# Inverness Backcountry Skiing Club - Snowsports Touring Risk Assessment

## Introduction

1. Backcountry skiing and snow sports touring has an element of physical risk. As all IBSC touring trips take place in winter in the Scottish Highlands, there are greater risks than when compared with summer hillwalking. The nature of the sport also means that there are particular risks associated with falls when skiing off-piste as well as differing avalanche risk management when compared with hillwalking or climbing. IBSC has a good safety record which is a result of a strong safety culture and proactive approach to managing risk and this risk assessment formalises existing club safety policy and procedure and presents it in one accessible document.
2. Although all IBSC members are informed of these risks when they join, the club has a responsibility to identify and mitigate the key risks as far as is reasonably possible. This risk assessment describes the key risks, their causes, their potential consequences, their mitigations and what specific steps the club has taken to manage these risks. The overall aim is to create a culture within the club that reduces the risks to members whilst enabling participation and adventure.
3. As the key risks do not alter in nature from trip-to-trip, this risk assessment is **general** and provides the overall framework. The extent of these risks do vary significantly trip-to-trip, depending on factors such as: the specific weather and snow conditions; potential objectives; participant experience; fitness and equipment.
4. Managing the risk for each **specific** trip is achieved through club trip planning requirements and many of the mitigations likewise are addressed through established club safety policy, communications, training etc as detailed in this risk assessment. The club trip planning process meets the requirements of assessing risk for each specific trip and no further risk assessment document for each trip/group heading out on the hill is required as these risks are best assessed dynamically.
5. This risk assessment covers the core club activity of backcountry snow sports in Scotland. Where other activities are undertaken under the club separate risk assessments will be made as necessary. This Risk Assessment will be reviewed prior to the beginning of each season. Any comments or suggestions should be sent to the IBSC Safety & Training Officer.

## General Risk Assessment

1. Our risk assessment identifies 5 general risks and is based on Scottish Mountain Rescue data and member experience. Most of these risks are common to all winter mountain sports, however off-piste skiing brings the additional risk of falls and an enhanced avalanche risk due to different travel choices and objectives.

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| Risk 1: Getting Lost | |
| Caused by: | * More challenging navigation in winter due to low visibility from hill fog and white-out conditions and shorter days. * Failure to bring essential navigation equipment such as map, compass, digital mapping or GPS device. * Failure of navigation equipment * Lack of sufficient navigation skills in group. |
| Resulting in | * Slow movement, risking benightment and enhanced risk of cold injuries. * Crossing more exposed or hazardous ground leading to greater risk of a slip/trip or fall or other hazards such as unplanned river crossings. * Entering into avalanche terrain without proper assessment. * Failing to detect cornice hazards. |
| Mitigated by | * Members having adequate navigation skills. * Members carrying map, compass and digital navigation tools. * Prior route planning * Members working as a team to make good navigation and route decisions. |
| Club actions | * Requirement for all IBSC groups to have at least 2 x maps and compasses available in each party. * Route Card policy encourages prior route planning * IBSC website and members comms highlights the risk and provides access to free mountain navigation learning resources from IBSC, Mountaineering Scotland and others. |
| Future actions | * IBSC offers members free practical navigation training |

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| Risk 2: Falling when skiing/riding off-piste | |
| Caused by: | * Lack of personal ski/boarding technique suitable for the snow conditions and slope. * Unsuitable skis or board for the off-piste conditions. * Challenging or lean snow conditions such as ice, hidden rocks, breakable crust |
| Resulting in | * Personal injury/trauma, ranging from minor lower leg injury through to serious or life-threatening injuries. * Immobilisation of the member & party, resulting in greater vulnerability to the risk of cold injuries. |
| Mitigated by | * Use of the right equipment for skiing/riding off-piste. * Obtaining the right personal skiing/boarding techniques. * Identification of expected snow conditions during trip planning. |
| Club actions | * Set a minimum personal standard for members to participate on club trips of being able to ski a 'red' on-piste run. * Created a WhatsApp channel for members to share information on observed snow conditions. * Provided planning skills training to new & inexperienced members via the Intro to Ski Touring course. * Provided access to enhanced Ski technique via BASI Level 4 ski instructors, with 4 single-day courses in Scotland per year. * IBSC system of nominated 'trip contacts' to ensure pre-trip planning aligns objectives with member ability & expected conditions and to help facilitate effective team decision making on the mountain. * Carrying of mandatory group safety equipment in each party * Mandatory use of helmets when skiing/boarding, with free provision of club helmets |
| Future actions |  |

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| Risk 3: Having a trip, slip of fall when walking, scrambling or skinning | |
| Caused by: | * Lack of proper equipment such as crampons & ice axe, boots with proper grip, rigidity & weight for winter use. * Lack of ski crampons when skinning * Lack of concentration due to fatigue or distraction. * Lack of necessary personal movement technique/skills for crossing, rough, steep or snow/ice covered slopes. |
| Resulting in | * Personal injury/trauma, ranging from minor through to serious or life-threatening injuries. * Immobilisation of the member & party, resulting in greater vulnerability to the risk of cold injuries. |
| Mitigated by | * Use of the right equipment for winter mountaineering/ski touring. * Obtaining the right personal movement skills for rough, steep or snow/ice covered ground. * Having sufficient personal fitness. * Identification of expected snow conditions during trip planning. |
| Club actions | * Trip planning system (route cards) to help members select objectives suitable to their fitness. * Mandatory requirement to carry ski & boot crampons and ice axe to reduce the probility of a slip and * Provision of free club boot crampon & ice axe hire to members * Personal movement (boot & crampon skills) and ice axe self-arrest skills training on Intro to Touring course for new/inexperienced members * Mandatory carrying of helmets and wearing of helmets when on steep, rough or icy slopes. * Club ‘steep skiing guidelines’ provide additional guidance for trips when it is planned to venture onto steep ground. |
| Future actions | * Delivery of ‘winter skills’ training to a wider range of club members * Delivery of ‘security on steep ground’ training to members with steep skiing aspirations |

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| Risk 4: Suffering a cold injury, particularly hypothermia | |
| Caused by: | * Insufficient clothing for the weather conditions. * Excessive exposure to cold/wet conditions due to slow movement due to poor navigation or lack of fitness. * Low energy levels from inadequate nutrition. * Enforced stop following a fall, accident, medical emergency, exhaustion or becoming lost. |
| Resulting in | * Reduced decision & concentration levels making due to cognitive impairment effects of hypothermia leading to greater risks of getting lost, suffering a fall, of failing to assess avalanche risk & greater exposure to avalanche hazard. * Reduced mobility ability to move due to the physical effects of hypothermia, leading to immobilisation and eventually death |
| Mitigated by | * Pre-trip assessment of weather and snow conditions * Wearing suitable waterproof and insulating clothing * Remaining properly hydrated & fed with high energy foods * Having a means of getting shelter from the wind and carrying spare clothing in case of an enforced stop. |
| Club actions | * Club trip planning processes (route cards) to ensure objectives are suitable for the weather conditions. * Information on clothing requirements provided on club website * Provision of mandatory Group Safety Kits that include a group shelter (‘bothy bag’), a thermal survival bag for a casualty and a satellite Personal Locator Beacon to call for help when outside of mobile coverage. |
| Future actions | * Nutritional information provided on website |

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| Risk 5: Being caught in an avalanche | |
| Caused by: | * Failure to adequately assess the avalanche risk before entering into avalanche terrain. |
| Resulting in | * Injury due to being swept into rocky ground or over cliff edges. * Full or partial burial resulting in asphyxia. * Cold injury |
| Mitigated by | * Pre-trip planning and use of Be Avalanche Aware process * Practice of safe travel techniques * Use of avalanche transceivers, shovel and probe * Practice of avalanche companion rescue techniques |
| Club actions | * Information on avalanche awareness and free education resources provided on club website. * Pre-trip planning processes (route cards) ensure specific avalanche risks are considered on each trip. * Use of Be Avalanche Aware process encouraged before and during trips. * Mandatory requirement for members to carry transceiver, shovel and probe on touring trips. * 4 x club transceiver, shovel and probe kits available for free member hire. * Transceiver search practice on club training events (Intro to Touring course, club safety night at Glenmore Lodge . |
| Future actions | * Avalanche awareness training. |

## Club Safety Policy, Procedure & Standard Mitigations

1. Many of the mitigations to the general risks come from standard club policy, training and communications. In summary these are:

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| Minimum membership requirements | To be a member of IBSC you need to have a minimum on-piste ski ability of a competent intermediate (ie can ski a red piste under control). Given the nature of the clubs main activity, we do not permit under 18’s to join the club. |
| Maximum group sizes | For touring trips we limit the group size to 6. Larger groups move more slowly and make avalanche hazard management more challenging. IBSC do no set a minimum group size, but solo touring is strongly discouraged. Different considerations apply to other activities. |
| Mandatory Equipment | The club website sets out what mandatory personal and group equipment must be carried. The group mandatory equipment consists of a group shelter, first aid kit, thermal survival bag and a Personal Locator Beacon. At least 2 maps and compasses are also required per group. |
| Free equipment hire | The club offers members free hire of key personal safety equipment such as helmets, ice axes and boot crampons. The club also provides group safety kits consisting of a group shelter, first aid kit, thermal survival bag and a Personal Locator Beacon. |
| Trip Contacts | Each trip has a ‘trip contact’. They are an experienced member of the club who is there to facilitate trip logistics and planning. The are not ‘leaders’ but help ensure members undertake any necessary planning for each specific outing/objective and that they complete a ‘route card’ detailing what their plan is. Trip Contacts are provided with role-specific training by the club and are also encouraged to attend training provided by Mountaineering Scotland as well as other training such as the Outdoor First Aid course offered by BASP, both of which the club has and will subsidise |
| Late Back Procedure | This is a mandatory requirement for members to set out what their plan for the day will be. As well as providing potentially vital information to mountain rescue in the event of an emergency, the process of making the route card encourages pre-trip planning and discussion which serves as the specific risk assessment for that trip |
| Safety Training | The club offers members safety training on a range of subjects including risk assessment, equipment selection and maintenance, emergency procedures & communications. As well as a dedicated ‘safety night’, other training includes ski technique, winter skills and introductory training for new & inexperienced members. |
| Steep Skiing Guidance | Steep skiing brings with it additional risks and the club steep skiing guidance sets out what steps members should take to mitigate these risks when planning or attempting to ski a steep line. |
| Knowledge and communications | The club website provides members with knowledge on a wide range of safety-related topics. This is supplemented by articles in the monthly members newsletter. The club provides members with a WhatsApp-based community where knowledge of current snow conditions can be shared and to allow members the opportunity to go touring with other members on private trips, which is safer than solo-touring. |