



# MINIMAL IMPACT CAVING CODE 2010

.....devised by cavers FOR CAVES.....

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## **Introduction**

This Code supersedes the previous 1995 version.

The need for a Minimal Impact Caving Code (MICC) evolved over many years as cavers realised the impact that they have on caves. This impact is so diverse and varied that it became necessary to devise a caving code that ensures ALL people who enter caves are aware of the measures that are necessary to reduce their impact on caves.

To those of you who have just become Australian Speleological Federation Inc. (ASF) members or who are entering caves in ANY other capacity it is important that you understand that a MICC is necessary to minimise the impact of ALL CAVE USERS on caves. Read the MICC carefully and apply it to all of your activities in caves - it will not completely stop cave users 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, the ASF Code for Scientific Investigation in Caves and Karst, the ASF Minimal Impact Rescue Code and the ASF Risk Management Guidelines.

## **General Principles**

This code is divided into two sections: one relating to general cave visits and the other relating to the exploration of a newly discovered cave or section of cave.

The following practices may fall into both sections and may be modified depending on the type of cave being visited. It should be stated that we are discussing here a code which will ensure that caver users have a minimal impact on the cave they are visiting. It is acknowledged that certain caves or sections of them have different degrees of vulnerability to caver impact e.g. some MICC practices may not necessarily apply to rocky stream passages that carry high energy floodwaters. However, there are many caves or sections of them where the presence of cave users may have a substantial impact simply by entering the cave or section. Generally, these minimal impact practices are designed to be applied when visiting the majority of caves.

In-cave marking refers to the use of a variety of materials to define tracks, routes and “no go” areas in a cave. These measures should be taken to protect sensitive areas, confine caver foot

damage and make cave users aware that a sensitive area exists. Any in-cave marking must be undertaken in accordance with any applicable legislation and regulations.

Sampling, removal or relocation of any cave contents should only be undertaken after consultation with the land owner/manager and in accordance with any permit conditions or legislation. Refer to the “Minimum Impact Code for Scientific Investigation in Caves and Karst”. Normally, initial expert evaluation of items should be made *in situ*.

Consider carefully if special purpose trips including (but not limited to) training, recreation, beginner or photography trips would be better undertaken in another cave that is less vulnerable to damage.

This code provides principles which are suitable for application by all cave users, regardless of the group or the purpose of their visit. This includes (for example) surveyors, photographers, scientists and other researchers, explorers, cave guides, land managers and management staff, rescue personnel, commercial operators and clients, recreational groups, scouting organisations, church groups, school groups and social groups.

In applying this code, there may be competing considerations including the goal of the trip (in terms of research or management outcomes) and issues of personal safety. In general, priority should be given to the principles in this code, but in certain circumstances, where there is a significant risk to personal safety or a significant management outcome cannot be achieved unless the code is departed from, consideration needs to be given to how to resolve these competing imperatives with the minimal impact on conservation values.

### **General Cave Visits**

1. Remember EVERY caving trip has an impact. Is this trip into this cave necessary? 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. Available information to assist minimal impact exploration, such as the cave’s sensitive features and the best anchor points, should be sought out prior to visiting a cave and made known to everyone on the trip. All party members share responsibility to avoid exploration and caving practices that may compromise the cave’s values.
3. Cave **slowly**. You will see and enjoy more, and there will be less chance of damage to the cave and to yourself! This especially applies when you are tired and exiting a cave.
4. If there are beginners on a trip, make sure that they are under the supervision of an experienced caver to help them as required in MIC practices and in difficult sections. Ensure that the party caves at the pace of the slowest caver.
5. Understand the possible consequences of a rescue. In the event of a rescue, human life takes priority over conservation of the cave environment, so cave users must aim to avoid the need for a rescue and hence the risk of damage to the cave environment during a rescue. Be prepared to consider changing plans or aborting a trip should any party member have trouble coping or other problems arise while caving.

6. In case of incident, “self-rescue” should be attempted where possible before making a call-out for assistance. Call-out rescues should ideally be conducted by experienced, trained rescue cavers who understand MICC practices (ASF Minimal Impact Rescue Code, MIRC). However, damage to the cave may still occur during rescue. Emergency personnel from other organisations who may be unfamiliar with MICC usually attend or conduct cave rescues and may unintentionally cause unnecessary damage to the cave, even if trained rescue cavers are present. Further, intentional damage to the cave may be warranted in order to make the rescue possible or hasten it. Such decisions should be made by a MIRC aware participant, if present. Cave Search and Rescue Exercise parties should ideally include at least one member of ASF or other person demonstrably familiar with the ASF MIRC.

7. Keep your party size small - 4 is a good party size in many caves.

8. Cave as a team - help each other through the cave. Don't split up unless impact is reduced by doing so, for safety reasons, or where required to achieve the purposes of the trip.

9. Constantly watch your head placement AND that of your party members. Let them know before they are likely to do any damage.

10. Keep caving packs as small as possible in sensitive caves or extensions.

11. Ensure that party members don't wander about the cave unnecessarily.

12. Stay on all marked or obvious paths. In a sensitive area, if no paths are marked or none is obvious – consider whether ONE should be defined. In river caves, the lowest impact route may be the streamway. Note that permission for marking must be obtained first from the land owner or land manager where possible. This may be required by law. In some cases where immediate, critical protection measures are deemed necessary, the minimum necessary measure/s should be undertaken and owner/manager consulted as soon as possible regarding more permanent or extensive works (so long as the law permits).

13. Learn to recognise cave deposits or features and cave biota and their habitats that may be damaged by touching or walking or crawling on them.

Examples include but are not limited to:-

- Drip holes
- Soil/sand cones
- Tree roots
- Flowstone
- Crusts
- Stream passage sediments
- Bone material
- Palaeo (fossil) soils or undisturbed sediments
- Moonmilk
- Cave pearls and pisolites
- Potential archaeological sites
- Aboriginal art
- Cave fauna and their habitats (see 19 below)

14. Take care in the placement of hands and feet throughout a cave.

15. Consider whether you need to wash or otherwise suitably treat your caving overalls, boots and gear regularly so that the spread of bacteria and fungi are minimised. It is a good idea to wash all caving gear before caving in a different caving region.

16. 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.

17. In sensitive caves, consider carrying in-cave marking materials so that you can restore any missing markers. Consider whether there is a need to tape off sensitive areas you believe are being damaged and report the damage to the appropriate management authority.

18. If the only route involves walking on sensitive floor areas (such as flowstone) in a cave, consider whether you should remove any muddied boots and/or clothing before proceeding or decide not to proceed. Sometimes it is better to assess the situation and return at a later date with the appropriate equipment.

In some caves, a specific route through a sensitive area may be defined in order to avoid the spread of clay/mud to other sensitive sections. Suitable soft soled footwear and clean overalls must be worn where an area has been so designated.

19. Treat the cave biota with respect, watch out for them, and avoid damaging them and their snares, webs and habitats, including sediments, roots, organic debris and guano. Also avoid shining lights on cave biota (including bats) if possible.

20. If bone material is found on existing or proposed tracks, the area should not be disturbed, but be taped off pending consultation with the land owner/manager towards timely assessment of the find. Collection should only be undertaken with appropriate permission.

21. 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.

22. Ensure that all foreign matter brought in by your party is removed from caves (except for track marking and other items required to be left as experimental apparatus). 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 carried.

23. 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 where appropriate. For example, protect natural anchors and rub points e.g. trees and speleothems with carpet, packs, cloth, etc. Bolts should only be used where natural anchors are inappropriate or where their use will minimise cave user impact over time. Permission for bolting must be sought from the cave owner or management authority where required.

24. All caves are of value. It is best to regard severely impacted caves not as “sacrifice caves” where MICC practices are no longer necessary, but rather as more appropriate venues than less impacted caves for the instruction of inexperienced people in all aspects of caving

practices. They provide opportunities for education on the nature and consequences of cave user impact and opportunities for restoration and conservation work.

## 25. CAVE SOFTLY!

### New Cave or Extension Explorations

1. The existing microbiology of the new cave, including fungi, bacteria, and protozoa, will almost certainly be irreversibly contaminated on the first trip into the cave! If you consider cave microbiology has not been investigated in the area of this new cave, if cave microbiologists are available, then please consider including them on initial explorations so that they may collect uncontaminated samples.

2. **Consider not entering sensitive new areas if you do not have surveying and track marking equipment.**

3. In sensitive new caves, the minimal activity should be surveying and (where required) track marking, not purely exploration. Be prepared to take measures for the conservation of both living and non-living cave values (see 13. above) in the initial exploration where appropriate.

4. Ensure that all alternative routes are examined, by completing as much of the cave survey as practicable, prior to crossing sensitive areas. It may not be necessary to enter some areas if they can be by-passed.

5. Having determined that a sensitive area is to be crossed it should ALWAYS be marked (subject to any necessary permission being obtained). Reduce future damage by defining a distinct, minimal width track.

6. Discuss in-cave marking within the party and ensure that all ideas are evaluated before marking is undertaken.

7. Where exploration is extended by excavation, pre-existing airflow or water flow should be rehabilitated where practicable in an appropriate manner before leaving the new cave or extension. If an excavation is required to be reblocked (for example, to restore natural air or water flow), the use of material “native” to the cave is strongly recommended, as introduced (foreign) material may be chemically reactive, introduce either biotic or abiotic contaminants and/or affect biological processes.

## 8. CAVE SOFTLY!