

Kendal Snowsports Club Freestyle Draft Risk Assessment

Author: Clive Hebblethwaite, KSC Committee Freestyle representative, with input from freestyle riders, SSE Park and Pipe Team members, SSE freestyle coaches, KSC parents and Supervisors.

General description of activities

KSC has several open sessions which include Freestyle as the main activity. There are other open sessions that do not include freestyle, during these the main jumps and rails are not available. During freestyle open sessions the far section of slope is generally set out with easier features and the near side is for more experienced riders who have gained good control of normal skiing. There are several coached Snow Sport England "Futures" sessions with external coaches, some KSC coached 'intro to freestyle' sessions and an annual KJAM competition which draws nationwide competitors. Occasionally there are filmed/demonstration sessions for organisations such as Kendal Mountain Film Festival and TV media outlets.

Main hazards

There can be a perception that the main risk of freestyle are inverted moves. This is not the case. Whilst there is the potential for serious injury during inverted moves the reality is that all arial moves and many other features (rails etc.) inherently have a similar hazard level. Concussion and impact injuries are the main hazards. Some other hazards are not quite so obvious but can still have serious consequences. These include maintenance of freestyle equipment and the rider's attitudes (human factors) to gaining skills, for example trying to progress too quickly without consolidation.

Main controls

These hazards are most effectively controlled by practicing varied and graduated skills that allow the associated risks to be understood and managed by the rider. Having Supervisors available who have knowledge of freestyle and can continually monitor activities is a valuable control measure for proactive safety. Slope supervisors undergo annual training on safe use of the slope and equipment.

Club members have access to external coaches and members compete in national and international freestyle competitions and understand the skills, expectations and accepted practices within freestyle generically, creating a valuable flow of information throughout the KSC group. In addition, the club sessions are conducted in a highly inclusive atmosphere. This environment encourages younger and less experienced riders to observe their older and more accomplished peers. Peer-to-peer learning lets riders observe and adopt safe ways to learn new skills. This structure supports gradual progression and helps reinforce safety and good technique among all participants.

All participants are briefed on safe use of the slope during freestyle activities through an induction video and freestyle members declaration.

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Hazard	Description of Risk	Controls
Human factors	Certain behaviours, some quite subtle and difficult to describe and recognise, can lead to an increased risk exposure of trying an inappropriate move. Some examples are: Over competitive, trying to please spectators/other riders/parents, over focus on linear progression (inverts for example) and trying to 'send' too early as a result.	- Supervisors and more experienced riders create a supportive and encouraging environment that promotes a graded exposure to skill acquisition. - These sessions by nature are 'freestyle' and over prescription of routines is not appropriate. - However, a rider's knowledge of the risks needs to be obtained gradually by experimenting and consolidating their skills on smaller features focusing on reliability and variability rather than fast linear progression. - Creating this ethos during all KSC sessions is a key component of safety.
General impacts	All freestyle activities have a risk of impacts. Some falls are inevitable and cannot be entirely prevented.	- All skiers/boarders to wear helmets during freestyle sessions regardless of activity on the slope. - Long sleeves top/trousers and gloves are mandatory for all slope users.. - Discretionary protective clothing such as a back protector and/or body armour protection (rib protection for rails) can be useful and should be considered by participants. Some makes from mountain bike manufacturers are also available (mostly for point impact protection). - However, body protection is not always the answer. It can lead to false sense of security (sending before enough practice), restrict movement and, if poorly fitting, can actually increase the level of injury. - Body protection does not replace the need to build skills gradually. - The slope surface is a well designed multilayered construction to provide cushioning for falls.
Head impact during falls	Concussion. This can be from direct impact with the slope, equipment or another skier/boarder.	All supervisors are first aid trained which includes how to recognise concussion.

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	Whiplash can also make slow speed manoeuvres potentially serious. Concussion can be difficult to define and is largely regarded as a collection of symptoms following a head impact. Ignoring symptoms, or continuing after concussion, can led to a dramatic increase in their seriousness.	• Further prompt cards are made available to remind and refresh participants and supervisors. • If any fall that has a suspicion of significant head impact the participant should sit out and monitor in the first instance. • There are concussion guidelines to distinguish between minor knocks and those needing more serious and perhaps immediate action. • Slope officials to follow club concussion guidelines and first aid procedures. • Red flag symptoms need 999 action, concussion symptoms need checking out by medical professional, no symptoms need a reminder of what to look out for once away from the site. • Following a confirmed/suspected concussion incident the UK Non Elite guidelines for Return to Sport (2024) should be followed. • https://sportandrecreation.org.uk/files/uk-concussion-guidelines-for-grassroots-non-elite-sport---november-2024-update-061124084139.pdf
Fixed jumps	The higher speeds of 'airtime' off jumps create increased chance of injury on impact.	• The jumps have been independently assessed by a freestyle expert as appropriate for freestyle moves (see separate report).

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		• There is a blind spot on the slope below jumps. Riders are aware of this from the introduction video and the early get off points on the near tow are out of bounds and cordoned off with wedge mats. • Participants should be experienced skiers/boarders to use the jumps. • Participants should only use fixed jumps after training on mobile jumps first. • Participants should use a warmup straight air jump to gauge speed of run in if uncertain of conditions affecting speed, such as icy (fast and risk of overshooting into flat area/too much speed into rollers), or very dry (slow and risk of flat landing hitting the knuckle hard). • Always watch flag by the near tow to gauge wind speed. Slope supervisors to consider closing jumps in high cross winds. • Heavy showers there can produce a fast changing wind speed on a squall front as the shower approaches. Supervisors to act quickly to consider temporally closing jumps. • During twisting moves clothing with hoods can impair vision and make landings harder to spot. Participants should consider tagging hoods down when attempting these moves. • Avoid back flips from 'Cheese Wedge', as there is a high risk of catching ski tips and crashing. It is not designed for this type of inversion. • Everyone to watch introduction video on slope etiquette to avoid snaking and blind spot crashes.

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		• Slope Supervisors to monitor inappropriate attempts on these jumps, for example trying tricks clearly well beyond experience. • 'Trains' only to be done by very experienced participants known to each other.
Impact with mobile features rails, boxes etc	Falling if not in control on a feature can result in an impact. Skiing under a rail can result in an impact with the supports. Being out of control after a feature can result in collision with another feature	• All skiers/boarders to wear helmets regardless of activity on the slope. • Body protection for ribs might be appropriate at the discretion of participants. • Participants should take gradual skill progressions on easier features before moving to more advanced moves and rails. • Slope supervisors to monitor clearly over ambitious attempts and advise more practice on easier features to gain solid technique. • Where possible padding and end blocks should be used to protect from impact into mobile features. This is not always possible and it is emphasised to all users that a residual risk exists and that techniques and skills need to be solid, avoiding sketchy attempts. • Many of the features are advanced and require a solid variety of techniques. These building blocks should be in place before attempting these manoeuvres, building skills gradually.
Person to person collision	Novice riders can drift/ linger in areas needed for fast approaches	• Novice freestylers must avoid snaking and drop ins. • All freestylers are required to watch KSC freestyle video and follow slope etiquette. • Slope supervisors to monitor etiquette and advise appropriately especially to new/inexperienced users.

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Collision with personal ski equipment and clothing issues	Ski/boards becoming detached from riders can have sharp edges. Loose hoods can restrict vision unexpectedly causing a crash landing.	• Ski/boards must be suitable and maintained. No broken edges or broken sides. • Except for basic moves twin tip skis are highly recommended. • Bindings should be properly set for advanced moves. This might mean, for experienced riders only, a DIN setting above those for standard sessions. A ski falling off on advanced moves is a considerable hazard. The Din should still not be excessive and should be set by an experienced person. • Loose clothing should not be allowed to create obvious entanglement problems or vision issues during advanced moves, consider hoods to be fastened down during some moves. Slope Supervisors to monitor and advise.
Damaged mobile equipment	Loose screws or raised edges can cause unexpected stops and crashes.	• Occasionally equipment will become damaged. It should be inspected each session as it is put out and on the monthly maintenance team's rota. • Any faulty equipment to be isolated immediately and put into under-balcony storage for repair by the freelance team. • There is a responsibility that if a user damages equipment they will report it immediately to a slope supervisor. • Slope supervisors and course setters to monitor equipment before and during the session.
Poor manual handling techniques	Some of the equipment is awkward and heavy to move. There is a risk of dropping, causing an impact injury, or sprains from lifting something too heavy. Sharp edges are sometimes present.	• At least one person in attendance needs to be familiar (normally slope setters or supervisors) with manual handling of freestyle equipment and ensure good practice. • Only older minors or adults to help move equipment. As a guide 14 years or older but this will depend on individuals; their size, size of equipment being moved,

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		experience of lifting, amount of supervision. It is an essential part of a session to be involved in helping setting out and clearing away. Teaching the principles of this process with young people in a progressive and manageable way is to be supervised by course setters and supervisors. • Use the appropriate number of people for each piece of equipment, use of the trolleys when feasible. • Trolley to be kept near freestyle equipment to encourage use when moving freestyle equipment. • Positioning of equipment on the slope needs to be in conjunction with the KSC Course Setter's recommendation, taking into account risks of collision.
Inversion moves	Members of KSC are competing at this level and greatly benefit from being able to practice these moves. They do create risks of serious injury if not performed correctly.	• These moves have become mainstream at many ski resorts, snow domes and artificial slopes. They are now also established as part of Olympic disciplines and regional competitions. • Inversions are an advanced move that requires many techniques to be brought together. Individual building blocks should be in place before attempting these maneuvers. The club has an inversion policy to ensure these skills have been attained and advanced freestyler status registered in KSC records.