

BOULDERING

Guidance on session delivery and supervision



FOLLOW



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ACKNOWLEDGEMENTS

Mountain Training would like to thank the four principle writers of this guidance, Freddie Naish, Nate McMullan, Dave Evans and Katherine Schirmmacher and the following individuals for their additional contributions: Bryn Williams, George McEwan, Guy Jarvis, Iain McKenzie, Jane Carney, Libby Peter, Pete Edwards and Simon Patton.

Thanks also to the following people whose images bring the publication to life: Bryn Williams, Graham Little, Guy Jarvis, Iain McKenzie, Jessie Leong, Karl Midlane, Lindley Educational Trust and Paul Smith.

FORWARD

This document provides guidance for instructors, coaches, supervisors and assistants engaged in the supervision of bouldering. It can also be used by trainers and assessors of in-house site specific schemes relating to the delivery of safe, high quality, bouldering sessions, both indoors and out, throughout the UK and Ireland.

The document is divided into two sections which cover the separate areas of indoor and outdoor bouldering supervision.



What is bouldering?

Bouldering is considered by many to be the purest form of rock climbing.



It distils the sport into very simple terms: unroped climbing focusing entirely on movement, allowing people to learn and develop their skills, often without the additional challenges associated with significant height and ropes.

Bouldering can be a fun, sociable and enjoyable way to engage with climbing and is one of the most common starting points for novice climbers. Most indoor bouldering is set to a maximum height of between 3-4.5m and will have a purpose-built safety surface below the bouldering area (normally 300mm deep). This surface does not eliminate the risk of injury, although it does make landing more comfortable and often reduces the severity of injuries.

Outdoor bouldering can take a multitude of forms, from low level, fun problems

above a soft, flat, grassy surface, to serious highballs above boulder fields, which should be considered as solo climbs.

Throughout this guidance the definition of outdoor bouldering refers to any natural rock venue without a pre-prepared matted landing area for which a separate person is responsible. The second section of this guidance will deal separately with natural rock outdoor bouldering venues where a supervisor is responsible for a greater degree of dynamic risk management. This is because supervisors of outdoor bouldering need to manage landings with bouldering pads, safeguard climbers by managing spotting and have a higher level of group awareness in order to judge their ability.

Managing risk

Despite the ease and freedom of bouldering, the vast majority of accidents and injuries at climbing walls happen while bouldering rather than roped climbing and, while not usually fatal, can be serious.

Injuries generally occur in the hands, wrists and ankles, with potential for leg, arm and back problems caused by awkward landings from greater heights. As bouldering can be quite intensive and explosive, extra care should be taken to avoid sporting injuries. Cold muscles and soft tissue can be prone to damage so a thorough warm up of both body and

mind should take place before any bouldering session. Attention should be paid to any tweaks or strains which occur during a session so that appropriate treatment (often rest) can start as soon as possible.

As the supervisor you are responsible for your students' welfare. If not managed carefully, bouldering on natural rock exposes people to a much more significant level of risk than bouldering on artificial walls, which is why the two are addressed separately in this document.



THE MANAGEMENT AND DELIVERY OF SAFE, HIGH QUALITY BOULDERING SESSIONS IN INDOOR FACILITIES¹

1.1: Safety, hazards, risk assessments, group management

There are various risks associated with bouldering which is why assessing risk is a core responsibility of any supervisor, particularly those supervising novices.

Artificial bouldering facilities could be anything from a quiet local wall on a weekday afternoon, to a national

centre/city centre facility on a busy weekend. This is a very dynamic environment when you consider all the inherent hazards associated with bouldering itself, as well as the risks associated with large numbers of people with a full range of experience. As such this area forms a fundamental part of the decision making process relating to how you manage your group.

1.1.1 Hazard Identification

Firstly, a bouldering supervisor, coach or instructor needs to be aware of the types of hazards that may exist in an indoor bouldering environment. Secondly the supervisor needs to have strategies to manage and minimise the associated risks.

Typical hazards might be:

- Regular ground fall (which has obvious physical injury consequences);
- Other users walking under or close to your group;
- Gaps in matting, insufficient depth or coverage (causing potential physical injuries);
- Overhanging areas where others can pass underneath;

- Spinning, unpinned holds (causing out of control falls);
- Sharp or small crimp holds (which may result in finger injuries);
- Finger traps;
- Fall zones near walls or hard objects such as volumes;
- Objects left on matting, in pockets or wearing a harness;
- Blind corners and arêtes (which may cause out of control moves);
- Awkward top outs and difficult descents;
- High problems bearing in mind size/age of participants; and
- Environmental: noise, cold, heat, excessive chalk.

1.1.2 Supervisor checks and pre-session preparation

Before starting any session as a supervisor you should ensure that:

- You have all the necessary paperwork completed (e.g. consent forms, medical details, emergency contacts, acknowledgement of risk, etc.);
- You know which parts of the wall will be free and whether other sessions will be running at the same time;
- You understand the experience of the group (whether they are beginners, intermediates etc.);
- You know the location of toilets, fire escapes and storage for participants' belongings plus any other facility

specific information;

- You have made an explicit request for written medical details in case any members of the group have any relevant medical conditions or ongoing injuries; and
- You have assessed, when planning your session, which areas of the venue may or may not be suitable for your group. Elements such as blind corners, archways and training areas are often places to steer clear of with novices to avoid the risk of collisions with other climbers. Equally important will be the types, angles and difficulties of problems available in a given area as well as the ease of descent.

¹For the sake of clarity, 'indoor facilities' is used in this guidance to denote any artificial purpose-built bouldering facility such as an artificial bouldering facility or an outdoor artificial boulder common in many urban settings.



The safety briefing should include the following points:

- Participants must be wearing appropriate clothing, with empty pockets and with jewellery removed or made safe;
- Housekeeping: the location of toilets, storage facilities and what to do in the event of an alarm;
- Group management issues such as requiring the group to remain together and to ask you if someone needs to leave the group for any reason;
- How many people can be bouldering at any given time; and
- It is good practice and useful to know whether anyone has had a recent injury or has restricted movement.

For beginners and groups new to a supervisor it is also worth including:

- An explanation of the level of the risks involved;
- An explicit statement that the matting does not remove the risk of injury;
- A warning not to walk or climb underneath or close behind other climbers;
- A warning not to top-out (except where topping out is permitted);
- A warning that holds may spin or break; Identification of specific hazards such as arêtes and archways and how to deal with them; and
- A warning that the descent may often be the hardest part of the climb and that participants should not just jump off without first practising climbing down and jumping off safely.



1.1.3 Safety briefing

Prior to starting a session you should conduct a safety briefing.

The content and tone of the briefing will vary depending on the group and should be tailored to suit their needs. Getting this part of your briefing correct will help you to manage the group throughout the session. With large groups of young people it should include expected standards of general conduct around the facility.

1.1.4 Equipment

Helmets are rarely used for personal bouldering but as a supervisor you should actively consider if they would provide extra protection for some novice groups.

Low level traverses with little safety matting below them could be an example of where these would be desirable. Some centres have specific guidelines relating to use of helmets in bouldering facilities which a supervisor should adhere to.

Well-fitting specialist climbing shoes will help your participants have much better personal control when actually bouldering, however they may cause some people to feel less steady when walking around and descending from the wall. It is important to ensure that all participants have the same footwear if possible and know about how climbing shoes will assist their bouldering.

From a practical point of view it is good to have all other remaining equipment required for a session ready before the session starts.

1.1.5 Supervision standards

It is important that supervisors remain in control of their group at all times.

In the event that the behaviour or activities of the group could compromise their safety or that of others, you must be prepared to stop or adapt your session.

With inexperienced groups and younger climbers it is essential that visual contact is maintained at all times in order to ensure effective supervision. With more experienced groups and adult groups you may choose to give them a greater level of autonomy but this should always be carefully considered and justified. It is

sometimes possible to separate a novice group from other participants in a marked off area.

Ratios

As with any climbing activity, appropriate supervisor to participant ratios are important for the safe management of a group. In a bouldering context where participants may have more freedom to roam the ratio can be even more important in aiding with group management. You should carefully consider what your maximum operating ratio is in relation to different group types, age, ability levels, type of activity undertaken and desired learning outcomes. You must be able to provide an adequate level of supervision and control at all times.

Number of participants climbing at any one time

Good coaching practice when bouldering means that people will spend as much time bouldering as possible, however this must be balanced with good group management. Having one person climb at a time means maximum group control but poor group experience. If lots of people are going to climb at the same time, you need to consider how easy this is to manage. Traverses, bouldering in pairs or everyone bouldering on the same feature (e.g. a slab) may be ways to manage this. You need to plan in advance and make the boundaries clear to the group. Outdoor artificial boulders can present different challenges as

there are often many blind spots for a supervisor which means they will not be able to see all group members at all times. You need to manage your group in such a way that you are able to maintain sight of all climbers off the ground. Suitably qualified or experienced assistants can provide support here.

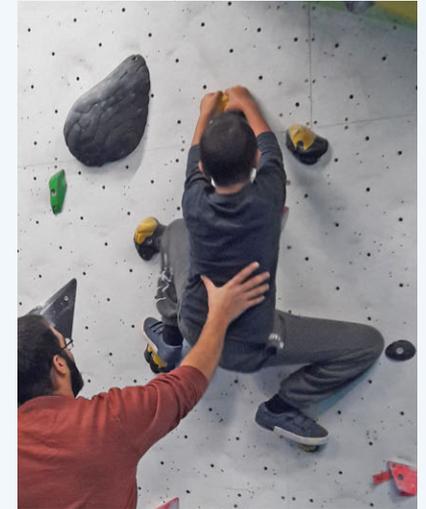


Spotting

Spotting is an advanced skill and should usually only be carried out by experienced climbers or supervisors. In most cases it is safer to provide proper instruction on how to fall and land safely. However as a supervisor you should be able to make a judgement about when it may or may not be appropriate to provide additional support or protection through the use of spotting. The purpose of spotting is to reduce the risk of injury, but this cannot be guaranteed. Often the primary role of the spotter in an indoor environment is to provide reassurance to the climber and to ensure the landing area is clear of objects and other climbers. The key elements of spotting are as follows:

- The spotter stands below the climber, with arms raised or at the ready, keeping fingers together to avoid broken fingers.
- If the climber falls, the spotter does not catch the climber, but redirects the climber's fall so that they land safely. The spotter's role is to attempt to guide the climber's fall so that their head and back do not strike the ground directly.
- If the climber jumps down, the spotter can also help prevent stumbles and injuries.

When spotting a climber on a vertical or slab climb, the spotter will typically hold their arms up with hands in a supporting position and if the climber falls, the spotter's hands lightly hold the climber's hips or lower back, near the climber's centre of gravity. This allows the spotter to help guide the climber's fall effectively,



effectively, helping them keep their centre of gravity over their feet. When on steeper, overhanging climbs, the spotter will hold their arms out in a cradling position. If the climber falls, the spotter supports the upper and middle back, helping the climber land on their feet.

A spotter may also be used to help accomplish new climbing moves. Often much of the energy in learning a new move is exerted in simply holding on. If a spotter puts even the slightest pressure on the climber's upper back or upward pressure on the hips during a move they will often give the climber the extra relief needed to learn the move. Once the move is learned, it can usually be practised and mastered without the extra help. You should always follow good safeguarding procedure when giving physical support in this way. Explain your actions and seek consent.



Peer spotting

The risks associated with peer to peer spotting often outweigh the risks of not spotting at all, so it is rarely appropriate for novices to spot each other. With more experienced groups carefully managed peer spotting at a low level can provide a gentle introduction to the skill as well as being of benefit for teamwork, peer to peer observation and shared learning. Any situation that requires 'real' spotting should be carried out by you, the supervisor, and could act as a valuable demonstration of how to do it well. Participants will need guidance on how to spot their peers once the course/session is over. This could be simply to clear the landing area, give directions and keep out of the way.

Outdoor artificial boulders do not usually have full depth matting below them. Therefore spotting may be a necessary risk management technique when using such facilities.

Getting off the wall

Getting down safely is one of the most important parts of an introductory bouldering session, but is often overlooked.

The two options are down climbing and jumping off, but few new climbers find either option easy or instinctive. Both methods need explanation, demonstration and lots of practice in a carefully managed setting.

See Mountaineering Scotland's publication *Boulder Safe* for further detailed advice.

Down climbing: Down climbing should be seen as an essential skill in its own right. It maximises the time on the route, develops movement skills and prepares climbers for times when they might not want to go any higher. You should ask and encourage climbers to climb back down to the ground as far as is reasonably practical. Your ability to do this will be greatly affected by the area of wall you've chosen for the group and as such you should carefully consider the descent options when choosing where to take your group. Often new climbers will struggle with this as they will fail to bend their knees and so it can be helpful to coach climbers back down by telling them to crouch down.

Before supervising a group on outdoor artificial boulders the means of descent should be identified.

Jumping off: A down climb will not be possible in all situations so it is important to help climbers understand how to jump or drop in a controlled manner that reduces impact on the body and the risk of injury. Provided that there is a good matted surface, climbers should look to land feet first, vertically, or with their centre of gravity slightly behind them, bend their knees as they land and, depending on the height of the fall, roll backwards to absorb the impact. Climbers should be specifically warned to keep their arms up and out of the way of the fall and not to extend their arms backwards. This practice session can be started with a simple mat exercise of increasingly high standing jumps into a backward roll, which can then be

transferred to the wall. Although it is important to check the landing zone is clear before jumping off, climbers should not twist away from the wall while jumping to avoid rotational forces to the ankles, knees and back.

As a supervisor you should warn your climbers that from time to time they may slip or fall unexpectedly and that in this situation they should do their best to follow the same process as for a controlled fall but highlight that this may not always be possible. A few pointers that may help in these situations are to tuck the chin and keep arms out of the way.

These techniques for descent should be practised in a controlled and measured way at lower levels before allowing climbers to continue further up the wall. It is important to take a progressive approach to this and be aware that, for some climbers, there will be limits to what they can manage safely. A 4.5m drop is not appropriate for many young climbers and you should set safe limits for your group.

Outdoor artificial boulders rarely have full depth matting below them; they often have other safety surfaces like pea gravel, rubber crumb, sand or wood chippings and so jumping off becomes more risky without additional bouldering mats. Participants should be encouraged to climb down where possible and you should check out these descent routes for suitability before allowing any climbers to use them.

1.1.6 Overuse injuries and prevention

Overuse injuries in intense bouldering are not uncommon. These issues are less likely to affect beginners who will more likely be bouldering on big holds and easy angled walls. However, for those people who boulder regularly, some issues may occur and an awareness of common issues and basic injury prevention is expected of you as a supervisor.

Most overuse injuries happen to the fingers, elbows and shoulders. It is important that you promote a culture within your groups that encourages communication if something is hurting. This is especially important for the fingers as tendons and pulleys are often affected. If pain is reported, especially from young climbers, they should be made to either change activity or stop. Taping, icing or resting (or all of these) may be necessary. If supervisors are unsure they should suggest a visit to a physiotherapist.

Injury prevention top tips:

- Warm up properly – 20 mins+ depending on the group and environmental conditions;
- Always seek out information of any pre-existing injuries during the briefing at the beginning of a session;
- Ensure sessions include lots of technique work. Bouldering ‘better’ reduces the strain on the upper body. Technique work is a good use of time and avoids spending significant parts of the session doing strenuous bouldering, physical conditioning and training;

- Avoid repetitive training – mix up the styles of problems used and the angle of the wall;
- Beware dynamic moves – for example dropping onto holds or swinging between holds;
- Ensure that people build up to using small holds over an extended period of time. Encourage different ways to hold holds: open hand, half crimp as well as full crimp positions;
- Be aware of the dangers of using fingerboards and campus boards for under 18s. See: www.thebmc.co.uk/campus-boards-guidance-on-use;
- During growth spurts young people are especially prone to injuries, particularly in the fingers. If you’re working with climbers in youth academies or clubs it may be an idea to regularly measure their height to keep track of when they may be going through growth spurts and adapt your sessions accordingly.



1.2 Planning and delivering quality bouldering sessions

The content of this section is a brief overview of the issues to be considered in the process of planning high quality bouldering sessions.

Planning is covered in more detail in the FUNdamentals of Climbing 1, 2, and 3 coach education workshops delivered by the mountaineering councils, Mountain Training’s Foundation and Development Coach qualifications and the Level 1 Climbing Coach delivered by Mountain Training Board Ireland.

The National Indoor Bouldering Achievement Scheme (NIBAS) provides a five level coaching structure designed for young people (www.nicas.co.uk).

Information on FUNdamentals courses delivered by:

British Mountaineering Council (www.thebmc.co.uk/fundamentals)

Mountaineering Scotland (www.mountaineering.scot/activities/indoor-climbing/skills-and-coaching/coaching-workshops/fundamentals)

Mountaineering Ireland (<http://www.mountaineering.ie/TrainingAndSafety/LeadershipTrainingAndAssessmentSchemes/FUNdamentals/default.aspx>)

Information on coaching qualifications:

Mountain Training www.mountain-training.org/climbing/awards/coaching-scheme

Mountain Training Board Ireland <http://www.mountaineering.ie/TrainingAndSafety/LeadershipTrainingAndAssessmentSchemes/ClimbingCoachingAward>



1.2.1 Session plans

The key to a good plan is to write it down! Getting into the habit of writing a session plan will greatly affect the success of a session. A good plan is a useable document that is just one or two pages long. Good session plans can be stored at a wall and reused by supervisors easily enough. Session plans should include the following elements:

- **Learning outcomes.** These outcomes or goals for the session should be concise, clear and achievable. With well-established outcomes it should be possible at the end of the session for the group to clearly show/demonstrate/explain whether they achieved the outcomes or not.
- **Warm up.** The warm up should include a pulse raiser, mobility exercises and easy bouldering. Really good warm ups will also help towards meeting the learning outcomes.
- **Activity.** This should then be sub-divided into three to four components. Some activities may be off the wall and some on the wall but all of them should link and progress from one to the other.
- **Warm down.** This may be in the form of easy bouldering, stretches or games.
- **Summary.** Time should always be allowed at the end of a session to pull the session together. It's a chance to run through what's been done, gauge the group's understanding, encourage self-reflection, explain what will happen in following sessions and allow for questions.
- **Review.** You should reflect on the sessions and assess whether you have achieved the desired outcomes of the session and describe what you might do differently the next time.



All session plans should include timings and details of any equipment needed for each element. When writing a plan for each session, consider the following:

- The overall time available;
- The number of climbers in the group;
- The ability/ experience of the climbers;
- How you will allow for differences of abilities within a group;
- How you will manage the group so that everyone is engaged as much as possible;
- What you will do if parts of the wall are not available at the last minute; and
- The resources you will have available.

1.2.2 Warming up

Given the often intense and athletic nature of bouldering it is important that an effective warm up is completed to reduce the risk of sports injuries as well as to improve performance.

In a group context the warm up can also be used to assess the general athletic ability of the group as well as their response to instruction and to identify any members of a group who may need additional supervision.

This process should be considered as a warm up for both body and mind. The protection of the body from injury is as much about the heart rate as it is about precision and coordination.

It is widely accepted that a warm-up should have three broad sections to it:

- A general warm up or pulse raiser (can be used as an ice-breaker in the form of a group game);
- Some movement preparation or mobilisation (an ideal opportunity to assess and work on movement patterns); and
- A more specific warm up with easy climbing or bouldering (an ideal opportunity to introduce and work on climbing or bouldering techniques even at beginner level).

1.2.3 Activity

The bulk of the bouldering session can include a range of activities, which should follow a progressive pattern in terms of either skill development or difficulty.

Moving climbers on too quickly in either area can lead to a loss of motivation or even injury so choosing appropriate exercises, tasks and challenges is key. Getting this correct will also help keep a group engaged and help with behaviour management.

Key topics

Fundamental movement skills such as balance, use of centre of gravity and footwork are critical. These form the basis of good bouldering movement and underpin the execution of accurate technique. These skills require specific time and constant practice to develop well. The overarching concepts you should be communicating are 'economy of movement' and 'efficiency'. The main message is that by using the lower half of the body climbers can save energy in their arms.

As people progress, more specific techniques such as twisting on steep ground, laybacks, arêtes, using heels and dynamic movement may be brought in over time, all while reinforcing the basic principles of balance and footwork.

Games

Games can provide great stimulation and challenge for groups. Most activities can be 'gamified' if it is appropriate.

The best games stimulate repeated attempts at problem solving whilst also observing competitors' strategies. When planning a session it may be hard to see where a warm up stops and the 'activity' begins. Games can be really useful, but only if they are clearly meeting the learning outcomes set out in the session plan. As is stressed in the FUNdamentals courses, keeping exercises fun and engaging is the key to successful sessions.

Climbing Games by Paul Smith may be a useful resource and you can research other climbing games on the internet, but be careful to assess them for quality and safety.

Off the wall exercises

This may happen on the mats, or standing on the ground, possibly using the wall for balance. The idea is to take a learning outcome such as improving footwork and recreate it in an achievable way off the wall. There are various floor exercises that can enhance bouldering skills including those that develop agility, balance and coordination which form the bedrock of all good movement skills. There are many films you can find on the internet for inspiration including those of the German Bouldering Team.

Technique drills

Drills are really useful for ensuring that key techniques are practised a number of times, on both sides of the body and at different speeds (repeat slowly, repeat fast). Drills are a form of fixed practice and can be blocked (where the same skill is practised again and again) or random (where multiple skills are practised in a random order). Other forms of practice include variable practice (repeating a skill in a variety of situations) and distributed practice (where attempts at the skill are interspersed with breaks for rest and mental consideration). Drills and structured practice are covered in more detail on Mountain Training's Foundation/Development Coach training or Mountain Training Board Ireland's Level 1 Climbing Coach training.

Self-directed bouldering time

Once climbers have been introduced to the basics it is important to provide them with a feeling of autonomy, even whilst they're still under strict supervision. This can be as simple as letting them choose which climb to attempt or, depending on the group, allowing them to break off into smaller groups and climb around the centre or venue. If this helps to meet the learning objectives it can be a very important part of the session.

Personal independence and decision making

Being able to make decisions is a vital part of all bouldering and should not be overlooked; considering this when introducing and developing others is crucial. Facilitating somebody else's ability to work out a boulder problem is much more difficult and time consuming than simply telling them how to do it.

However, climbers of different abilities will require different input. Novices will likely require more direction than someone with more experience. You should bear this concept in mind when a participant struggles; instead of providing direction on how to complete a boulder problem, for example, you should first seek to coach at the appropriate level to stimulate development of this skill by the participant themselves.

Group management

Quality sessions will ensure that all climbers get lots of time bouldering. Sessions should be organised in such a way that allows all participants to be active at the same time – either all bouldering together or in pairs. If only one participant is climbing at a time you will have maximum control over the activity, but this runs the risk of the group getting bored and losing interest, which can result in group management problems.



1.3. Ethics and etiquette

1.3.1 Grading

Most bouldering centres and venues will offer a grading system to help climbers identify appropriate challenges.

This can vary from centre to centre and even within a centre from setter to setter and as a result, should be considered as a rough indication of difficulty rather than definitive. The style of the problem will often have a greater impact on the participants' enjoyment and ability to climb it than the grade might suggest and you should use your own judgement to help climbers select a suitable problem. The participant's ability and the aspects of movement you may be focussing on should be the most important factors affecting your decision making.

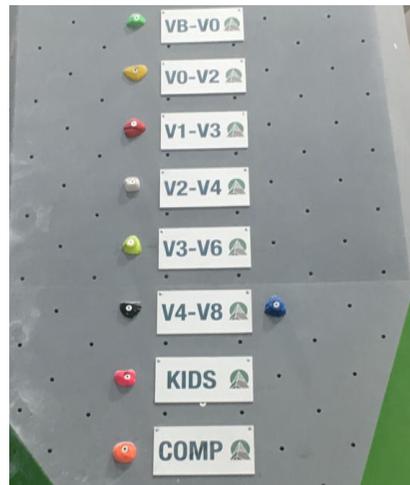
When introducing novices to the sport, calibrating the difficulty of the problem to the participants' abilities is essential. As a supervisor you should be prepared to create your own problems for participants; using coloured stick chalk or tape to mark holds can sometimes be useful here, but should be removed afterwards. With the centre management's consent you could even set your own problems with some holds and an Allen key.

Novices need early success and should succeed on most problems to encourage motivation. However, if you make it too easy they will soon become bored. As your participants progress they will become more experienced and resilient, allowing them to tolerate more failure and find success in learning from the process of

working out a problem. Top level boulderers 'fail' almost all the time!

Bouldering Grades		
V Grade	Font Bouldering Grade	British Tech Grade
VB	3	4a
V0-	3+	4b
V0	4	4c
V0+	4+	5a
V1	5	5b
V2	5+	5c
V3	6A 6A+	6a
V4	6B 6B+	6b
V5	6C 6C+	6c
V6	7A	
V7	7A+	
V8	7B 7B+	
V9	7C	
V10	7C+	
V11	8A	7a
V12	8A+	
V13	8B	
V14	8B+	
V15	8C	

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1.3.2 Setter's rules

Depending on the venue there may be guidelines with regards to how the problems are designed to be climbed.

Supervisors should be aware of these guidelines and communicate them to their participants. These may include things like sit-starts, standing starts, matching on the top hold, using (or not) volumes, arêtes, smears and screw-ons.

There may also be local rules, such as whether topping out is acceptable or not, that need to be adhered to.

1.3.3 Chalk

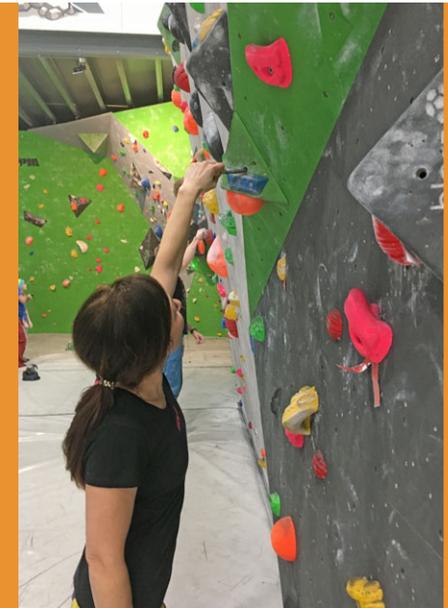
Different venues will have different rules on the use of chalk.

They may range from 'anything goes' to 'liquid chalk only' and these also need to be relayed to the group under supervision.

1.3.4 Etiquette

Bouldering has some generally accepted practices that are worth sharing with new participants, such as:

- Take turns on problems - once you've had a go, step away from the wall to allow others to have a go;
- Ask a climber if they would like advice/guidance/beta before giving it (remember the guidance above about problem solving);
- Do not stand/sit/lie under climbs;
- Brush holds before and after bouldering; and
- Ask before spotting.





Section 2:

THE MANAGEMENT AND DELIVERY OF SAFE, HIGH QUALITY BOULDERING SESSIONS **OUTDOORS.**

The difference in approach required for decision making with participants in the outdoors should never be underestimated.

The ever-changing nature of the environment and needs of participants

make the level of care much greater. It is fair to say that supervising outdoor bouldering sessions is probably the most serious aspect of the work of any supervisor, and as such, you must be prepared to have a flexible plan for any session that can be easily altered.

2.1. Access and conservation

As a supervisor you should be aware of access arrangements and laws regarding the sites you wish to visit; the mountaineering councils provide good sources of information. In order to maintain this access it is important to educate participants about the Country Code, littering, noise pollution etc. There is a specific code of conduct with regards to bouldering outside which promotes respecting the rock (not tick marking boulder problems excessively with chalk, not climbing on friable rock after rain, no chipping, no use of resin) and respecting other people who also want to try the boulder problems.

- Mountaineering Scotland Bouldering Code of Conduct – download here: www.mountaineering.scot/activities/outdoor-climbing/style-and-grading
- The BMC manages a regional access database which can be viewed online, or via an iPhone or Android app. The most up to date access information for all climbing and bouldering venues in England and Wales is provided, so that climbers and boulderers have definitive information to inform their venue choices. <https://www.thebmc.co.uk/bmc-regional-access-database>
- For Irish access issues contact: info@mountaineering.ie

2.2. Safety, hazards, risk assessments, group management

As with indoor bouldering, providing clear briefings at the start of the day can set the tone for how the rest of your session will proceed.

In addition to the usual points detailed below, setting out clear boundaries for where group members should and should not go is required. This is particularly relevant when bouldering in an area that has high boulders or poor landings that the group should not access.





2.2.2 Supervisor checks and pre-session preparation

As with indoor sessions there are a series of checks necessary before bouldering outdoors with a group.

Before starting any session as a supervisor you should ensure that:

- You have all the necessary administration completed;
- You understand the experience of the group (whether they are beginners, intermediates etc.);

- You are aware of participants' relevant medical conditions or ongoing injuries;
- You have looked at the weather forecast and relevant access information to help establish the correct venue for the day;
- You have considered all the possible outdoor locations (see point 2.2.4) that meet the needs of the group; and
- You have established communication systems with your employer/deployer (be aware of mobile coverage), casualty evacuation plans and transport arrangements.

2.2.1 Hazard identification

Bouldering outdoors carries additional elements of risk compared to bouldering on artificial walls and as a supervisor you need to be aware of these risks and how to manage them.

These include:

- bad landings and uneven or boggy ground
- sloping top outs
- loose rocks

- greater height of problems and high ball top outs
- tricky descents
- poor weather and slippery conditions
- difficulty in warming up
- snappy holds

Appropriate risk assessments should be carried out to assess the suitability of the venue for a specific group and identify any location specific hazards. Ongoing dynamic risk assessments should also be made with regard to the party and conditions at the time.

2.2.3 Selection of appropriate venues and problems

The height of problems versus the height of hard moves as well as the nature of the landings, are all issues to bear in mind when choosing appropriate locations.

Many good group bouldering venues are not described in guidebooks, with good lower standard problems not always listed. Site-specific knowledge is invaluable in choosing an appropriate venue so it may be useful to ask other supervisors about possible venues if you

are not local. The use of problems appropriate to group ability and confidence is essential to a successful session.

You should consider what height is appropriate for particular groups when bouldering. The height limit in a purpose-built facility with integral crash matting is a maximum top out height of 4.5m. With this as a reference point, it is reasonable to infer that any hard moves above bouldering pads outdoors should be low down and the relative level of difficulty should decrease as height increases. A high degree of judgement is required here.

2.2.4 Safety briefing

A thorough briefing is critical when delivering a bouldering session outdoors. The same injury risks exist outdoors as indoors, however, because of the uneven ground, varying height of each problem and lack of flat matting, you must set firm boundaries with your participants. A briefing should include the following points:

- Participants must be wearing appropriate clothing, with empty pockets and any jewellery removed or made safe;
- Housekeeping: where participants should leave their belongings and the location of toilets/where to go if nature calls and how to protect the environment;
- Group management issues such as requiring the group to remain together, and to ask you if someone needs to leave the group for any reason;
- How many people can be bouldering at any given time;
- It is good practice and useful to know whether anyone has had a recent injury or has restricted movement;
- Identification of specific hazards such as jagged boulders under pads, other boulders that may be in the way and an acknowledgement that each boulder will present its own risks;
- A warning that the descent may often be the hardest part of the climb and that the supervisor will specify where participants should descend; there may be different strategies to manage each boulder; and
- That people should ensure all the pads are arranged properly before they set off on a boulder problem.



For beginners and groups new to a supervisor it is also worth including:

- An explanation of the seriousness of the risks involved;
- An explicit statement that the pads do not remove the risk of injury;
- A warning not to walk or climb underneath or closely behind other climbers;
- The importance of cleaning shoes before climbing with regards to protecting the rock from erosion and maximising the contact surface between shoe and rock.

2.2.5 Equipment

In the case of outdoor bouldering where falls can occur (as opposed to low level traversing and 'weaseling' where good supervision and occasional spotting may suffice) it is highly recommended to have a number of bouldering pads in order to protect landings.

Bouldering pads can never completely remove the risk of injury, however they can significantly reduce it. You should be

able to stack pads as well as laying them out flat in order to protect participants' ankles. A few pieces of old carpet or towels may also be useful to dry off and clean shoes before climbing.

Consideration should be given to whether participants should wear helmets, bearing in mind the age and experience of the group. If participants are used to uncontrolled descents from indoor boulder problems, they must be made aware that the same attitude cannot be taken outside. It would normally be best practice for supervised groups to wear helmets.

2.2.6 Supervision standards

Ratios

Constant supervision is necessary with novice groups to ensure that they are behaving appropriately. It is not possible to give specific guidelines on supervisor to participant ratios as this depends on many factors such as the age and experience of the group, the experience of the supervisor, the nature of the venue and activities to be undertaken, environmental conditions and other assistance to hand. Considering all the issues discussed previously, it would generally be considered that supervisor to participant ratios would be lower in an outdoor context.

Topping out vs jumping off

Topping out is an important part of bouldering, but the difficulty of any awkward moves at a dangerous height has to be weighed against the ability of the participants. Depending on the height of a boulder, it may be preferable to place a couple of bouldering mats under a problem and get the group to aim for a certain hold, or touch the top of the boulder and then jump off with care. This can make certain problems usable with participants which would otherwise be too risky at height or difficult to descend.

Falling off and landing

As problems increase in height, falling has to be more controlled and as the supervisor you must make the participants aware of this. Being defensive, looking around, picking a landing spot and jumping off carefully is always preferable to falling mid move. An uncontrolled fall will always end in a more awkward landing than a controlled one.

Peer spotting and the teaching of spotting in outdoor climbing

Spotting forms a far more integral part of risk management in outdoor bouldering than indoors, particularly as climbers progress through the sport. At an introductory level, you should generally avoid any problems that are too high or with awkward landings as the risks associated with novices peer spotting often outweigh the risks of not spotting at all. As participants progress in outdoor bouldering it is essential to develop their ability to assess and manage this risk. Developing this understanding in an appropriate and incremental way is key, as is never exposing people in your care to unnecessary or inappropriate risk. The potential for serious injury in poorly managed outdoor bouldering is high. The responsibility lies with you, the supervisor, as there is a significantly enhanced duty of care in this context.

The focus for spotting should be on the protection of the back, neck and head and helping someone to land on their feet. Catching another person is impossible and attempting to do so will likely end in injury to both parties. The nature of spotting also changes significantly as the climber gains height, with problems closer to the ground being much easier to spot well than higher ones. When a climber is comfortably within arms' reach it is easy to keep their heads up, usually by pushing on the shoulders, whereas when a climber is even slightly beyond reach, being dynamic and attentive is crucial. This takes a great deal of skill and practice.

An awareness of both the climber's and spotter's ability level is critical in the safe management of more advanced bouldering sessions. If the supervisor is in any doubt, they should take over the spotting themselves.



Bouldering pad placement

Unlike bouldering indoors it is not possible to cover the entire fall zone and additional run-off areas with mats when bouldering outdoors. Instead, mats must be carefully placed in order to achieve maximum safety for the climbers. Factors such as the expected direction of a fall, the location of the crux moves and hazards like boulders or rocks will all affect where pads should be placed. There should not be any gaps between pads in places where it is anticipated the climber's feet will land. Small spot pads can be used to sit over gaps in pads to reduce the risk of a climber's foot going through the gap. Spotters can also be used to move pads whilst a climb is in progress to ensure the best possible placement throughout the climb.

Poor landings

In this context a poor landing is anything where the ground below a problem is

uneven and managing the hazards requires more than simply laying pads down flat. It may be that the landing area can be levelled out by placing bags or other objects under the bouldering mats. If this technique is used it is important that no sharp objects are placed under the pad that might pierce through the pad. You should also consider whether mats need to be placed against objects such as tree trunks and other boulders to reduce the risks associated with a climber falling or stumbling backwards into them.

Spotting poor landings

Where the landing is poor, spotting may be essential and will need to be performed by an appropriately experienced and competent person. Spotters need to be aware of crux moves, the expected direction of fall and the location of any hazards. Spotters must also be aware of their own immediate surroundings in terms of trip hazards and uneven footings for their own protection.



2.3.1 Planning sessions

It is likely that when supervising outdoors you will have much more time to run your bouldering session than indoors.

There are also more things to do like travelling to the crag, walking in and moving between boulders, which all take time and should be factored into your session plan, along with the following:

- Learning outcomes
- Warm up
- Activity
- Warm down
- Summary
- Review

2.2.7 Overuse injuries and prevention

See section 1.1.6.

2.3 Planning and delivering quality bouldering sessions

See also the start of section 1.2 for information on various training options which cover this topic in more detail.

In an outdoor environment, you should hopefully have a) more space to work with, and b) a much larger area of appropriate terrain in which to teach people than when supervising indoors. The average indoor climbing centre has relatively little climbing surface which is less than vertical and even less that is a true slab. At most outdoor bouldering areas there should be plenty of terrain available for “play” on friction based slabs where participants can be directed to safely learn about footwork, centre of mass, weight transfer and economy of movement.

2.3.2 Warming up

The outdoor environment lends itself to a much more interactive approach to warming up than a climbing wall.

While much of the basic warm up process can remain the same, with many bouldering areas there are jumbles of boulders to balance and jump around on, allowing many of the fundamental movement skills to be slowly developed

in a more holistic way. The game of playing some kind of follow my leader around a boulder field can be great fun for both kids and adults alike. This requires a much greater level of dynamic risk management and group awareness than with any indoor climbing session. Low level traverses can provide excellent group challenges where relatively difficult moves can be attempted just inches from the ground – this needs to be well managed as the tendency is for the climbers to gain height without clear direction.



2.3.3 Activity

If footwork and particularly friction are learning outcomes of your session, it's important to tailor the warm up and initial boulder problems (which may just be small sloping bits of rock and not 'official' boulder problems) accordingly. You can then progress the activity until the participants are doing longer boulder problems relying on friction. Advance knowledge of the bouldering areas and available problems will enable you to create an appropriate circuit for your

participants and is a good way of delivering an effective session.

It is worth being aware of the skills and techniques that are harder and easier to teach on artificial walls compared to outdoors. Friction-based footwork, movement on slabs and jamming are obvious things that are not easily taught indoors. Bouldering can be used to start a session by focusing on these techniques close to the ground before doing some routes later in the day.

2.4. Ethics and etiquette

2.4.1 Grading

If climbers are used to bouldering indoors they may need to adjust their expectations and comparison of grades when climbing outside.

It's common for indoor climbers to struggle when they first go outside. This is partly because of the lack of obvious handholds and footholds (until they start to understand friction and balance) and secondly because they often won't be able

to climb the same grades outside as they do inside, at least initially. Prepare your group for this likely occurrence.

Most outdoor venues in the UK use either the Font grading system or the V grading system and it is useful to explain these systems to novice climbers. Some guidebooks also make reference to the 'British' grade of particular moves which may add to further confusion. If your group is also doing routes, bouldering may be a useful opportunity to practise what a British 5b move is like close to the ground first, before attempting this at height.

2.4.2 Chalk

Footholds are not as easily visible outdoors as they are indoors which is why it is common practice to tick mark them with chalk.

There is no problem doing this, as long as the tick marks are removed with a soft brush before leaving the boulder.

2.4.3 Etiquette

Briefing groups about standard bouldering etiquette is similar to that indoors.

It is also important to remind your participants about the issues of excessive chalking, brushing it off after climbing,



damaging the rock and not hogging particular problems when other climbers are around. Participants should also adhere to the Country Code.



Appendix

GLOSSARY OF BOULDERING TERMS

<http://threerockbooks.com/index.php/bouldering-terms/>

USEFUL RESOURCES

Rock Climbing by Libby Peter

New Rock Climbers – a BMC publication

BMctv - Bouldering Skills channel

BMC Regional Access Database

Climb Scotland

Mountaineering Scotland – climbing information and advice

Mountaineering Ireland – climbing information and advice