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Non-Technical Caving

Good Practice Guide.
Version 1
2021

Non-Technical Caving

The guidance in this GPG is intended for caving trips of up to three hours, in horizontal caves with drops of no more than three metres in height. The cave must have easy access in and out for group and emergency management. Well established routes are used, fixed ladders may be in place, and low flow streamways may be encountered that do not require swimming or deep-water management. Caves may require the rigging and management of simple handlines to assist participants on short vertical steps.

Guidance for caves with vertical pitches requiring abseiling and belaying techniques, and deep and moving water management can be found in the Activity Specific Guideline – Caving <https://www.supportadventure.co.nz/assets/Caving-ASG-v2.pdf>

This GPG covers situations where participants are being directly supervised by a designated leader, guide, or instructor. It is not intended to cover recreational caving with peers, or the hire or rental of equipment for unsupervised use.

This guidance is specific to **Non-Technical Caving** and is designed to be used in conjunction with the [General Guidance for Organised Outdoor Activities](#) and the [Non-technical Caving Planning Template](#).

Potential value of activity

CAVING CAN PROVIDE OPPORTUNITIES FOR PARTICIPANTS TO:

- Connect with Papatuanuku, and consider significance of the underworld to Māori
- Develop a sense of respect for and guardianship of a fragile place with cultural and environmental significance. Kaitiakitanga
- Experience, appreciate and explore a new, unique environment
- Experience calmness and being present - in quiet, in darkness, without digital devices
- Look after other people, e.g., spotting, relaying communication, sticking together, encouraging each other. Whanaungatanga.
- Develop empathy - people react and are challenged in different ways underground
- Be physically challenged; scrambling, body awareness, water skills, navigation
- Be psychologically challenged; darkness, tight spaces, quiet.

“Climbers climb mountains because they’re there, cavers go caving to find out what is there.” – Anon

Environmental considerations

Caves are not adversely impacted by anything other than humans, any damage that we do is permanent. Well-meaning people can unintentionally cause irreparable damage which affects other users' experience and can lead to caves being closed to public use.

- Walk on the obvious path to concentrate damage and leave the rest of the cave undisturbed. Walk in streamways as they are a durable surface.
- Stay within stringlines; they have been intentionally placed to keep people to a worn path protecting the formations behind the string.
- Only touch formations if they are a safety feature – e.g., frequently used handhold or anchor. Formations (e.g., stalactites, stalagmites, columns, straws) can be easily and permanently damaged.
- Take all rubbish and food scraps out. Food attracts rats and other pests. A possum has been found 1km into a NZ cave system, attracted there by crumbs dropped by cavers. The possum caused further damage to what had been a pristine environment.
- Toileting. Never urinate in a dry cave. Urinating in flowing water of a streamway is acceptable but avoided if possible. Always take faeces out (e.g., in poo pots or poo bags).
- Leave the cave as you found it, or in better condition. Avoid:
 - throwing mud (intentionally or accidentally)
 - making mud 'snowmen'
 - graffiti of any kind
 - tracking mud and animal dung into cave entrance
 - touching glowworms.
- Boot washing stations are sometimes found before clean areas of formation, obey signage.
- Consider the environmental damage caused by a rescue – stretchers, rescue equipment and people moving through the cave. Plan well to minimize the chance of needing a rescue.
- Don't publicise a cave's location, especially if it has been recently found. Having less people travel through a cave is a way to protect it. Stringlines may be placed to protect formations before public exploration should occur.
- Move carefully at entrance ways to avoid dislodging and moving material, and to minimise disturbance to flora and fauna.

“Cave formations can take a millennia to form but only a second to break” – NZ Speleological Society

Cultural considerations

The underworld has spiritual significance to different cultures. This should be acknowledged – for the participants about to enter the cave, and for the manawhenua – the people of the area. Be respectful to the place and the people to whom it is significant.

- The underworld has spiritual significance to Māori, and other worldviews. This should be acknowledged and discussed to ensure all participants feel respected and included.
- Are there stories of the area that should be shared? Who is the appropriate person/s to share these stories?
- Is there spiritual significance of the area that should be acknowledged, e.g., urupa, burial caves? Are there cultural protocols that should be observed before entering a cave?
- Recognise the transition from one place and state into another (e.g., from light into darkness, from above to below, from tense to quiet) with a karakia or acknowledgement, to refocus and calm the group.
- Kaitiaki / guardianship of future access – maintaining positive relationships with iwi and landowners is essential for maintaining access to caves. Access is a privilege which could easily be taken away.
- For more information on Māori cultural values of caves - see page 7 of Karst Management Guidelines (see Further Support).



Planning considerations

Before planning a caving trip, question: is this cave appropriate to go in? e.g., permission to access? environmental impact? sufficient skills to manage group and deal with an emergency underground?

An activity plan helps to maximize an activity's success and minimizes risk to participants, and to the environment. The [Non-technical Caving Planning Template](#) provides a useful format.

In addition to the generic planning considerations see the [General Guidance for Organised Outdoor Activities](#)

Venue

How to ensure the cave is appropriate for the leader and participants to enter.

- Does the leader have the necessary skills to manage a group in this cave, in normal situations and in an emergency?
- A pre-trip visit helps familiarise the leader with hazards, pre-planning of group management, time management and emergency procedures.
- Talk to the landowner to ask permission to access the cave, and about other protocols.
- Prioritise maintaining a good relationship with landowners as this can affect future access for other users. e.g., park vehicles in designated areas, leave gates as found, respect farm animals, ask permission.
- Are there specific protocols that should be adhered to before, during and after the trip? e.g., acknowledgement of Māori significance, environmental care, footwear cleaning.
- Toileting - ensure participants can use a toilet before entering the cave.
- Flooding - how does different weather affect this cave? Look at the catchment upstream of the cave and the forecast of that area. How much water has previously been in the cave – look for flood lines on the walls?
- It is usually safer to move upstream. A group will be more in control of their movement and speed if moving against the flow of water, rather than being pushed downstream.
- Is there potential that participants could fall, or have rocks fall on them? Plan how to manage this, e.g., spotters, handlines. Does the leader have the skills to set up and manage a handline?

Participants

How to ensure the activities match the participants' abilities and needs.

In addition to the generic participant considerations (see [General Guidance for Organised Outdoor Activities](#)) consider:

- Do the participants have sufficient fitness, mobility, and strength to enjoy the planned cave?
- Is there enough time planned for the participants to gain value from the experience?
- Do the participants have appropriate clothing for the trip?
- Are participants reliable? e.g., to pass communication up and down the line, to respect the fragile environment



- Assessing the participants' ability and confidence before going underground by asking questions about their knowledge and prior experience in the dark, in confined spaces, and on uneven terrain
- A buddy system or closer supervision of participants who may get scared or need extra support
- Sequencing of activities to aid the development of confidence and competence, e.g., go into a spacious cave before exploring a tighter one, get wet at the end of the trip rather than the beginning
- If a participant finds the cave too challenging (physical, emotional, spiritual), can this be managed, or can they be returned to the surface easily? Front loading the mental skills used to manage oneself in caves can prevent incidents happening.
- If two or more groups meet in the cave – clarify who is responsible for managing each group and how will all participants be accounted for, e.g., headcounts, buddy system.

Supervision

The level and style of supervision typically required for this activity.

CONSIDER THE FOLLOWING WHEN DETERMINING THE APPROPRIATE SUPERVISION STRUCTURE FOR CAVING:

- There is no one 'ratio' of leaders to participants for any given caving activity. Supervision needs vary according to age and ability of the participants, the nature of the cave, environmental conditions, and the skill and experience of the leaders.
- The level of supervision must be higher in delicate, and technical caves to intervene for environmental protection and participant safety.
- Supervision must involve monitoring cave conservation practices, monitoring the groups wellbeing and being able to assist a participant(s) while they negotiate a difficult section (climb, squeeze, crawl). More competent groups might provide parts of this for one another or be able to effectively relay information to the leaders during a narrow section of cave.
- Planning and supervision should consider the risk to the cave and participants if they are left unsupervised, e.g., mud throwing, formation damage, wandering off, separation from group etc.
- Often the leader will need to float throughout the group to manage obstacles, junctions, and points of interest for teaching, entertaining and inspiration of the participants.
- How the group will manage if the leader becomes incapacitated. Can the participants (and adult helpers) be trusted to follow the emergency procedures? Will they sit tight and wait for a rescue? Could they get lost or injured if they walked out to get help?

Assessing an Activity Provider's Competence

WHERE AN EXTERNAL OPERATOR IS BEING CONTRACTED TO PROVIDE THE ACTIVITY, IT IS APPROPRIATE TO:

- Ask for evidence of the safety management system the operator has for the activities being provided.
- Clarify if the planned caving trip is covered by the Adventure Activity Regulations, if so; the provider must be registered with WorkSafe as an adventure activity operator.
- Clarify roles and responsibilities, e.g., the provider is usually responsible for safety during the caving activity and will need to know of participant medical and behavioural issues that may affect safety, the school / organisation may oversee participant pastoral care, discipline and activity after the caving has finished.

Leader competence

The experience and knowledge required by those running the activity, both for normal operation and for managing emergencies. What competence assistant leaders should have should also be considered (e.g., where parents or other adults are helping lead the trip).

Skills and knowledge

The simplest way to evaluate competence is to look at the qualifications they hold. Asking questions of potential leaders and having them provide examples of training and experience allows you to assess their personal and group management ability.

SPECIFIC LEADER COMPETENCIES RELEVANT TO CAVING INCLUDE:

- Personal caving skills and experience which exceed that which will be required for the planned caving trip
- Effective management skills of groups in caves, including in both normal and emergency situations, and time management. Confidence and authority to assert self when necessary.
- Knowledge of sequencing and progressions to build participants' confidence and competence.
- Familiarity with the cave being used, e.g., access, protocols, entrance and exits, hazards, effect of rain, obstacles and junctions where participants may need extra supervision
- Ability to manage participants' emotions; coaching people who are scared to move their body in specific ways, physically assisting where necessary
- Knowledge of appropriate environmental and cultural practices for the location, e.g., toileting, minimising damage, protecting formations, caving specific Leave No Trace principles
- Ability to manage an underground first aid situation and emergency.

IF USING ASSISTANT LEADERS, THE MINIMUM COMPETENCIES FOR THESE WOULD BE:

- Ability to assist the leader in the management of the group in the cave in normal and emergency situations
- Ability to take over group management if the leader become incapacitated
- Understanding of and ability to carry out the emergency management plan

Relevant Qualifications

The following qualifications are relevant to Caving:

- Current first aid certificate
- NZOIA Cave Leader / Cave 1
- NZ Certificate in Outdoor Leadership (Level 4). Strand in Caving
- NZ Certificate in Outdoor Leadership (Guiding / Instructing) (Level 5). Strand in Caving.



Emergency communications

Caves have unique communication challenges. Communicating between the front and back of the group within a cave can be difficult. Contacting emergency services from within a cave is often impossible. Prior planning for both is important.

- Leave intentions with a reliable person with clear instructions on what to do if the group is not out by a certain time. Include: location of cave, make/model of vehicle, landowners contact number, number in group. Text contact person before entering cave, and when safely out.
- In some caves, the best response is to not move, and wait for the rescue team to arrive. It can be tempting to send runners to get help, but they could get lost or injured making the situation worse.
- Have pen and paper so that a detailed message can be relayed to the outside: what has happened, where, how many people, what assistance is needed and how urgent it is. Runners wait at the entrance while the group stays put for rescue.
- Leave EPIRB and/ or cellphone at cave entrance and know where the closest cell phone coverage is to cave entrance.
- Contact NZ Police and specifically ask for Cave SAR.

Resources and equipment

Consider what equipment and resources are required to ensure the activity can be run safely. The participants may be required to bring this, or it may be provided to them.

Participant

What each participant would need to bring to the activity (or be provided with)

- Head torch – securely attached to helmet – with sufficient battery power to last the expected duration of the trip plus extra for emergency time
- Properly fitting helmet – to protect head from hitting the roof, and from falling objects
- Warm layers and hat – thermal / polypro
- Protective layer – e.g., boiler suit, old wet weather gear
- Grippy closed toed footwear – e.g., sneakers, PVC gumboots (consider holes in gumboots so water can drain out)
- Personal medication (EpiPen, asthma inhaler)
- Dry change of warm clothes for changing into after exiting the cave

Group

Recommended equipment that may be made available to the participants for the activity

- One light per person
- Extra warm clothes,
- Extra food and water
- First aid kit
- Heat source – e.g., thermos, cooker for hot water

Leader

Equipment that should be carried by the leader or that the leader should have easy access to

- Bag – consider using one without straps / pockets as these cause damage to formations
- First aid kit
- Spare batteries, spare torches
- Cave map
- Rope / sling – to set up handline
- Communications device (e.g., cell phone and/or EPIRB), consider leaving at the cave entrance
- Group medical and contact information
- Consider leaving a grab bag at cave entrance – with means to warm a cold person (e.g., cooker, thermos, bothy bag/ shelter, food), and emergency communications

Further support

Places to gain more information from

- NZOIA Qualified cave instructors – www.nzoia.org
- Skills Active qualified cave instructors nzrrp.activecv.co.nz
- Cave Stream – Canterbury <https://www.doc.govt.nz/parks-and-recreation/places-to-go/canterbury/places/cave-stream-scenic-reserve>
- Conservation and protection of caves
<http://caves.org.nz/code-of-ethics/>
- Technical guidance on caving which falls under the Health and Safety at Work (Adventure Activity) Regulations
<https://www.supportadventure.co.nz/assets/Caving-ASG-v2.pdf>

Non-Technical Caving Planning Template

Overarching Risk Management Guidance

