to the injury.

Limitation on claims for personal injury damages

Pursuant to the *Civil Liability Act 1936* (as amended) an injured person cannot obtain damages for pain and suffering unless the injured person's ability to lead a normal life was significantly impaired by the injury for a period of at least seven days or medical expenses of at least the prescribed minimum have been reasonably incurred in connection with the injury. The assessment of pain and suffering is assigned a scale value on a scale running from zero to sixty, sixty being the most severe form of injury.

The Act also imposes a cap on damages for pain and suffering of a maximum of \$241,500 (indexed annually) together with other limitations in respect of damages for mental harm, and claims for both past and future economic loss.

Applying the Adventure Activity Standards

Having suitable risk management programs and strategies in place, and ensuring the AAS are met, will minimise the likelihood of injury or loss. Evidence of compliance with such programs and the AAS may also assist in the legal defence of claims and in helping to establish that a provider and its leaders have acted reasonably in the circumstances (i.e. were not negligent). It is also likely such programs will assist providers in obtaining more favourable insurance arrangements.

Disclaimer

The above comments on legal liability in Contract and Negligence and defences and limitations thereto, including recent legislative changes, do not purport to be a complete and accurate description of the law on these topics. The State Government of South Australia (Office for Recreation and Sport) and Recreation SA, its servants and agents are not by these comments providing legal advice to any person, company or organisation and make no warranties with respect thereto and to the maximum extent permitted by law disclaim all liability and responsibility for any direct or indirect loss, damage or liability which may be suffered or incurred by any person, company or organisation as a consequence of or in reliance upon anything contained in, implied by, or admitted in this document.

Contents

Activity description.....	12
Caving activity leader context statements.....	12
Horizontal Caving Leader	12
Laddering Caving Leader	12
Vertical Caving Leader	13
Multi-pitch Vertical Caving Leader	13
Guided Cave Diving.....	14
Definition of terms.....	14
Summary of abbreviations	15
1 Planning.....	15
1.1 Activity plan for recreational caving.....	15
1.2 Pre-trip documentation	16
1.3 Documented site-specific hazards	16
1.4 Emergency strategy.....	16
1.5 Restrictions to participation.....	17
2 Responsibilities of the trip leader/guide.....	17
2.1 Competencies.....	17
2.2 First aid.....	19
2.3 Specific responsibilities of the trip leader	20
2.4 Assistant to the trip leader	21
2.5 Communication and authority	21
2.6 Ratios of trip leader and guides to participants	22
2.7 Group size.....	22
3 Equipment	22
3.1 Equipment used by the group	22
3.2 Equipment used by participants	23
3.3 Equipment used by the trip leader/guide.....	24
3.4 Equipment condition, maintenance and storage	24
4 Environment and conduct.....	24
Waste	26
Fire	27
Camping.....	27
5 Further information.....	28

Activity description

Caving is a highly physical adventure activity conducted underground where natural processes have created passages and caverns of varying sizes and complexity. This AAS applies to any organised caving trip involving dependent participants, commercial or non-commercial.

Caving is also conducted by experienced (peer) groups into complex caves, newly discovered caves or for exploratory cave dives. These trips are beyond the scope of this AAS.

ASF member clubs including the Cave Exploration Group SA, Flinders University Speleological Society or a relevant land manager, e.g. DEH, can be contacted for further details of the requirements for peer group caving.

This caving AAS is written primarily for wild and adventure caves: it is the responsibility of land and cave managers to document standards for show caves.

Caving activity leader context statements

Horizontal Caving Leader

A horizontal caving leader leads trips into caves, which are horizontal and do not require climbing aids to traverse. This includes trips into the horizontal sections of more complex cave systems.

The horizontal caving leader is responsible for the selection of the cave, equipment and safety systems suitable for the level of experience of the group. The participants have a shared responsibility for their own safety, within their level of experience of the activity.

A horizontal cave may have sections of rock which the caving party has to scramble over or squeeze between, but there would not be any sections which require a belay to negotiate. The cave may have other features which the party must negotiate such as rock piles, streams or lakes.

The participants on the caving trip will usually be dependent on the caving leader for navigation in the cave and on how to traverse the cave and its features appropriately.

Laddering Caving Leader

A laddering caving leader leads trips into caves which are principally horizontal in development but contain one or more steep pitches connected by horizontal cave passages that require the party to use a ladder and belay system.

The laddering caving leader is responsible for the selection of the cave, equipment and safety systems suitable for the level of experience of the group. The participants have a shared responsibility for their own safety, within their level of experience of the activity.

The cave may have sections of rock which the caving party has to scramble over or squeeze between, but there would not be any sections which require a belay to negotiate. The cave may have other features which the party must negotiate such as rock piles, streams or lakes.

The participants on the caving trip will usually be dependent on the caving leader for navigation in the cave, on how to traverse the cave and its features appropriately, and how to use caving ladders and belay systems used in the cave.

Vertical Caving Leader

A vertical caving leader leads trips into caves which contain one or more steep pitches, or are principally horizontal in development but contain one or more steep pitches connected by horizontal cave passages that require the party to use caving specific single rope techniques (SRT), or self belay systems on caving ladders.

The vertical caving leader is responsible for the selection of the cave, equipment and safety systems suitable for the level of experience of the group. The participants have a shared responsibility for their own safety, within their level of experience of the activity.

The cave may have sections of rock which the caving party has to scramble, squeeze between or free climb which require a belay or handline to negotiate. The cave may have other features which the party must negotiate such as stream-ways.

The participants on the caving trip will usually be dependent on the caving leader for navigation in the cave, on how to traverse the cave and its features appropriately, and the establishment of rigging and belay systems used in the cave.

The participants on a vertical caving trip will have had previous instruction on the use of abseiling and ascending techniques required to traverse the cave. The caving party may use buddy checks on pitches for the correct use of the ascending and descending equipment. This may involve the participant having the primary responsibility for his or her own safety on the descent and ascent of the pitch.

Multi-pitch Vertical Caving Leader

A multi-pitch vertical caving leader leads trips into caves which are mostly vertical in development, which requires the party to use caving specific single rope techniques (SRT) to negotiate the cave. There would normally be two or more continuous pitches in the cave connecting to other cave passages. A multi-pitch vertical caving leader also leads trips into complex cave systems where a route through the cave involves two or more continuous vertical pitches.

The multi-pitch vertical caving leader is responsible for the selection of the cave, equipment and safety systems suitable for the level of experience of the group. The participants have a shared responsibility for their own safety, within their level of experience of the activity.

The cave may have sections of rock which the caving party has to scramble, squeeze between or free climb. The cave may have other features which the party must negotiate, such as waterfalls.

The participants on the caving trip will usually be dependent on the caving leader for navigation in the cave, on how to traverse the cave and its features appropriately, and the establishment of rigging and belay systems used in the cave.

The participants on a vertical caving trip will have had previous instruction on the use of abseiling and ascending techniques required to traverse a multi-pitch cave. The participants are responsible for checking and using their own ascending and descending

equipment on the rigged rope systems. This will involve the participant having the primary responsibility for his or her own safety on the descent and ascent of the pitch.

Guided Cave Diving

A cave diving guide leads trips into caves which involve cave diving. Depending on the cave to be negotiated, the skills of a cave diving guide may be a companion requirement to Horizontal, Laddering, Vertical or Multi-pitch Vertical Caving Leader.

The negotiation of the cave with cave diving gear and increased emergency and first aid requirements may significantly increase the potential difficulty of the cave.

The cave diving guide is responsible for the selection of the cave, equipment and safety systems suitable for the level of experience of the group. The participants have a shared responsibility for their own safety, within their level of experience of the dry caving activity; however they assume full responsibility for their safety during the cave dive.

The participants on the caving trip will usually be dependent on the cave diving guide for a detailed description and advice on navigation in the underwater cave, and how to traverse the underwater cave passage and its features appropriately.

The participants on a cave diving trip will meet the experience requirements for the type of cave to be traversed, e.g. Horizontal Cave, Vertical Cave, etc. The participants will also have had previous instruction in cave diving and will meet the appropriate cave diving competencies required to traverse the cave.

Definition of terms

Activity Provider: The provider of the activity. This may refer to an organisation (Commercial or non-commercial) and/or a trip leader (commercial or non-commercial).

Organisation: A group of persons organised for a particular purpose and assuming the role of providing a caving activity (activity provider) being commercial (for profit) or non-commercial (not for profit/community group).

Participant: A person whose welfare is the responsibility of a guide or trip leader or instructor. (NOLRS 'Client')

Guide: A person who assumes responsibility for a group of participants on an adventure activity 'Caving' with the intention to offer the experience of the activity and to satisfy the objectives of the trip. (Commercial or not)

Trip Leader: A senior guide who assumes the responsibility of the guide and co-ordinates the entire group, including the guides, to satisfy the objectives of the trip.

Urban: Urban trips are defined in AAS as any trip which is at no point any more than 2 hours from emergency medical attention.

Remote: Remote trips are defined in AAS as any trip which is at any point more than 2 hours from emergency medical attention.

Emergency medical attention: Definitive medical attention being that of a medically qualified person (paramedic, doctor). This may be getting definitive medical attention to the injured participant/s or by getting the injured participant/s to definitive medical attention.

Summary of abbreviations

AAS	Adventure Activity Standards
DEST	Department of Education, Science and Training
NTIS	National Training Information Service
ITAB	Industry Training Advisory Board
SRTA	Sport and Recreation Training Australia
NOLRS	National Outdoor Leaders Registration Scheme
CDAA	Cave Divers Association of Australia
Cth	Commonwealth

1 Planning

The planning section of the activity standards contains the documented administrative aspects of AAS. It is here you will find the requirements that must be completed before undertaking any activity plan.

1.1 Activity plan for recreational caving

Cave selection is the most important consideration when creating an activity plan. Organisations and leaders must select known, mapped caves that meet the objectives of the trip. To do this, the following considerations are to be included:

- Leader/guide to participant ratio (see 2.6 Ratios of trip leader and guides to participants)
- Objectives of the trip (Desired outcomes)
- Group size
- Group skill/experience levels including fitness
- Cave type (horizontal, single pitch, multi pitch)
- Cave environment (wet, dry and ability of cave to withstand visitation with minimal impact)
- Access and remoteness of cave system
- Land managers' requirements (access guidelines, registration, group numbers)
- Equipment requirements.

When selecting the leader and guide/s for a caving trip it is essential to consider the following:

- The leader and guide/s must have the required competency to conduct the trip, effectively manage incidents and to satisfy the planned objectives
- The leader or a guide on the trip must be familiar with the specific cave system being visited
- Competencies must be commensurate to the cave system being visited.

1.2 Pre-trip documentation

Documentation is often seen as a chore and not a minimum requirement. However, there are certain details which a leader and/or organisation must be aware of to maximise safety. The following is agreed to be the minimum required documentation for a caving trip:

- Emergency Strategy (including details set out below in 1.4 Emergency strategy)
- Participant's name, address and emergency contacts
- Participant's emergency contact details
- Participant medical conditions and how they should be dealt with (e.g. asthma (details of management plan required), diabetes, epilepsy, fainting/dizziness, specific allergic reactions, blood conditions which may effect bleeding/clotting, recent or longstanding injuries (e.g. back, knee, ankle), disability, conditions effecting balance, current tetanus or other relevant medical conditions (e.g. heart condition, migraines and/or pregnancy) and any relevant medication)
- Participants must provide signatures to acknowledge inherent risks and to authorise any relevant emergency treatment by a medical officer if required (after a full explanation/brief)
- Participants under the age of 18 must have the signature of a parent/guardian.

All documentation must be readily accessible to the leader and a non-participating contact in the event of an incident/emergency and all individual participants requirements must be appropriately accounted for throughout the trip.

1.3 Documented site-specific hazards

AAS recommend that trip leaders conduct a documented risk assessment prior to any trip and document hazards, changes to expected conditions and how they should be reasonably dealt with. This information should be made readily available within the organisation and reported to the land manager where relevant.

1.4 Emergency strategy

Every emergency strategy must be written to manage incidents and minimise their escalation.

Trip leaders, guides and an appropriate external contact, either within each organisation or otherwise, must be fully aware of the emergency strategy and a summary must be provided as a component of the preliminary group briefing.

A copy of the documented emergency strategy must be kept with other trip documentation (readily accessible to the leader and a non-participating contact in the event of an incident/emergency) and an extra copy must be kept with the relevant external contact.

The trip leader shall communicate with the relevant external contact at designated time/s. Upon failure to do so the external contact shall notify the SES/Police.

The emergency strategy for a caving trip must be specific to each site and trip and must contain:

- Evacuation routes
- Assembly points where appropriate
- Contact details for key organisations (e.g. land manager, emergency services, Police, ambulance) and how they are best contacted (mobile phone, satellite phone, radio)
- Planned start and finish times of the trip.

1.5 Restrictions to participation

Operational restrictions to a caving trip include weather, equipment, land manager/owners requirements, type of cave and restrictions dictated by environmental factors as advised by the land manager or otherwise (including seasonal flora and fauna).

Individual restrictions to a caving trip apply to participants deemed to be under the influence of alcohol or drugs, including prescription drugs that may affect performance and to participants who are unable or unwilling to follow instructions. In a very tight cave or where long reach is essential, individual size may also restrict inclusion. (See 2.3 Specific responsibilities of the trip leader)

2 Responsibilities of the trip leader/guide

This section includes all aspects of the activity plan that involve both the trip leader and the guide. This section covers the specific competency required for various types of cave, difficulty levels and covers basic requirements.

2.1 Competencies

In the absence of any established and recognised national training qualification for caving activity providers, any leader must be confident of having satisfied a process of skill acquisition which must be at least equivalent to that described by the following selected units from the Australian National Training Authority.

A statement of attainment for these units is not compulsory. However, the inclusion of this section is intended to provide a suitable benchmark describing the skills that a leader should have as described within the National Outdoor Recreation Industry Training Package.

Generic

These units relate to the generic competency expected of any individual in a position of leadership or management in the outdoors.

Leadership and Management Skills

Code	Unit name
SRXEMR001A	Respond to emergency situations
SRXFAD001A	Provide first aid
SRXGRO001A	Facilitate a group
SRXGRO002A	Deal with conflict
SRXRIK001A	Undertake risk analysis of activities

SRXINU002A	Apply sport and recreation law
SRXOHS001B	Follow defined OHS policy and procedures

Outdoor Recreation Skills

Code	Unit name
SRONAV002B	Navigate in difficult or trackless areas
SROODR002A	Plan outdoor recreation activities
SROODR005A	Guide outdoor recreation sessions
SROOPS002B	Plan for minimal environmental impact
SROOPS003B	Apply weather information
SROOPS006B	Use and maintain a temporary or overnight site

Caving**Horizontal Caving Leader**

Code	Unit name
SROCVE001A	Move through a cave with minimal impact
SROCVE002A	Navigate in caves
SROCVE020A	Guide horizontal caving trips

Laddering Caving Leader

Code	Unit name
SROCVE001A	Move through a cave with minimal impact
SROCVE002A	Navigate in caves
SROCVE003A	Demonstrate laddering skills
SROCVE004A	Apply single pitch abseiling skills in caves
SROCVE005A	Rig a ladder pitch
SROCVE006A	Apply laddering skills
SROCVE008A	Rig ropes and establish belays in caves
SROCVE0021A	Guide vertical caving trips (single pitch)
SROVTR001A	Perform vertical rescues

Vertical Caving Leader

Code	Unit name
SROCVE001A	Move through a cave with minimal impact
SROCVE002A	Navigate in caves
SROCVE003A	Demonstrate laddering skills
SROCVE004A	Apply single pitch abseiling skills in caves
SROCVE009A	Rig ladders in complex situations
SROCVE006A	Apply laddering skills
SROCVE007A	Use caving-specific single rope techniques
SROCVE008A	Rig ropes and establish belays in caves
SROCVE0021A	Guide vertical caving trips (single pitch)
SROVTR001A	Perform vertical rescues

Multi-pitch Vertical Caving Leader

Code	Unit name
SROCVE001A	Move through a cave with minimal impact
SROCVE007A	Use caving-specific single rope techniques
SROCVE002A	Navigate in caves
SROCVE010A	Rig a complex pitch using caving-specific techniques
SROCVE011A	Demonstrate vertical caving skills
SROCVE012A	Rig multi pitches in complex vertical cave systems
SROCVE023A	Guide vertical caving trips (multi-pitch)
SROVTR002A	Perform complex vertical rescues

Guided Cave Diving

Where a caving party visits a cave to dive in flooded sections of the cave, and the divers are dependent on a caving leader to navigate through the cave or negotiate pitches, all diving members must have satisfied cave diving competencies appropriate for the cave.

Code	Unit name
SROCVE015A	Demonstrate cavern diving skills, or
SROCVE016A	Demonstrate cave diving skills, or
SROCVE017A	Demonstrate sinkhole diving skills, or
SROCVE018A	Demonstrate sump diving skills, or
SROCVE019A	Demonstrate advanced cave diving skills

Details of these units can be accessed by logging on to the Department of Education, Science and Training (DEST), National Training Information Service website at www.ntis.gov.au.

2.2 First aid

Decisions on the level of first aid should be based upon the risk assessment and emergency strategy for the adventure activity. Leaders and guides should have the appropriate first aid skills commensurate with the planned activity, the skills of the group and the location of the activity, including remote areas. A comprehensive first aid kit appropriate to the level of first aid training must be accessible at all times. Remote areas may require more advanced first aid skills such as Wilderness First Aid where leader and guides recognise, prevent and treat many illnesses and injuries prevalent in wilderness and remote locations.

The following provides an overview of equivalent first aid training with St John Ambulance and Australian Red Cross.

Level 1: Basic First Aid (Resuscitation) involves basic skills and knowledge in order to recognise and provide immediate first aid for a range of common illnesses and injuries and minimise the severity of injury or sudden illness.

Leaders and guides with Basic First Aid should be able to:

- perform CPR (resuscitation)
- manage breathing emergencies: expired air resuscitation (EAR)

- control bleeding, wounds and bandaging
- manage extremes of heat and cold
- manage injuries to bones, joints and muscles
- manage poisoning, bites and stings

Level 2: Intermediate or Senior First Aid involves skills and knowledge to recognise and provide immediate first aid for a range of common illnesses and injuries and minimise the severity of injury or sudden illness.

Leaders and guides with Intermediate or Senior First Aid should be able to:

- define the principles of first aid
- demonstrate knowledge of basic human anatomy
- recognise and manage both a conscious and an unconscious casualty
- perform effective CPR and expired air resuscitation (EAR)
- identify a range of common illnesses and injuries
- control bleeding and care for various types of wounds
- recognise and manage injuries to bone or soft tissue
- recognise and manage medical conditions that may need emergency care, including heart attack, stroke, asthma, diabetes and epilepsy
- use practical first aid skills using prepared and improvised materials
- demonstrate knowledge of first aid management for a range of common illnesses and injuries.

On multi-day trips, trips planned for participants with disabilities and/or walks into remote areas, more specialised first aid knowledge may be required.

2.3 Specific responsibilities of the trip leader

The following are the responsibilities of a caving trip leader. Individual tasks may be delegated but the responsibility remains with the trip leader.

It is the trip leader's responsibility to ensure that the level of knowledge, ability, skill and equipment of each participant is appropriate for the level of difficulty and complexity of the trip and to receive acknowledgement from all participants that he/she (as leader) has the role of leading the group:

- Complete trip plan
- Confirm group experience/capabilities match trip to be undertaken
- Be aware of and comply with the relevant land manager's guidelines for accessing caves
- Management of the group's progress including being aware and in control of the spacing, position and condition of group members

- Maintain constant surveillance/observation of participants to ensure to the best of your ability that group members do not get into situations beyond their capabilities
- Instruct participants in the use and reasonable care of equipment
- Check suitability and condition of all equipment prior to departure and on return
- Confirm headcount before entry, during, and immediately upon exit of cave
- Notify appropriate external contacts of safe return/completion
- Ensure that any incidents are documented and reported
- Check first aid kit and communication equipment prior to trip
- Research and plan for likely hazards/incidents/emergencies
- Appropriately designate responsibility to guides
- Collect waiver forms signed by all participants prior to the trip
- Appoint appropriate external contacts to notify SES, Police, etc. if not contacted by designated times
- Ensure a full brief is clearly carried out and understood by all guides and participants. (See 2.5 Communication and authority)

2.4 Assistant to the trip leader

All persons acting as guide must support and assist the trip leader according to the trip plan and manage any incident or emergency according to the emergency strategy if the leader becomes injured or incapacitated. (See 2.6 Ratios of trip leader and guides to participants, and 2.7 Group size).

2.5 Communication and authority

As for all outdoor activities involving group participation, all participants, guides and trip leaders must use an agreed and understood system of communication. It is therefore essential that this system be devised before the trip and agreed as a component of the pre-trip briefing. (An example may be found in Section 7 of the ASF Cave Safety Guidelines.)

Every communication system requires a clear full briefing. This may be delivered differently according to organisational preference and, where relevant, the length and complexity of a trip but must include and is not limited to each and every element of the following:

- Introduction of trip leader, guides and objectives
- Basic information about the cave system, location geology and the land manager/owner
- Strategies for conservation including flora, fauna and other cave contents (e.g. sediment), human impacts (do's and don'ts), rubbish removal
- The nature of the activity, inherent risks, emergency strategy, group conduct and communication requirements

- Equipment and clothing including explanation of equipment use and fit
- Confirm participants' clothing, hair and jewellery are appropriate for the planned trip
- Verbal health check for participants to voice concerns about their capabilities
- Explanation of required documentation including completion and signing of waiver (section 1.2 Pre-trip documentation).

2.6 Ratios of trip leader and guides to participants

Obvious variables will affect the leader/group ratios. These include the cave (type, size, difficulty, condition including sensitivity and complexity) and the group (experience, competence, fitness and available equipment). There are clearly situations where your judgement will dictate the requirement for smaller numbers of participants per leader/guide. Land managers may also suggest ratios that differ from AAS and where these are within AAS they must be regarded as minimum standards.

Regardless of these factors:

- There should always be at least two individuals with the competency to lead the group on any beginners' caving trip. (A group of cavers conducting their first SRT or Laddering trip into a cave would be considered beginners, even though they may have other caving experience)
- The leader/guide to dependent participant ratio should not exceed 1:6.

2.7 Group size

For the safety of both the group and the cave system, the maximum group size for a caving trip involving a dependent group should be 12 (participants).

The minimum safe group size in any cave is 4.

Any group of more than 12 participants must be split and each resultant group must independently adhere to AAS.

3 Equipment

Equipment requirements vary with the objectives of the trip plan and the environmental conditions likely to be encountered. When planning equipment requirements for a caving trip it is important to plan ahead as much as possible for all eventualities, taking into account any appropriate information including forecast weather conditions.

3.1 Equipment used by the group

The following equipment must be accessible during any caving trip involving dependent groups:

- First aid kit (basic kit to be taken into the cave and an accessible comprehensive kit)
- Food and water if cave system warrants it (eating in a cave system should be avoided where possible)

- 2 watches
- A pocket-knife
- Notebook and pencil
- An appropriate 'thermal' (e.g. thermal blanket, bivvy bag) wrapping is considered essential in wet caves and is recommended in all cave systems.

The following additional equipment must be available in the cave for any vertical or laddering caving trip involving dependent groups:

- All ropes must be appropriate for caving and made to UIAA (CEN) standard
- An appropriate rescue system spare 'emergency' rope must be accessible when engaging in vertical caving
- Both ascending and descending equipment must be carried and must be arranged in such a way that it can be quickly reversed. This is regardless of the intended direction of travel
- Unless using equipment that specifies otherwise, there must always be two points of attachment when ascending or transferring on ropes
- Appropriate descending devices must be used when abseiling
- Appropriate steel wire caving ladders and attachments must be used in conjunction with belay lines.

3.2 Equipment used by participants

The following equipment requirements apply to all dependent participants:

- Helmet with securely attached and fitted chinstrap and a well fitting cradle (construction helmet for example) must be worn in horizontal caves although AAS recommend the use of UIAA (CEN) or equivalent approved climbing and caving helmets
- Each participant must carry reliable and independent primary and secondary light sources appropriate to the cave. It is recommended that the primary light source be helmet mounted or hands free. It is recommended that a third independent light source be carried
- Clothing should be appropriate to the cave and conditions
- Footwear must have a substantial tread and must be appropriate for the cave and conditions
- No open footwear such as sandals or thongs can be worn in caves. It is recommended that boots with a sound tread are worn
- Spare globes and batteries must be carried according to trip leaders' experience and knowledge of group and conditions
- The participant must carry any personal medication and the trip leader and guide/s must understand the requirement.

The following equipment requirements apply to all dependent participants on vertical caving trips:

- UIAA (CEN) or equivalent approved climbing and caving helmets must be worn
- Only UIAA (CEN) or equivalent harnesses must be used
- Primary light sources must be helmet mounted on vertical caving trips.

3.3 Equipment used by the trip leader/guide

The leader must have the same as the participants, plus the responsibility to ensure that all relevant group equipment is correctly carried, and access to emergency communication equipment is easy.

3.4 Equipment condition, maintenance and storage

- All equipment used in caving activities must be used, maintained and stored according to manufacturers' specifications where applicable
- All equipment used must be checked before and after each trip
- All issued equipment must be provided in a clean and serviceable condition
- All ropes used must be carefully checked during the activity.

Where appropriate, a log of all equipment use and maintenance must be kept current.

4 Environment and conduct

The leader, guide and organising body should be satisfied that participants are aware of their responsibilities as members of the group to ensure areas of scenic or recreational significance, special scientific or archaeological sites, and the natural environment are respected, and that the requirements of land managers are adhered to.

Specific to recreational caving, the following is an extract from the Minimal Impact Caving Code.

Introduction

The need for a Minimal Impact Caving Code (MICC) has evolved over many years as cavers have realised the impact that they have on caves. That impact is so diverse and varied that it has become necessary to devise a caving code that ensures that cavers are aware of the measures that are necessary to reduce their impact on caves. To those of you who are not or who have just become Australian Speleological Federation Inc. (ASF) members it is important that you understand that a MICC is necessary because cavers are one of the major sources of damage to caves. Read the MICC carefully and apply it to all of your caving: it will not completely stop cavers damaging caves but it will certainly reduce their impact on the cave environment. This MICC was devised by cavers **for caves**: please assist the Caves of Australia by using these simple MIC techniques. This MICC should be used in conjunction with the ASF Code of Ethics.

General Cave Visitation

1. Remember **every** caving trip has an impact. Is this trip into this cave necessary? If it is just for recreation, is there another cave that is less vulnerable to damage that can be

- visited? Make this assessment depending on the purpose of your visit, the size and experience of the proposed party, and **if the trip is likely** to damage the cave.
2. Where possible the party leader should have visited the cave previously and hence should be aware of sensitive features of the cave, the best anchor points, and generally reduce the need for unnecessary exploration.
 3. Cave slowly. You will see and enjoy more, and there will be less chance of damage to the cave and to you. This especially applies when you are tired and exiting a cave.
 4. If there are beginners on a trip, make sure that they are close to an experienced caver, so that the experienced caver can help them when required, e.g. in difficult sections. Ensure that the party caves at the pace of the slowest caver.
 5. Keep your party size small: 4 is a good party size.
 6. Cave as a team: help each other through the cave. Don't split up unless impact is reduced by doing so.
 7. Constantly watch your head placement **and** that of your party members. Let them know before they are likely to do any damage.
 8. Keep caving packs as small as possible or don't use them in sensitive caves or extensions.
 9. Ensure that party members don't wander about the cave unnecessarily.
 10. Stay on all marked or obvious paths. If no paths are marked or none is obvious: define **one!**
 11. Learn to recognise cave deposits or features that may be damaged by walking or crawling on them. Examples are: Drip Holes, Stream Sediments, Paleo soils, Soil Cones, Crusts, Flowstone, Cave Pearls, Asphodilites, Bone material, Potential Archaeological sites, Cave Fauna, Coffee & Cream, Tree Roots.
 12. Take care in the placement of hands and feet throughout a cave.
 13. Wash your caving overalls and boots regularly so that the spread of bacteria and fungi is minimised.
 14. If a site is obviously being degraded examine the site carefully to determine if an alternative route is possible. Any alternative route **must** not cause the same or greater degradation than the currently used route. If an alternative is available suggest the alternative route to the appropriate management authority and report the degradation.
 15. Carry in-cave marking materials while caving and restore any missing markers. Tape off sensitive areas you believe are being damaged and report the damage to the appropriate management authority.
 16. If it is necessary to walk on flowstone in a cave remove any muddied boots and or clothing before proceeding **or don't proceed!** Sometimes it is better to assess the situation and return at a later date with the appropriate equipment.
 17. Treat the cave biota with respect, watch out for them, and avoid damaging them and their 'traps', webs, etc. Also avoid directly lighting cave biota if possible.

18. If bone material is found on existing or proposed tracks it should be moved off the track to a safer location if at all possible. Collection should only be undertaken with appropriate permission.
19. If you eat food in a cave ensure that small food fragments are not dropped as this may impact the cave biota. One way is to carry a plastic bag to eat over and catch the food fragments. This can then be folded up and removed from the cave.
20. Ensure that all foreign matter is removed from caves. This includes human waste. If long trips are to be made into a cave ensure that containers for the removal of liquid and solid waste are included on the trip inventory.
21. When rigging caves with artificial anchors, e.g. traces, tapes, rope, etc, ensure that minimal damage occurs to the anchor site by protecting the site. For example, protect frequently used anchors, e.g. trees, with carpet, packs, cloth, etc. Bolts should only be used where natural anchors are inappropriate.
22. **Cave softly!**

© Australian Speleological Federation Inc.

The contents of this Code of Ethics are Copyright to the Australian Speleological Federation Incorporated. Without limiting the rights under copyright legislation, no part of the contents may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without the prior permission of the copyright owner. In the first instance enquiries should be directed to the ASF General Secretary.

The copyright owner will normally grant a licence without charge to reproduce the Minimal Impact Caving Code, provided that the copyright holder is acknowledged. All requests should be directed to the Secretary. The following strategies, which effectively minimise disturbance to natural and cultural values, represent acceptable conduct for the long-term sustainability of both the activity and the environment.

Further to this, the following strategies, which effectively minimize disturbance to natural and cultural values, represent acceptable conduct for the long-term sustainability of both the activity and the environment.

Waste

Rubbish: It is the responsibility of the group leader to ensure that no rubbish or introduced matter is left as a result of the group's activity in an area. This particularly applies to all food or drink packaging, food scraps and activity equipment. Leaders should plan to carry rubbish receptacles sufficient to enable all group-generated rubbish to be removed from the area. Where practicable, leaders should encourage participants to remove rubbish left by previous users.

Human waste: Faecal wastes are to be managed and disposed of in line with environmental regulations and land manager directions. This means that where toilet facilities are provided, these must be used. Where camping is permitted and no toilet facilities are available, toilet wastes must be buried at least 100 metres from a watercourse. If it is not feasible to bury wastes or to bury them at least 100 metres from a watercourse (e.g. narrow river valley, cliff areas), group leaders should plan to use equipment (e.g. 'poo-tubes') that enable the wastes to be removed and disposed of at a facility designed for this purpose.

Fire

Fire Bans: In most parks, the fire danger season in South Australia usually extends from 1 November to 30 April, depending on seasonal conditions. No wood fires are permitted in parks during this time. Some parks have year round bans on wood fires. Open flames are banned in all parks on days of extreme fire danger. These are declared by the Country Fire Service (CFS). Parks may be closed to visitors on Total Fire Ban days. The onus is on the leader to check the fire ban status for the area they are visiting. Phone or visit the Department for Environment and Heritage or CFS Office for more details.

Camp Fires: Native vegetation within reserves is protected. In non-reserve areas, dead trees and fallen logs play an important role in the environment. In some parks, wood fires are prohibited or restricted. Gas or liquid fuel stoves are preferable. Where fires are permitted they must be:

- lit in existing fireplaces where possible or in a properly constructed fireplace or pit (minimum 30cm deep and a maximum of one metre wide) and returned as closely as practicable as it was
- cleared of flammable vegetation for at least three metres around the fireplace or pit
- kept to a minimum size necessary for cooking, minimising disturbance to the surrounding area
- attended at all times
- extinguished with water
- avoided if fuel is scarce
- avoided if at all unnecessary or where doing so will not comply with the minimal impact approach.

Camping

- Camp at established campsites where possible
- Make campsites away from water resources (at least 20 metres from any stream) and allow animals undisturbed access
- Use floored tents with poles
- No trenches around tents
- Use toilet facilities where available
- Avoid using any soaps or detergents. If they must be used, use only biodegradable soaps and detergents. Dispose of washing water at least 50 metres from any water source
- Wash all soil from camping and personal equipment and vehicles before leaving home or moving between locations, in order to avoid transporting seeds or soil-borne pathogens such as phytosphthora.

In addition, participants are also expected to:

- try to avoid tracks and other areas which will be intrinsically more prone to erosion, especially with larger groups

- use boot washing and or hygiene stations to assist in the prevention of phytophthora
- make reasonable efforts to minimise the impact of the group on others
- assist other parties in difficulty providing this action does not adversely effect the safety of the group
- be diplomatic with other groups and other recreational users of the area
- try to minimise noise.

5 Further information

Further caving information (ASF Caving Code of Ethics (1992), Cave Safety Guidelines (1992) and the full Minimal Impact Caving Code (1995), The ASF Cave Diving Code of Practice, contact details for caving clubs and other valuable caving information relevant to Adelaide and Australia can be accessed via the ASF website, <www.caves.org.au>