Winter Mountain Leader

Guidance notes

for trainers and assessors

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Introduction

- These guidance notes should be used together with the Winter Mountain Leader candidate handbook and the Mountain Training Scotland quality manual.
- This guidance has been prepared to allow a flexibility of interpretation within the framework of the syllabus. Indeed, the strength of the scheme, as with mountaineering in general, lies in its freedom from rigid constraints.
- All course staff should be active winter mountaineers who are up-to-date with current practice and have extensive experience of leading, and teaching others in a winter environment. The MTS trainer and assessor person specification in the MTS Quality Manual details the required experience and technical skills.
- At assessment candidates should have an absolute minimum of 40 QMDs under winter conditions, with at least 20 gained in Scotland, distributed over a period of at least three winter seasons (75% of the minimum requirements must be UK based and at least 50% gained in Scotland). Overseas quality mountain days can be counted up to 25% of the minimum number required for assessment if they are in equivalent terrain and conditions to the UK and Irish mountains.

Definition: Winter Quality Mountain Day

The quality of a winter QMD lies in such things as the conditions experienced both overhead and underfoot, the exploration of new areas, the terrain covered, the skills deployed and the physical and mental challenge. At assessment 50% of the minimum required number of winter QMDs must be in Scotland.

All the following criteria should be fulfilled:

- the individual takes part in the planning and leadership.
- navigation skills are required away from marked/well used paths.
- experience must be in terrain and weather comparable to that found in UK and Irish mountainous terrain.
- knowledge is increased and skills practised.
- attention is paid to safety.
- the journey is five hours or more.
- conditions encountered should be in terrain and weather comparable to that found in the UK and Ireland in true winter conditions.
- ascent of a substantial peak would normally be included in the day.
- an ice axe and crampons are likely to be required.

General principles

The success of any course, whether training or assessment, depends on the contributions of everyone involved. Training and assessment courses should encourage open discussion and active participation.

Trainers and assessors should be mindful of the psychological pressures candidates may experience and their desire to perform well. These pressures can be managed effectively through attentiveness to the needs of the group, recognition of individual differences, and an understanding of how group dynamics interact with the learning and assessment environment. Self-awareness is equally important for course staff. Understanding one's own strengths, limitations, and training or assessment style supports sound decision-making and contributes to safer and more effective outcomes.

Trainers

- Courses should focus on those skills that candidates are unlikely to develop effectively without expert guidance, while recognising that the skills required of an effective Winter Mountain Leader are integrated and demonstrated through holistic performance.
- Trainers should encourage and facilitate reflective practice, including structured reflection at the end of each day.
- Trainers should be mindful of candidates' experience levels when introducing new content, particularly where techniques or approaches lie at the margins of the qualification's scope.
- At the end of the course, trainers should support candidates in developing action plans for the consolidation period, using the Winter Mountain Leader Skills Checklist as a reference.
- Candidates should receive individual debriefs and leave the training course with a clear understanding of what is expected of them during the consolidation period.

Assessors

- Assessors evaluate candidates against the requirements of the syllabus.
- Assessments should provide sufficient opportunity for all candidates to perform to the best of their ability under appropriately challenging winter mountain conditions.
- Assessors should ensure that candidates understand the tasks set and are given adequate opportunities to demonstrate competence. Where a candidate is initially unable to demonstrate competence, further opportunities should be provided where practical and appropriate.

- Assessors should make realistic, objective judgements against the nationally recognised standard and should not determine results by comparing candidates with one another.
- Assessment should be based on tasks or scenarios rather than requests to demonstrate isolated techniques. Tasks should not require solutions that rely on techniques beyond the scope of the qualification.
- Candidates should receive an individual debrief and, where unsuccessful, leave the assessment with a clear understanding of the reasons for the outcome, an appropriate action plan, and clarity regarding the requirements for re-assessment (see CMS Guidance Notes).

In conclusion, Winter Mountain Leader courses are for participants with considerable personal experience.

While course staff should endeavour to maintain a safe working environment, participants also have a duty to exercise judgment regarding their own personal safety and that of other members of the group.

Managing poor weather and conditions

Marginal conditions

With climate change winter conditions have become increasingly fickle and less reliable.

In a situation where marginal conditions are an increasing concern, the key principle MTS Winter ML Providers follow when deciding whether or not to run a Winter Mountain Leader course is: “you start it - you finish it”.

When deciding to run a course MTS Winter Mountain Leader Providers have to have full confidence that given the conditions and forecasted weather, they can complete the course. “If there is doubt, then there is no doubt.”

MTS manages this process by the guidance detailed in the ‘live’ document ‘Marginal conditions and course cancellation guidance winter’.

Managing hazard and risk

Delivering Winter Mountain Leader courses highlights the key dilemmas facing training and assessing staff with candidates operating from the very start on potentially serious terrain, in often adverse weather conditions. This creates a dynamic where staff endeavour to maintain a safe working environment while addressing both the requirements of the scheme syllabus and the candidates’ needs in a realistic winter environment.

In recent years a shallow snowpack has meant that thin and icy snow conditions can quickly occur and equate to easy angled slopes having potentially serious run-outs in the event of an uncontrolled slide. Trainers and Assessors who strive for realism should always consider the outcome of an unguarded moment or a lapse of concentration.

There is merit and value in exposing candidates, on training, to 'the gnarl' and how valuable this is to developing their confidence in dealing with such adverse conditions. However this does require careful and considered management regarding candidate safety.

Mountain Training Scotland will always support a decision to compromise the provision of the syllabus by any Course Director, Trainer or Assessor if it ensures the safety and well-being of candidates during a training or assessment course.

Snow holing

The inclusion of snow holing in Winter Mountain Leader courses, when conditions safely allow, is a convention to ensure candidates are fit and resilient enough to cope with the demands of the winter environment and maximise time spent 'in the snow'.

Its purpose is not to teach the Winter Mountain Leader how to conduct expeditions using snow holes as the base or main form of accommodation. The creation and use of snow shelters and holes is considered to be an emergency procedure. In a real situation consideration would be given to what the best strategy might be, and it might not be using energy to dig in.

If adverse weather means not snow holing, or abandoning the expedition due to safety concerns, then so be it. As the person 'on the ground' Course Directors (or trainers/assessors) are the ones best placed to make these calls and MTS will always fully support such decisions. It is also worth stating that in all the cases where snowhole expeditions were compromised due to conditions the trainers/assessors have striven to fulfil the syllabus in other ways. Examples of some of these other ways include, but are not limited to, the following:

- Day into night journey, creating an 'emergency' shelter, having a 'brew' then navigating back down and out (variations include using group shelter; conducting longer journey in darkness but with no shelter dug; accessing and briefly using existing snow holes/shelters as a temporary base for a short rest stop before continuing journey and coming off the hill.).
- Conducting an overnight journey using an open 'bivvy' (requires settled high pressure conditions).
- Using tents to camp out (in appropriate weather conditions) at a lower sheltered location.

In such situations feedback from candidates and training/assessing staff has indicated that no candidate has had their training or assessment compromised in such an event. On the

contrary it was felt that such adventures have been used as very useful learning opportunities and if anything, served to underscore just how potentially serious winter can be.

To re-emphasise – Winter Mountain Leader courses are for participants with considerable personal experience. While training/assessing staff will endeavour to maintain a safe working environment, participants also have a duty to exercise judgment regarding their personal safety and that of other members of the group. This will inevitably mean the training/assessing staff balancing the syllabus requirements with the ability of the candidates, and working out the 'safest' most appropriate way to manage the course given the prevailing conditions.

At the end of the day winter walking and mountaineering are risk activities and while we can do our best to make them 'safe' we can never fully remove the inherent risks associated with participating in them.

Candidate fitness guidance

It is important that candidates have the appropriate level of experience to allow engagement with course content. Candidates must satisfy the prerequisites for training and assessment courses, and this must be evidenced in writing, ideally in DLOG, before attending their course.

However, within any group of candidates there will inevitably be a range of fitness and experience levels. Mountain Training expects course staff to manage various levels of fitness and experience in a group 'on the hill' in a thoughtful and inclusive approach.

Here are some strategies based around the Mountain Training leadership and decision-making behaviours that can help course staff manage different abilities:

Individualised support: Understand that each group member may have different fitness levels and abilities. Take the time to know their strengths, weaknesses, and goals. Offer personalised support and guidance, like suggesting suitable routes or adjusting for different fitness levels.

Inspire and motivate: One of your main roles is to inspire and motivate your candidates. Encourage them to challenge themselves while creating a supportive and positive atmosphere. Share stories of personal achievements, provide encouragement, and celebrate progress to keep everyone motivated throughout the course.

Set realistic goals: Work with each group member to set realistic and achievable goals based on their experience and fitness levels. The aim is to create a sense of accomplishment and keep participants engaged. Adjust goals as necessary to accommodate dissimilar experience, fitness, and ability levels within the group.

Foster collaboration: Encourage collaboration and teamwork within the group. Pair individuals with dissimilar experience and fitness levels so that they can support and encourage each other. Create an inclusive environment where everyone feels valued and can contribute to the group's overall success.

Adaptability and Flexibility: Be ready to adapt and be flexible. Modify plans based on the group's capabilities, weather conditions, or unexpected situations. Have alternative routes or options available to accommodate different fitness and experience levels, ensuring that everyone can take part and enjoy the experience.

Communication and Feedback: Effective communication is crucial when managing a group with diverse experience and fitness levels. Keep communication open with group members, listen to their concerns, and provide constructive feedback. Encourage participants to share their experiences and challenges, promoting a culture of continuous improvement and learning.

Lead by Example: Demonstrate positive leadership behaviours. Your enthusiasm and passion will inspire and motivate others to strive for their personal best.

By following these leadership behaviours, you can create an inclusive and supportive environment where candidates with varying experience and fitness levels can succeed and enjoy their Mountain Training course.

Fitness feedback at post course debriefs

Training

Mountain Training expects course trainers to assist candidates in developing their action plans, utilising the relevant skills checklist and quality day definition as a reference. These action plans will often serve as the foundation for candidates' individual debriefs with the course director.

When providing feedback on someone's fitness level and creating an action plan, it is crucial to approach the matter with sensitivity and tact. It's important to determine whether the candidate genuinely has an issue with their overall walking fitness or if the trainer is making comparisons between candidates' abilities.

Trainers must recognise that discussions surrounding fitness can be emotionally charged, and the aim should be to inspire confidence and provide advice for the candidate with regards to completing Quality Days. Poorly delivered or generalised feedback can have a significant negative impact on a candidate's self-perception and well-being. Be specific about any aspects they may need to address and link this to the Quality Day definition and syllabus competencies.

Assessment

An assessor should conduct a realistic and objective assessment of a candidate's fitness, without making comparisons to other candidates' abilities. It is important to recognise that some candidates may have above-average fitness levels, while others may possess average or below average levels of fitness within the context of the qualification terrain.

To gain perspective, assess whether the candidate is fit enough to lead a group of unfit novices on a Quality Day in appropriate terrain. This consideration helps ensure that the candidate possesses the necessary fitness level to fulfil their responsibilities as a leader.

By focusing on the individual's fitness within the specific context of the scheme and their ability to guide a group, assessors can make an accurate and fair evaluation. It is essential to avoid drawing comparisons among candidates and instead assess each individual on their own merit and suitability for the leadership role.

Videos and e-learning resources

There are now several online resources covering avalanche education and awareness that may be of interest.

E-learning

Be Avalanche Aware

The first one is 'Be Avalanche Aware: An eLearning course to introduce you to this important decision making tool for all winter mountain users' created by the Snow and Avalanche Foundation of Scotland. You can access this free e-learning resource at https://beaware.sais.gov.uk/online-course/

Winter Mountain Leader – snow and avalanches

MTS have also produced an e-learning module that is specifically aimed at Winter Mountain Leader candidates and provides a primer for the Snow and Avalanche section of the syllabus. You can access the free course here:

https://www.mountain-training.org/help/resources/e-learning/winter-mountain-leader-snow-and-avalanches/

Mountain Training Pathway to effective Leadership

We have also added a course covering the Leadership and Decision-making competencies based on the Mountain Training 'Vison; Support; Challenge' model.

https://www.mountain-training.org/help/resources/e-learning/pathway-to-effective-leadership/

Winter Mountain Leader videos

Winter Mountain Leader Registration Process

This video might be useful to send out to candidates prior to registering but also equally as good as a primer for ensuring DLOGs are up to date.

https://youtu.be/z-64JvZSm4c?si=n2_IRe_z27bsAiMk

Winter Mountain Leader competencies

These are not 'how to' but are designed to help candidates put into the context of the syllabus the competencies required by Winter Mountain Leaders.

https://www.youtube.com/watch?v=lm4dLUFfcVc&list=PLiapHXvOHIUt7qBCnWLYjbEC-y_lAR8vy

Guidance on using microspikes a.k.a. micro-crampons in winter conditions

The following information has been developed to assist trainers and assessors in discussing the use of micro-spikes (also known as micro-crampons) with Winter Mountain Leader (Winter ML) candidates. The intention is not to provide formal or practical training and assessment, but rather to raise awareness on this topic. In 2025, the syllabus will be reviewed to determine appropriate revisions for formally incorporating their use within the scheme.

There are various products designed to enhance grip in snowy and icy conditions, typically featuring studs, underfoot chains, or short metal spikes. These are attached to footwear by stretching a flexible harness over the boot. At the more robust end of the range, designs featuring small spikes, are more suited (with limitations) to winter walking. These are commonly referred to as micro-spikes or micro-crampons. In this guidance we will refer to 'micro-spikes' to describe those products that use short metal spikes.

NOTE: Those products which use chains or thin metal studs are not suitable for winter walking and are not covered in this guidance.

Microspikes are compact, slip-on traction devices designed to enhance a walker's grip on icy and packed snow surfaces. They are not dependant, like most crampons are, on a rigid boot sole to attach to, and can be worn with a variety of mountaineering boots, trainers, or snow boots.

With recent lean winters, approach paths might consist of hard packed snow/ice. Wearing crampons in such conditions can be uncomfortable or awkward so microspikes can be a lighter, cheaper and more comfortable piece of equipment to walk in compared to crampons. Hence the use of microspikes has grown in popularity as a lightweight and affordable alternative to traditional crampons for winter traction. While they can be a useful tool in the right conditions, Winter Mountain Leader trainer and assessors should ensure that candidates understand their strengths and limitations which are critical to using them safely.

Here's an overview of key points to consider regarding their use:

When to use microspikes

They only work in a very limited range of conditions. Specifically, they are only suitable for moderately steep slopes - roughly speaking, slopes on which you can consistently keep the entire sole of your foot on the ground.

- Ideal terrain**:** Well-defined paths, tracks, and rolling terrain with compacted snow or thin ice on which you can consistently place the whole sole of your foot. Furthermore, they only work well on exposed water ice and hard névé (or icy compacted snow).
- Advantages**:** Easy to put on/off, compatible with various footwear, and less cumbersome than crampons in low-risk environments.

Limitations of microspikes

1. Traction: They tend not to work effectively if the hard icy surface is covered by layer of non-compacted or cruddy snow as the short spikes or the chains are not adequate enough to penetrate the unconsolidated covering and find purchase. The small spikes (or chains) don't penetrate deeply, limiting grip on steeper slopes or harder ice. This does tend to mean that they can suddenly go from providing a reassuringly secure traction to zero grip in a split second. This can mean (like using ski poles for balance and support) you can find yourself ascending steep terrain comfortably until suddenly you can't...
2. Balling up: They tend to accumulate snow ('ball-up') much more easily than crampons in certain conditions and this 'baling-up can be difficult to clear, especially since the user, given the terrain, be more likely holding poles rather than an ice axe.
3. Slippage: Stretchy rubber bands holding microspikes can flex and slip off, particularly on steeper inclines.
4. Coverage: Limited spike area means reduced traction on edges or toes, unlike crampons, which have spikes around the full sole.
5. Durability: Generally they are of a less robust construction than mountaineering crampons so are more likely to fail during use, potentially leaving the user 'stranded'. Advice would be to avoid buying cheap and carry a suitable emergency repair kit (e.g. carrying small cable ties) to enable a quick in field repair.

Safety considerations

- Know your terrain limitations when using micro-spikes
- Assess the terrain and consequences of a fall. On gentle slopes, a slip might result in minor injuries. On steeper or exposed ground, a slip very quickly becomes a fall which could be fatal.
- Use microspikes only where the terrain is suitable, and consequences are manageable.

Key takeaway

If in doubt about the terrain or conditions, opt for crampons - they provide more reliable traction, are more robust and are safer for challenging winter terrain environments.

Winter Mountain Leader syllabus

1. Leader responsibilities

Trainers

Trainers should ensure that candidates are made aware of the importance of assessing the strengths, weaknesses and needs of the group and planning the journey accordingly. Trainers should discuss with candidates how best to carry out initial preparation and how to complete detailed planning (this would include the Be Avalanche Aware process at some point in the planning stage) before leading winter walking trips into the mountains. Candidates should be made aware of some of the formal requirements of the planning process such as gaining parental consent, organising insurance and obtaining organisational permissions. The winter mountain environment presents additional hazards that may not be apparent to novice walkers, so participants and parents of children participating in this activity should be made aware of and accept these risks.

Assessors

Assessors should examine the candidate's ability to undertake risk assessments for planned journeys and their strategies for dealing with emergency situations. Planning skills can initially be assessed with a presentation or written task but they should not be looked at in isolation from a candidate’s ability to lead a group effectively on the hill. Questioning and tasks can be set to examine candidates’ knowledge of safeguarding, duty of care, obtaining informed consent and information on participants, contingency and emergency planning, supporting special needs and planning appropriate objectives.

Top tips

- Setting scenario-based open questions or tasks, whether verbally or in writing, will best determine the candidates’ knowledge and thought processes with regard to planning.
- Candidates’ route planning should incorporate the Vision/Support/Challenge model and the Be Avalanche Aware process and show considerable adaptability to anticipated changes in conditions, the group or the environment. This can be tested on the hill either for real or by setting different scenarios.

2. Leadership and decision-making

Trainers

Trainers should emphasise to candidates that underpinning our role as a leader are the values, beliefs, ethos and philosophy that shape our view of what leadership should be. The 'Vision, Support, Challenge' model used by Mountain Training provides a framework that candidates can use to plan, execute and review their leadership behaviours. In this way, followers who receive the right balance of the three categories can be encouraged to perform beyond their own expectations. Transformational leadership is a model of positive (INSPIRE) behaviours that leaders can use to promote the best outcomes for their groups. Mountain Training's ethos of developing competence and independence should be contrasted with other approaches.

Training in leadership needs to be a balance between a theoretical and practical approach to group management and the leader's responsibilities. Trainers should highlight that leadership attributes can be learned, trained, and developed. Trainers should highlight that whilst leadership attributes allow us to make good decisions and lead well, our decision making is influenced by the 'situation and environment', and human factors such as the leader, and the group.

All leaders tend to have preferred behaviours that are heavily influenced by their personality, experience, ethos and beliefs, as do their groups. Trainers should stress that leaders will need to adapt their preferred behaviour to an appropriate behaviour required by balancing the needs of both the situation and the group.

Teaching of leadership works best if it is integral to every task and situation during training. Trainers should include the more commonplace leadership tasks that occur, for example managing a group across a busy road as part of a planned journey. Training staff should recognise that they are acting as role models for candidates through their own practice during a course.

The 'Vision, Support, Challenge' (VSC) model can help trainers 'frame' discussions, sessions, and feedback regarding leadership and decision making. Trainers should ensure candidates know what they are trying to achieve with regard to the 'Individual and group satisfaction and performance'. Importantly how do they – the leader – know what this is? How do they monitor it? And how do they achieve it? It should be stressed to candidates the potential impact on this process caused by the additional fatigue and stress associated with winter walking/mountaineering on the group and individuals.

Whilst there are challenges with setting scenarios involving peers during training, trainers may find that modelling leadership behaviours, then using the VSC model to review the task, can support candidates' understanding of the practical application of the Mountain Training leadership model.

The following are examples of other options for structuring leadership tasks:

- Use of 'scenario' cards to promote discussion and reflection amongst the group.
- Having the group involved in decision making and route choice.
- Having the group plan breaks/food stops for the day.

Trainers should be well versed in the literature on leadership and the responsibilities of a leader, as specified for candidates, in addition to developing their own resources. Trainers should draw on their own and the candidates' experiences to discuss and expand this topic in the classroom and on the walk.

The Mountain Training resources and associated E-learning will help support candidates in applying the Mountain Training leadership and decision-making competencies.

Assessors

It can be challenging to provide genuine leadership situations on assessment. For example, groups of assessment candidates are not likely to react like a novice party. Much assessment however can be achieved by careful questioning throughout the course as situations arise. Assessors should consider introducing the VSC model at the beginning of the assessment and use this to help frame the assessment process and manage candidates' expectations.

Assessors should be clear in their own minds as to which aspects of leadership they can assess within the structure of the course. They should carefully consider how they use simulated situations for assessment and should make clear to candidates what is being assessed at any given time. Self-evaluation (using VSC as a framework) should be encouraged because being an effective leader depends upon leaders being aware of their behaviours, strengths and limitations.

Assessors may consider using questions based around the factors underpinning leadership and decision-making competencies e.g. can you briefly explain your personal leadership style and beliefs? How does this align with the Mountain Training ethos?

Candidates' understanding of different styles and modes of leadership should be assessed. Candidates should be able to identify their preferred behaviour(s) and therefore the style with which they are most comfortable and be able to make judgements about when changes of behaviour might be appropriate when leading a group. Assessors should give candidates opportunities to show understanding of the issues surrounding effective management in a variety of mountain situations. During the practical assessment candidates should also be presented with some common emergency situations.

Certain aspects of group management, such as pace setting, briefings and communication are relatively easy to evaluate, as are the choice and preparation of personal equipment, selection of routes over varying terrain and reaction to set emergency situations. However, the best course of action for an unanticipated situation has to be weighed carefully against possible

alternatives. It is common for these situations to be used as further training for the benefit of all concerned.

Assessors should give daily debriefs, with special regard to leadership aspects. Such sessions will provide a vital platform for discussion and opportunities to compare the perceptions of all parties involved.

Top tips

- Encourage candidates to think of observable behaviours that demonstrate the leadership competencies. The VSC and situational leadership models can help with this.
- Ask candidates to describe or enact leadership behaviours on the course as relevant situations arise e.g. 'What would you say/do to a mixed ability group before setting off on today's walk to create an inclusive and positive team spirit for the day?'
- Set tasks that require technical focus (e.g. micro-navigation, negotiating icy mixed terrain) and also demand positive group management. Can they manage both?
- Home research tasks and brief interviews can examine candidates' knowledge of leadership models and their own ethos of leadership.

3. Planning, Weather, Snow and Avalanches

Definition: Summer and winter conditions

The term 'summer conditions' is used to describe any conditions not covered by the term 'winter conditions'. 'Winter conditions' can be defined as the time when snow and ice prevail, and travel requires the skills and equipment required to cope with the special hazards of winter conditions. Mountain Training Scotland's Winter Mountain Leader scheme provides specific training and assessment for winter conditions in the hills and mountains of the UK and Ireland.

Neither term can be defined by a portion of the year i.e. 'summer conditions' can prevail during the winter months; likewise it is possible, especially in high mountain areas of Scotland, for extensive snow and ice, and hence 'winter conditions', to prevail well into summer.

Trainers

Trainers should emphasise that the ability to plan and lead a mountain journey is an essential skill for a Winter Mountain Leader and candidates should be able to incorporate the Be Avalanche Aware (BAA) process and guidelines into every aspect of their operation as a leader.

Trainers should highlight the importance of planning each day, taking into account such factors as the expected weather and its influence on the avalanche problem, conditions on the hill, the level of experience, fitness, skill and equipment of the group, as well as of themselves. Ensuring candidates identify 'key Places' is crucial to 'on the hill' decision making on the actual journey.

The trainer should identify the basic level of weather knowledge required to enable the candidates to make appropriate judgements, including how this may impact on the avalanche hazard based on commonly available information. This can be achieved through presentations and by directing candidates to suitable material such as the Met Office e-learning module. Forecasts and synoptic charts should be used and compared with the local weather conditions. Interpretation and forecasting based on weather signs and patterns illustrate the practical application of this aspect of the syllabus.

It is recommended that this approach, based around the BAA process, be integrated within the course on a daily basis using information gathering and practical observations.

By reviewing the forecasts during the planning phase candidates should have a good understanding of the avalanche hazard before they set out. Once on the hill, and throughout the day, the trainers' emphasis should be on facilitating candidates continually observing the weather and snow conditions both underfoot and around; and considering its effect on avalanche hazards along the planned route, taking into account the appropriate human factors.

With regard to the avalanche problem, the general thrust of this topic is the avoidance of being avalanched, by focusing on effective planning to avoid, or mitigate, the effect of avalanche hazard on the group.

Significant variations in weather conditions will be a positive aid to candidate learning as this should enable them to identify potential effects on the snowpack and, with ongoing guidance, to interpret what effects these changes may have on the level of avalanche hazard. In the absence of appropriate and variable snow conditions trainers can make use of suitable historic SAIS reports and make use of fictional scenarios based on these avalanche forecasts to discuss decision-making.

Trainers should take time to highlight (and explain/show) the significance of 'Key Places' (which should have been identified and noted at the 'Planning' stage) at appropriate times, places and situations during the day. Emphasis should be placed on ensuring candidates, by the time they reach 'Key Places' during the journey, should be well aware of the hazard (through following the processes outlined above and detailed in the Be Avalanche Aware process). It is at this point that particular emphasis should be paid to the potential negative influence of 'human factors'.

Normally at least one lecture should be given during the course and this should have a strong visual impact. The use of any relevant forms of visual aids is strongly recommended. To support this process there are two online E-learning resources that candidates may find of use: the Be Avalanche Aware and Winter Mountain leader Snow and Avalanches. Ideally these would be completed by candidates prior to the course.

Assessors

By the time candidates attend an assessment course, they should be aware that continual evaluation of the 'avalanche problem' is an essential part of winter mountaineering. Consequently this topic should not be seen as something to be assessed as a one-off skill on one particular day, but as an ongoing and developing contribution to the week's course.

It's likely that written papers will be used to assess candidates' knowledge of theoretical aspects such as factors influencing snow stability (including weather), human factors and causes of avalanches as well as precautions in avalanche areas, and rescue. Snow conditions and slope aspect encountered throughout the week will offer opportunities for questioning and discussion. Assessors should take the opportunity to offer further training when circumstances allow.

Candidates should be expected to understand the link between the snowpack and weather (past and present), terrain, human factors and avalanche hazard. They should also have knowledge of the work of SAIS, in particular the interpretation and possible limitations of avalanche forecast information.

By applying the decision making process outlined in Be Avalanche Aware, they should be able to avoid situations of avalanche hazard. These decisions should be based on good reliable information and using this knowledge to mitigate the associated risk, as well as associated information-gathering techniques to continually challenge their 'mental model' regarding the snow and avalanche hazard to help inform their decisions as they travel around the mountains.

This part of the syllabus is one which lends itself to further training on the assessment but a candidate who is oblivious to obvious danger of the snow conditions may be deferred on this subject and recommended for further training. While the candidates should be allowed as far as possible to assess the situation for themselves, the assessor may need to take over if decisions put the group in situations of unnecessary danger.

Candidates should be able to integrate their understanding of the avalanche problem into their planning as Winter Mountain Leaders.

Top tips

- Asking candidates to research the information required to apply the BAA process, through various means, and to present this with its implications for planning to the group is both a useful training and assessment task.
- Different weather and/or group scenarios can be given to demonstrate or assess how routes and objectives can be changed to suit the conditions and needs of the group.
- Use of historical forecasts and prepared resources (e.g. laminated historical SAIS forecasts) can be used in conditions of minimal snow/avalanche hazard to provide scenario context for planning and navigation.

4. Hazards and emergency procedures

Trainers

Many mountaineers will encounter an emergency in the hills, and Winter Mountain Leaders should be thoroughly prepared for these situations. It should be understood that emergencies may not be a result of an error on the part of the leader but can be the result of an unforeseen accident happening to a party member or other group/individual(s) encountered on the hill.

Accident and emergency procedures should be revisited to ensure candidates are aware of the key differences between incidents in summer and winter, and the implications. Syllabus item 4.8 asks candidates to describe and demonstrate the actions to be taken if involved in an

avalanche incident and organising a rescue and recovery for those buried in an avalanche using commonly carried equipment.

There is no prescribed list of equipment that must be carried. In addition to an ice axe, Winter Mountain Leaders may choose to carry other equipment such as walking poles, shovel, or probe which could be used to aid the rescue of someone buried by an avalanche.

Transceivers are not commonly carried by Winter Mountain Leaders. With regard to the use of transceiver, shovel and probe (TSP) by mountaineers and climbers in the UK please refer to the Mountain Training paper in **Appendix 2**.

Types of rescue that a Winter Mountain Leader may be involved in are defined as follows:

Self-rescue

Victims caught in an avalanche are advised to try to escape to the side of the avalanche/fight to stay on the surface. If knocked off one's feet, victims should jettison any equipment (if possible) and fight for their life. Rolling like a log may help one escape to the side. Conventional wisdom says to make swimming motions to stay on the surface. Anecdotal stories tell successes; however, analysis of avalanche motion and physics dispute swimming as a successful tactic. Avalanches stop quickly, and if under the snow it is critical to get a hand in front of the face to create an airspace before the snow stops. If near the surface one may try to thrust an arm, leg or object above the surface. If possible, victims should try to break free once the snow stops. If unable to move one should not struggle except to enlarge the air space.

Immediate rescue

Note: in a worldwide context the term 'companion rescue' is synonymous with the organised and systemic use of transceiver, shovel, probe by the victim's party members to attempt to effect a prompt and rapid rescue.

Survival time is short, if a victim is buried. The search for victims must start immediately; many people have died because the surviving companions or witnesses failed to do even the simplest search.

Witnesses to an avalanche that engulfs people are frequently limited to those in the party involved in the avalanche. Those not caught should try to note the locations where the avalanched person or persons were last seen. In fact, anyone planning to enter an avalanche area should discuss this step as part of their preparation. Once the avalanche has stopped and the danger of secondary slides has passed, witnesses should mark these points with objects for reference. Then, survivors should take a headcount to determine who may be lost.

If the area is safe to enter, the searchers should visually scan along a downslope trajectory from the marked points last seen. Victims who are partially or shallowly buried can often be located quickly by visually scanning the avalanche debris and pulling out clothing or equipment that may be attached to someone buried.

Because survival rates plummet as time passes, do not send a searcher for help until you feel you can do no more. However, do use your mobile phone or radio to call for help as soon as you suspect a burial. Generally, the telephone connection will be better from the top of a slope than from the bottom. Go to and mark the Last Seen Area. Select likely burial areas and search them, listening for voices, expanding to other areas of the avalanche, always looking and listening for other clues (movement, equipment, body parts). Probe randomly in probable burial areas. Mark any points where equipment is found. Continue scanning and probing near marked clues and other likely burial areas. After 30 to 60 minutes, consider sending a searcher to get more help, because at this point, the remaining victims have probably not survived.

Line probes are arranged in most likely burial areas and marked as searched. Continue searching and probing the area until it is no longer feasible or reasonable to continue. Avoid contaminating the scent of the avalanche area with urine, food, spit, blood, etc., in case search dogs arrive.

Organised rescue

Mountain Rescue teams respond when a victim needs more help than their companions can provide. Traditionally, organised rescue responded after immediate rescue efforts have failed. However, today, thanks to mobile telephones and helicopters the distinction between *organised* and *companion* rescue can sometimes blur together as organised rescue can respond quickly to assist companions.

Assessors

Assessors should be confident about the candidates' knowledge and ability regarding accident procedure and their responses to emergency situations. Candidates should exercise reasonable judgement and an awareness of the consequences of any particular course of action. When it comes to considering what is appropriate equipment, any decision has to balance objectives, economics and equipment availability.

With regard to Syllabus item 4.8 which outlines that candidates should be able to:

" describe and demonstrate the actions to be taken if involved in an avalanche incident and organising a rescue and recovery for those buried in an avalanche using commonly carried equipment."

This aspect of the syllabus can be assessed through questions and by practical demonstrations, for which group activity is acceptable. With regard to the avalanche problem, the general thrust of this topic is the avoidance of being avalanched, by focusing on effective planning to avoid, or mitigate, the effect of avalanche hazard on the group. However it may be an incident has involved other walkers and the Winter Mountain Leader being in close proximity becomes involved. Attention should be given to hazard avoidance, sound preparation and a thorough understanding of the techniques and dangers of an avalanche rescue. It may be appropriate to deliver further training in rescue and recovery once it has been established that candidates understand the core process and associated potential dangers.

Emergency snow shelters and holes

Candidates are expected to be able to cope with unplanned events or emergency situations. As Winter Mountain Leaders they should be appropriately equipped, fit and resilient so they can continue to function as an effective Winter Mountain Leader whilst managing themselves, the group and potentially a casualty.

The inclusion of snow holing in Winter Mountain Leader courses when conditions allow, is a convention used by trainers and assessors to ensure candidates are fit and resilient enough to cope with the demands of the winter environment. Its purpose is NOT to teach the Winter Mountain Leader how to conduct expeditions using snow holes as the base or main form of accommodation.

It will be usual for candidates to spend one (training) or two (assessment) nights snow holing on expedition. Course staff should ensure candidates are made aware that when conditions are overly hazardous, for example in conditions of limited or icy snow cover, a rapid thaw or high avalanche risk it may not always be possible, nor safe, to spend a night in a snow hole during their course. As a result of climate change the likelihood of snow holing being inappropriate due to adverse weather and conditions has increased.

Course staff have extensive experience of methods for adapting the scheme expedition phase due to unfavourable conditions, examples of which include, but are not limited to, walking through the night with a short halt to dig a single person emergency shelter within which to cook/brew then continue on; phased extended day into night activity; and theoretical lectures/discussions on snow- holing.

Whether the decision is taken to snow hole or adopt another method, all require careful consideration and management to ensure candidates are not overtaxed - physically or mentally. Candidates should also be assured that whether they snow hole overnight or not their course experience has still met the rigours of the Winter Mountain Leader scheme.

Trainers

The foremost task is to ensure Winter Mountain leader candidates can identify and manage, through a combination of planning, route choice, leadership and group management, common environmental and terrain hazards encountered on a winter mountain journey.

Snow shelters are a potentially useful way of avoiding the worst of the weather in an emergency, but the majority require a deep enough bank of snow to be effective. This may not be nearby in the event of a serious incident, so every step should be taken to avoid an emergency situation from developing in the first place.

Hill walking equipment that could be used to construct an emergency shelter may include an ice axe and/or a shovel. Whilst a shovel has multiple uses, not everyone considers them hill walking equipment and candidates should be able to construct an emergency shelter using only an ice axe. As a rule of thumb candidates would generally be expected to create a suitable emergency shelter to get themselves out of the elements within fifteen to thirty minutes, though snow conditions would have a significant impact on ease of digging and associated time required. Trainers should consider these times as a guide rather than a target.

Trainers must ensure candidates understand it is not within the scope of the Winter Mountain Leader scheme to lead overnight expeditions using snow holes. Nevertheless candidates should be able to recognise suitable sites for the construction of emergency shelters including snow holes. This can be achieved with the use of the map and knowledge of the snow and weather conditions. The task of selecting the snowhole site during the training course will normally be that of the trainer.

Trainers should ensure that candidates are aware of the potential risks posed to the occupants of a snow hole by avalanche, drifting snow and rising temperatures (both inside and out). This should be reflected in trainer input, focusing on snow hole site selection, construction and management of internal temperatures by effective design and appropriate ventilation. Ultimately snow hole design decisions can influence safety.

Assessors

Candidates should be able to demonstrate skill, practice and fitness in digging a suitable shelter in a reasonable amount of time. They should be able to select, from the map and from their knowledge and experience in the mountains, likely areas for emergency shelters/snow holes.

They should be aware of changes to shelter/snow hole sites that may occur during an overnight stay and be able to suggest ways to protect themselves and others from dangers of burial from drifting snow, avalanches and rising temperatures (both inside and out) that may lead to shelter/snow hole roof collapse.

Candidates are expected to do more than just `survive' the experience of the five day assessment. Assessors should satisfy themselves that candidates are organised enough to demonstrate that they are capable of safely journeying and looking after a group after a prolonged spell in what are often very adverse conditions. While traditionally the expedition may often be used to assess navigation at night, other methods as mentioned above may be more appropriate. Whatever method is used, assessors do not need to make conditions artificially difficult. Situations which occur during the course often provide the assessor with opportunities to determine a candidate's ability.

Candidates should be fully aware of the seriousness of spending a night out in winter and assessors should emphasise this during the course.

Top tips

- The management of hazards and emergency procedures often concerns candidates as they rarely get to practise these. Time demonstrating techniques, discussing decision making and practising scenarios is well spent in order to build their confidence.
- Candidates should be encouraged to think around problems for the best solutions rather than necessarily imitating a technique they have seen.
- Ensure candidates are familiar with the demands winter walking makes on the individual, their equipment and their skills especially in emergency situations.

5. Equipment

Trainers

Trainers should stress that a candidate's ability to equip themselves appropriately for a variety of conditions and journey lengths will enable them to carry out their Winter Mountain Leader role effectively.

Careful refinement of equipment commonly means Winter Mountain Leaders can continue to operate efficiently with minimum gear 'faff'. Experienced Winter Mountain Leaders make no assumptions nor leave things to chance regarding the choice or packing of equipment.

You are also likely to offer advice to novices on choice and suitability of winter clothing and equipment and this advice will need to consider the intended use and available budget; less expensive alternatives can often perform nearly as well as more expensive, branded, outdoor clothing and will be perfectly adequate for those starting out in relatively benign conditions. In more challenging conditions higher quality equipment will pay dividends but it still need not be expensive. Appropriate knowledge and understanding of what is available on the market is therefore useful.

Food and drink for any winter mountain walk should meet the two main requirements of being easy to access and consume, whilst providing a good return of energy. An understanding of the basics of nutrition will enable you to offer advice on the benefits of different foods.

Candidates should be encouraged to travel light yet must also be able to deal with foreseeable emergency situations. It may be that some form of assistance might be given to others as well as having to deal with needs amongst their own group. This kit can be shared amongst the group if appropriate and might include spare clothing, spare food, a shovel or shovels, a group shelter and Blizzard bag (or similar), long sling, karabiner, emergency rope and walking poles.

Trainers should ensure that all candidates understand and can use the equipment they will need as Winter Mountain Leaders and the depth of knowledge required to advise others.

Assessors

An assessment course provides many opportunities to examine the suitability of each candidate's personal equipment. Equipment should be examined with regard to safety, comfort and efficiency, allowing for personal opinion that will have been developed over previous months or years. Candidates need to be able to operate as party leaders in poor conditions and choice of personal equipment will have a bearing on their ability to do this.

Candidates' knowledge of various types of equipment requires examination, especially with regard to their recommendations to others.

Top tips

- Setting short (5 minute) presentation tasks assesses both a candidate's research and knowledge as well as their communication skills.

6. Snowcraft and Walking Skills

Trainers

Despite the fact that all candidates will have logged at least 20 Winter Quality Mountain Days (QMDs), and should be familiar with the use of ice axe and crampons, the quality of skills between them will be variable. A Winter Mountain Leader should have a very good level of personal competency in winter skills, for example moving on snow, use of ice axe, self-arrest, etc. Therefore the key emphasis during the training course should be on developing and enhancing these personal skills.

Microspikes, also known as micro-crampons, are lightweight, slip-on traction devices with short metal spikes designed to improve grip on icy and hard-packed snow surfaces. Unlike traditional crampons, they do not require rigid-soled boots and can be used with various footwear. Their popularity has grown due to lean winters and their suitability for icy approach paths.

Trainers should ensure that candidates understand when to use them, their limitations and safety considerations. It is not anticipated this should take up a great deal of time, and will be dependent on appropriate underfoot conditions and terrain to cover this topic – such as on the approach.

Candidates should be encouraged, if they have their own microspikes/micro-crampons, to bring them. If candidates do not have their own it may be possible – given the sizing methods (S,M, L etc) – to quickly try on a pair of someone else's. Ideally all candidates will be given practical experience of wearing and using them.

The key takeaway for candidates should be if you're not sure about the ground or the conditions, choose crampons. They provide better traction, are more robust, and are safer when the terrain is rough underfoot in winter.

It may be necessary to spend some time ensuring that all candidates can satisfactorily demonstrate the use of ice axe and crampons on a variety of slopes and surfaces. Usually, some time early in the course will need to be devoted to these skills and followed up with practice elsewhere during the course. The use of a journey can allow an opportunistic approach to covering snowcraft techniques and allow techniques to be used in context. These sessions will be dependent on snow conditions and a sensible approach needs to be adopted to make the most of the prevailing conditions and the training opportunities. Discussion on the suitability of the different equipment for specialist use will be valuable.

Winter Mountain Leaders will frequently need to give basic tuition to novice walkers in some or all of the above techniques. This role is undertaken within a wider context, such as part of a led group undertaking a winter mountain walk to 'winter proof' their charges.

Emphasis should be placed on good solid demonstrations that ensure that the leader is seen as an expert model for the technique and choosing suitable safe terrain to instruct appropriate techniques.

When introducing candidates to teaching basic skills trainers should be mindful that some candidates may be too involved in learning for themselves, and that this process may not receive their full attention. In this situation, effective reviewing at the end of each day would enable the training team to emphasise the key elements in providing effective basic instruction, and tease out key learning points. It's also worth emphasising to candidates the potential limitations in teaching certain techniques in relation to the prevailing snow conditions, for example some techniques, such as step cutting, require hard snow. It's a common observation that candidates seemed to be unaware of this issue especially at assessment. Therefore at training, specific and due regard should be giving to this issue.

Assessors

The need to provide basic tuition to novices means that candidates should be able to demonstrate good technique and confident use of the equipment. They should have sufficient knowledge to select equipment suitable for themselves and for novice winter hill walkers.

This part of the syllabus will be assessed practically. There are several ways this may be done. One option is for the assessor to give candidates a specific task, for example teach self-arrest or use of axe as a self-belay and go on a journey. The journey allows assessment of the use and teaching of appropriate skills. Assessors can also use peer to peer teaching, such as individual candidates teaching techniques to their peers. The emphasis in this process is on good, solid, clear demos. Use of questioning allows the assessor to explore the candidate's depth of knowledge and understanding of suitable teaching/technique progressions.

Candidates should be able to select a safe slope suitable for practising ice axe arrest and movement on snow, and be able to suggest ways to improve safety in an area which is not ideal. They should also be able to demonstrate a simple structure and clear progression in any training programme and an understanding, and effective use, of basic teaching strategies.

They should be aware that judgement of where and when to use ice axe and crampons versus axe or ski-poles and microspikes/micro-crampons is essential. Assessors should take the opportunity throughout the course to question candidates on situations where novices might need to use this equipment.

7. Navigation

Definition: Poor visibility/darkness

The term 'poor visibility and/or darkness' are used to describe situations where an individuals' line of sight i.e. how far they can see, may be limited by weather (e.g. mist/low cloud, heavy driving rain), environment (e.g. plantation woodland, complex rolling terrain) and/or time of day (e.g. night time).

Any combination of any or all of these can severely restrict a person's line of sight requiring specialist navigation skills to navigate their journey safely and efficiently. Night-time alone does not in and of itself equate to darkness. At high summer months in Scotland, assuming clear skies it never really gets dark. Likewise in clear weather with a full moon it is unlikely to be dark enough to warrant reliance on specialist navigational techniques and skills.

Trainers

Whilst candidates will be expected to be reasonably proficient navigators and map readers this may not always be the case. Many experienced winter walkers have done little navigating in poor weather conditions or have employed only a limited range of techniques. Others may have mainly used electronic devices such as a GPS or their phone.

Access to and the use of electronic navigation aids such as GPS, smartphones and GPS watches has significantly increased in recent years. In addition, technology has improved vastly in terms of battery life/types in such units. They are more reliable now and used correctly can be a powerful navigation tool.

Candidates should be introduced to developing their winter navigation and map reading competence using both electronic navigation devices and digital mapping, as well as competence with map and compass.

Trainers should dedicate a day where there is sole reliance on using digital mapping and navigation, ideally during a complex mountain journey (e.g. steep ground journey). The aim is not to replace map and compass, but to expose the limitations of digital devices in winter: cold and damp affecting batteries and screens, difficulties with gloves, reduced peripheral awareness, and reliance on fragile technology. Experiencing these drawbacks reinforces the value of traditional navigation and map-reading skills, while ensuring leaders understand both the potential and pitfalls of digital tools.

Winter navigation requires a sound grasp of contour interpretation and the use of appropriate navigational planning strategies such as the use of aiming off, attack points and catching features. All these need to be backed up with well-practised relocation strategies.

Navigation training should reflect this and be presented in a structured form, so that progress is made throughout the course.

By the end candidates should:

- understand the importance of a high level of competence;
- be aware of the standard at assessment
- know how much work they (individually) need to undertake before assessment.

It should be made clear to candidates that they will be assessed on their navigation and map reading competence using a paper map, compass and stopwatch as well as electronic navigation devices and digital mapping. It's on this basis that they should prepare themselves for assessment.

Trainers should be extremely careful that they are not perceived to be using electronic navigation devices to gain some navigational advantage over the candidates. Candidates may find it useful to be shown how to use their electronic navigation device as a training aid for personal feedback post training, for example tracking a navigation leg they are undertaking using a map and compass to then review navigation strategies when back at base.

Part of the training should be allocated to choosing routes, and navigating them, over mixed and difficult terrain using electronic navigation devices and digital mapping. Trainers should include night navigation even if poor visibility has been encountered, as it is not uncommon to be walking off the hill in poor light. It should be remembered that on a clear night, navigation may be no more difficult than in daylight.

Navigation should be presented in a progressive structure so that the candidates can build and consolidate skills throughout the course. The candidates should finish the course being aware of the level of navigation ability required and what they need to do to achieve this.

Assessors

Candidates should be able to demonstrate navigation and map reading competence using map and compass as well as competence with both electronic navigation devices and digital mapping.

The assessor should structure the tasks to ensure that all relevant navigation techniques are seen. Navigation and map reading will be assessed throughout the course so assessors can usually afford to settle candidates by initially setting simple navigation tasks. Assessors need to be certain that any errors are through lack of ability rather than as a result of 'assessment nerves' or their own failure to communicate clearly. Very careful and precise briefing of the candidate concerning what is being asked of them is essential. The other candidates must also be briefed about their role while someone else is leading the group.

Candidates should be given time to demonstrate their level of navigation ability to the assessor. They should be allowed to complete the task to the best of their ability and not be pressured into making quick decisions and mistakes. Candidates should be given the opportunity to demonstrate their ability to adopt the appropriate technique for the situation. The assessor should look at the task set from the viewpoint of someone navigating over unfamiliar ground in a stressful situation.

Assessors must be sure that sufficient time and opportunities are provided for a candidate to correct any mistakes. The main requirement is to ascertain whether or not a candidate can respond well to normal tasks of navigation at the same time as acting as a leader, even when mistakes are made.

It is essential that candidates are able to navigate accurately and be able to identify the 100m square within which they are located at any time during a walk. If they are unable to locate their party's position accurately, they may unknowingly lead their group into danger or, should an incident occur, they will fail the group and waste time for the rescue services. On many occasions dependent on terrain, candidates will need to be considerably more accurate than this to move safely through the mountains.

Assessors should look at this standard in context. In most conditions this will be achievable; in some conditions candidates may be able to pin-point themselves within a 25m square (a ‘fix’); in other conditions anything within a 200m square box may be the best achievable, for example, after navigating from an estimated position in whiteout conditions to a map point on a featureless piece of terrain. Assessors should exercise some leeway when interpreting this ‘standard’ and always put the perceived difficulty and accuracy in context, that is when it is possible for a candidate to locate on a feature and locate so it is a ‘fix’ versus an ‘estimated position’.

At assessment candidates are expected to demonstrate a practical awareness of how electronic navigation devices can be integrated with a map and compass, for example get a grid reference fix from the GPS, plot this on their map and navigate to their next objective. However the candidates’ core navigational ability is to be tested with map, compass and watch only, without relying on GPS or other similar equipment. Assessors should be aware of the potentially negative influence candidates’ own GPS could have if they use it to review their personal performance throughout the assessment.

Assessors should be extremely careful that they are not perceived to be using electronic navigation devices to gain some navigational advantage over the candidates.

Candidates who make a simple mistake should be given time to resolve the situation. The ability to identify and correct an error is both an essential skill for a Winter Mountain Leader and an informative process for an assessor. The choice of appropriate techniques and the efficiency of their application may be as important as the arrival at a designated point for the assessment process.

8. Security on Steep Ground

Definition: Winter steep ground

'Winter steep ground' as described by Mountain Training is snow-covered ground, often with easy angled steps of ice, neve, or rock on which a fall or slip could have potentially serious consequences. It may include complex terrain where a leader's experience in identifying a safe route is demanded, and decisions about managing safety on exposed slopes, steps or sections will require judgement and foresight.

Trainers

It is important that candidates are introduced to the idea that the ability to manage a group and individuals and ensure safe travel on steep ground is a continuum of types of terrain which will tend to dictate the appropriate technique (along with appropriate leader support).

Trainers should stress to candidates that emergency situations requiring the use of the rope are best avoided. Candidates should be taught that this can be done through a combination of planning, route choice, effective leadership and decision making, and appropriate use of winter techniques, such as kicking or cutting steps by the leader; all of which should reduce the risk of a group member slipping.

All candidates, being Mountain Leaders, will be familiar with elementary ropework, but a number will have let their ropework and steep ground skills lapse and have difficulty appreciating that the winter scheme requires a competency and judgement that only comes with experience and personal confidence. The emphasis should be on avoidance of the problems of security on steep winter ground; the emergency techniques including the unplanned uses of a rope are more likely to be required in descent rather than ascent. Training should reflect this with clear explanations of when these techniques are used.

When candidates have no climbing experience, the skills to concentrate on are:

- attaching to the rope;
- construction of anchors in snow, ice and on rock;
- construction of the belay;
- rope management;
- dealing with cornice edges/lips.

Trainers should be aware that this element of the syllabus is potentially hazardous and candidates can easily be taken beyond both their experience and confidence. Trainers must

examine each candidate's DLOG to ascertain their background experience. With comfort and educational principles in mind, the terrain chosen should not be intimidating. Trainers who strive for realism should always consider the outcome of an unguarded moment or a lapse of concentration.

The syllabus expects proficiency with normal winter hill walking equipment – axe, sling and karabiner. The role of appropriate security techniques within the scheme must be stressed. The MTUKI publication *Winter Skills* illustrates some of these core techniques in *Part 4 Security on Steep Ground*.

The particular rope systems adopted will not necessarily be those of the climber. While candidates with climbing experience have advantages and may even help in training others, there's a danger of adopting inappropriate techniques, for example the leader always being tied to the rope, expecting an anchor point to be within easy reach of the stance etc.

Candidates should be able to give a confidence rope to a group member and be able to determine when this technique is appropriate or not.

There has been and there is ongoing debate about the use of snow anchors as direct belays. While all trainers (and assessors) agree, in principle, this technique is acceptable, all agree it is NOT a simple judgment call. There have been several incidents where snow anchors as direct belays have failed unexpectedly. Trainers should focus on 'belts and braces' techniques such as a bucket seat with belayer linked to a snow anchor as the start point. While slow to set-up, it is 'safer' in that it requires less in the way of judgement calls from the candidate. Thereafter the progression of techniques and anchors taught at training should reflect the overall or individual experience of candidates.

Following on from this there is the issue that we expect candidates to be able to make appropriate judgments about the suitability of a snow bollard to abseil off – in effect a direct belay, so why could we not allow them to make a similar call to use a bollard as a direct belay, for example a loop of rope around a bollard with an Italian hitch? Again, context is everything. Candidates should not be lowering a full body weight load but instead should only be expected to use the rope to protect short climbing descents/ascents, such as where the clients' weight is not on the rope but on their feet while they down-climb.

Trainers may find it initially beneficial for the candidates' learning to cover the technical skills in-situ. Once this has been done the general consensus among trainers is these then need to be put into context by undertaking a steep ground journey with candidates being given scenarios/tasks in a single pitch context, whilst avoiding multi pitch ascents or descents.

When creating scenarios trainers should consider situations that reflect the more common, or likely situations in which a Winter Mountain Leader may have to deploy and use the rope. While working up a slope for several rope lengths might be 'easy' for the trainer to manage, it can lead to confusion within the candidates' minds as to the situation they are being trained for. In a real life situation, almost invariably the Winter Mountain Leader would be using only one rope length in descent. Anything done for training purposes that may be outside the scope of the scheme should ideally be avoided.

The use of lowers – where the group member's full body weight is on the rope – and the use of complicated rope harnesses, for example Thompson knot or triple bowline, are all outside the scope of the scheme.

Winter Mountain Leader Syllabus item 8.7.5 states that candidates should be able to "Hold slips and arrest short slides using dynamic belay techniques". This must not be done in a formal climbing context, such as when a leader slips and takes a long fall. The most likely context in a Winter Mountain Leader walking scenario is while belaying a client out of a section as they move or traverse onto 'safe' ground they could potentially slip. Hence practice should reflect this.

Assessors

When assessing this aspect of the syllabus the assessor should examine the skills of group management on steep terrain both with and without the use of a rope. While there should be no undue emphasis on this part of the syllabus there should be a number of occasions during the assessment when it can be examined. This must not be in an unduly intimidating situation. Candidates should be able to tackle the problems in a relaxed frame of mind with reasonable amounts of time to complete tasks. The methods demonstrated should be safe, secure, efficient and practical with assessors recognising that there are usually several acceptable solutions.

Management skills such as the positioning of the group in relation to the leader and the various forms of un-roped assistance e.g. kicking or cutting steps, are valuable to a potential leader and should be examined.

When looking at the use of security on steep ground rope techniques, assessors must be satisfied about the candidate's judgement and attitude to it. Ideally assessment should take place in situations within the usual deployment of security on steep ground, such as doing single rope lengths in descent. A balance should be found between the assessment of technical skills and their use on a mountain journey, and assessors should be prepared to return to this subject in other appropriate situations.

A commonly used approach is assessor(s) and candidates undertaking a journey with a less 'techy' ascent and more ropework-based 'single pitch' scenarios (i.e. no multi-pitch ascents or descents) in descent as an effective and realistic way to assess steep ground skills. This allows the assessor to also check out route choice, avalanche assessment and group management for example. If required this could be carried over into the expedition (although this then raises the issue regarding carrying appropriate safety kit such as helmets). Doing formal steep ground scenarios on expeditions is more of a last resort if it was felt a particular element required a revisit, for example due to unsuitable conditions on the day, etc. Where several candidates are being set tasks at the same time, assessors should be aware of the need to retain ultimate control over everyone's safety.

It's desirable that, when assessment is completed, a discussion takes place in an informal atmosphere, reviewing methods, attitudes and particularly general problems associated with

winter security on steep ground. The interchange of ideas at this stage should be considered as training for all concerned.

Finally, the requirement to complete the assessment can mean that assessment takes place in conditions that no Winter Mountain Leader would consider suitable for leading a group. Weather and conditions should be taken into account. Because there will always be technical variations between trainers, assessors should be open-minded as to the actual method used. The main criterion is that any safe method is acceptable. Assessors should and will accept **any safe method** of constructing anchors. The ability to set up a specific type of belay system is less important than the candidates' ability to assess whether such a technique would be appropriate.

9. Teaching and learning skills

Trainers

Candidates need to pass on their knowledge and enthusiasm effectively to their students. However, inspiring is not the same as impressing and a fruitful discussion can be had on the role of the leader and the values that Mountain Training espouses. It is often worth spending some time looking at group communication skills, both verbal and non-verbal.

Candidates will need to be able to teach basic snowcraft and walking skills (within the context of leading a winter walk) but not more advanced skills such as teaching navigation. Candidates should be able to demonstrate use of an appropriate teaching model to deliver a structured progressive session to a group, for example a simple 'show and tell' approach, or an 'appropriate teaching model' could be something like IDEAS or EDICTS or any variation thereof – nothing more complicated.

Time should be spent looking at how leaders can alter their activities and delivery style to teach the same topic to different groups. Being able to alter their language, calibrating the level of challenge, giving clear demonstrations, and setting appropriate goals are all essential teaching tools.

Reflective practice is the key to improving teaching skills and candidates should be encouraged to approach more experienced leaders for feedback and to experiment by modelling different behaviours with groups.

Assessors

Candidates need to be able to command the attention of their groups and deliver knowledge and instructions to their participants with clarity. There should be a good structure to what they say and they should have developed a habit of checking for understanding from their group using a range of reviewing methods.

Candidates need to be able to teach the basic skills that groups need in order to be led onto the mountains, as described above in the trainers section, but not more advanced skills such as teaching navigation. They should be able to plan and adapt activities that are appropriate for the group and that achieve defined outcomes. They should keep the group engaged and enthused by facilitating the appropriate level of challenge. Candidates should also be able to evaluate students' progress and signpost them to appropriate avenues for further development.

Written and verbal self-evaluation will give the assessor good insight into the candidate's ability to reflect on and adjust their approach. All these skills can be modelled with peers or by presenting them with alternative scenarios.

Top tips

- Setting scenario-based lesson plans is a good way to assess a candidate's choice of route and goals.
- Look for behaviours that can be described, recorded and fed back to the candidate, e.g. voice characteristics, eye contact, use of names, body position and language, quantity of talk and activity, pace, attention to individuals, giving feedback and encouragement etc.
- Setting different teaching scenarios for the same skill development will test candidates' abilities to adapt their plan and style of delivery.

10. Access, conservation and the environment

Trainers

Recreational use of upland areas represents only one of the many demands placed upon these environments. These demands may at times conflict and trainers have a responsibility to ensure that candidates have sufficient knowledge to operate without inadvertently creating tension with other land users.

Upland areas, where the climate is typically severe, are often particularly sensitive to change and opportunities should be built into a course to illustrate the impact of recreational and other upland use on the balance of habitats. Measures to minimise or control these effects should be illustrated during a course.

Trainers must be aware of current legislation as it affects the upland and remote areas of the UK and Ireland and trainers should ensure that candidates leave the course with an understanding of the current legal situation.

Winter Mountain Leaders may operate in unfamiliar areas. It is therefore essential that they know how to obtain current information about access. Trainers should ensure that candidates are fully aware of the significance of Rights of Way and access arrangements as shown on

maps. They should also appreciate the different legal rights and approaches to access in different areas of the UK and Ireland: https://www.outdooraccess-scotland.scot/

https://www.mountaineering.ie/accessandenvironment/AccessPolicy/default.aspx

https://www.gov.uk/right-of-way-open-access-land

https://gov.wales/get-access-countryside

The principles in the accepted codes of practice should be embedded throughout the course. The concept of Leave no Trace, and its implications should be discussed.

It is important that on a training course, staff try to impart knowledge about differing aspects of the mountain environment. Candidates should be encouraged to discuss areas of personal expertise with the rest of the group and to impart what knowledge they may have. Candidates can be helped to develop the confidence to talk about their knowledge through a positive demonstration by training staff. Guidance may be given on resources available for further development.

Assessors

An assessor can gain an understanding of candidates' experience and attitudes towards this crucial aspect of the syllabus by reviewing their DLOG and asking follow-up questions. Although a written paper may be of value and provide a stimulus for worthwhile discussion, this aspect lends itself to be evaluated throughout a course either as opportunities arise or as they are engineered by the choice of venue. It is common for a candidate to be asked to prepare a discussion topic and then lead a group session on relevant local or national access and environmental issues.

The criteria applied to the assessment of this area of the syllabus, with its wide range of topics and possible levels of expertise, will need to be flexible. However, assessors should not hesitate to defer a candidate if they feel that the range of experience demonstrated contributes to a serious lack of awareness of the importance of access and the environment, or that the practice of the candidate has, or may have, a negative impact. Assessors may look for knowledge and enthusiasm over a wide range of mountain related subjects but should not expect equal levels of expertise across them all.

The assessment of candidates in this area of the syllabus needs to be flexible and allow for variations in personal interests and depths of knowledge. A positive attitude to learning and imparting knowledge on the part of the candidate may well be the over-riding concern. Candidates should be familiar with current legislation that may differ between the different parts of the UK and Ireland.

Assessors should be confident that candidates are aware of the interests of others, both commercial and recreational, in upland areas. They should be particularly aware of and sensitive to the potential conflict between their own imported values and those of local

communities. Assessors must be confident that a candidate in no way jeopardises existing arrangements through insensitive actions.

Knowledge of sources of current information is vital to planning any route. It is possible to incorporate this in a planning exercise during an assessment course. This would provide opportunities to discuss real situations as they arise and to offer further training.

The implications of the various protection designations should be understood, as should the value of the relevant code.

Top tips

- Setting research and presentation tasks on access rights in different settings of the UK and Ireland can be used to assess the candidates' abilities to find the relevant detailed information.
- Presentation tasks on the mountain environment should encourage the explanation of systems, processes and concepts (e.g. glaciation, ecology, mountain building, food chains, environmental impact etc) rather than just describing and naming observations.

11. Background knowledge

Trainers

Trainers should introduce candidates to a variety of resources to enable them to expand their understanding of the development of mountaineering and hill walking. They should also introduce candidates to the role of Mountain Training and the national Mountain Training organisations, the mountaineering councils and the Mountain Training Association and of how they work with other agencies that have interests in the mountains. This can be achieved through lectures and an integrated approach throughout the course.

Assessors

Assessors must be confident that candidates operate in a suitably sensitive way in order to avoid conflict between their activities and those of other hill users.

Candidates' overall knowledge of the development of the activity and roles of national bodies should be investigated. They should be able to signpost participants to suitable pathways for their activity development. This can be achieved through a variety of ways, e.g. research tasks, discussion or presentations.

Top tips

- Ask candidates to choose a suitable wild campsite and make a risk/impact assessment – considering themselves, a group scenario and the environment. This can be done theoretically by map or practically on the hill.

Appendix 1

Winter Mountain Leader staffing

This is an excerpt from the MTS Quality Manual:

It is the responsibility of the Course Director to ensure that all staff have appropriate levels of skill and experience.

All staff working on Winter Mountain Leader training must, as a minimum, hold the Winter Mountain Leader qualification with at least 20 winter quality mountain days' experience after gaining the qualification and have worked on at least three Mountain Leader training courses. At the time of application to provide Winter Mountain Leader courses the Board does not require details of training staff who are WMCI qualified; however, the names of training staff who are only qualified Winter Mountain Leaders are required by the Board.

If Providers wish to have trainers who hold the Winter Mountain Leader, rather than WMCI holders, working on Winter Mountain Leader training courses they should first contact the MTS office to discuss this before using them on courses. In addition to the above they should meet the personal specification criteria as described in Appendix 2 of the MTS Quality Manual.

All staff working on Winter Mountain Leader assessment courses should hold the WMCI and have worked on at least two Mountain Leader assessment courses and two Winter Mountain Leader training courses plus meet the criteria as described in Appendix 2 of the MTS Quality Manual

- Maximum director/candidate ratio 1:12;
- However two such candidate groups may be accommodated together and combined for theoretical sessions.
- Minimum group size for Winter Mountain Leader training – 2
- Minimum group size for Winter Mountain Leader assessment – 2
- Minimum number of trainers or assessors – 2 trainer; 2 assessors
- Maximum ratio (training) – 1 trainer: 6 candidates
- Maximum ratio (assessment) – 1 assessor: 4 candidates

All training candidates should work with more than one trainer during the course. On assessment courses at least two assessors should give an opinion on the candidate's performance, one of whom should preferably be independent or external in the case of 'in house' courses.

Appendix 2

Mountain Training's Position Statement regarding avalanche rescue and safety equipment for mountaineers.

Produced 23/1/14

Written by John Cousins, Chief Officer, Mountain Training UK in consultation with BMC, MCofS, MI, AMI, BMG, BAIML, Plas y Brenin, Glenmore Lodge and Tollymore.

Avalanche rescue and safety equipment of various kinds has been available for many decades. All of it is designed to locate or retrieve someone buried in an avalanche or to keep them near the surface or able to breathe whilst buried. None of this equipment assists with avoiding avalanche hazard. This remains the priority in avalanche education and is a subject that is very well addressed by recent innovations developed through the Snow and Avalanche Foundation of Scotland (SAFOS), and supported by all the key mountaineering bodies(1). The shared aims of all of these organisations is twofold; develop widely accepted and commonly taught good practice regarding a thorough and robust planning and decision making process, and adopt common language and structure in avalanche education programmes.

Avalanche transceivers, and more recently air bag systems in rucksacks and snorkel like breathing aids, are used by skiers, albeit the more specialist off-piste kind who actively seek out steep, unmanaged slopes. The shovel could not be categorized as necessarily a specialist piece of equipment but there are many lightweight models designed specifically for snow and these are always carried whenever a transceiver is used, as is a collapsible avalanche probe.

Amongst mountaineers the use of this equipment is far less common. When this does occur, use ranges from only carrying a shovel, and occasionally probes, to the rare occurrence of transceivers being worn. A transceiver is a specialist item of equipment that requires training for all party members, if their benefit is to be worth their deployment. It is not the norm to carry such specialist equipment in winter for mountaineering or climbing and few people own them or have any experience of using them. To date there has been little research done on the pros and cons of such equipment to mountaineers but prevention (avoidance) is of course better than cure (rescue) and safety equipment doesn't necessarily make things better if people take greater risks because they feel safer.

There are significant differences between travel on foot and travel on skis as well as between the alpine snowpack and the UK snowpack. These differences may explain the variation in the respective use of transceivers in these disciplines.

When skiing, the speed of travel; on the surface of the snow; over many altitudes and aspects, very largely in descent, requires a different decision-making process compared to that when travelling on foot.

The alpine snowpack, in terms of depth, consistent colder temperatures, and deeply buried instabilities leads toward harder to identify weak layers, and a greater risk of burial.

The Scottish wind transported, often shallow, snow pack, in a maritime climate, appears much more likely to present a risk of trauma. Most incidents result in injury or death by trauma not asphyxiation where the use of transceiver would not have helped.

Travelling on foot allows the mountaineer to have a greater sense of snow structure and for this reason transceiver, shovel and probe are also not normally carried in Alpine climbing and mountaineering.

When it comes to the training of winter mountaineers then a cornerstone of the work of leaders, instructors and guides is that they act as role models and behave like "ordinary" walkers and climbers when teaching the techniques and skills that are commonly used by all. It is essential that these leaders, instructors and guides continue to use ‘best practice examples’ of techniques and equipment that are commonly available to recreational climbers and mountaineers alike. Minimalism is a firm part of every mountaineers approach and this means that every item of equipment has to fight for its place in a mountaineer’s rucksack, whatever their role.

There may be times when it makes good sense for those who go to the mountains in winter (on foot, on ski or by snowshoe) to carry transceivers, shovels and probes. However, this needs to be a decision that is based on the prevailing conditions, weather forecast, proposed itinerary, experience of the group and availability of specialist equipment. There is a very big difference between a mountain rescue team operating in foul conditions at night and a group under instruction learning about winter navigation. The former may have more limited choices in being exposed to avalanche risk whereas the latter should make safe travel decisions that avoid such risk.

Mountaineers have learned that blanket rules and policies rarely make good sense for sound decision making in the mountains. Everyone should ensure that they are free to regularly and consistently make decisions based on “first principles” to suit the specific situation at the time. In this way, they each make the best decision they can, each and every time, rather than resorting to a default setting.

Getting avalanched in Scotland is not an option and avoiding such incidents is imperative. This is achieved by conservative decision making, well informed venue choice and the use of fundamental techniques for safe travel.

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(1) Mountain Training, British Mountaineering Council, Mountaineering Council of Scotland, Mountaineering Ireland, Association of Mountaineering Instructors, British Mountain Guides, Glenmore Lodge, Plas y Brenin and Tollymore.