



Field Archery

A guide to field archery courses



CONTENTS

1. INTRODUCTION	3
2. ARCHERY FIELD COURSES	5
3. ANCILLARY REQUIREMENTS	9
4. SAFETY	11
5. RESTRICTING ACCESS TO SHOOTING AREAS	14
6. ENVIRONMENTAL CONCERNS	15
7. OTHER CONSIDERATIONS	16
8. FREQUENTLY ASKED QUESTIONS	17
9. DRAWINGS	18

1. INTRODUCTION

Archery is a fast growing sport in the UK. More than 45,000 people are members of clubs which operate under the auspices of Archery GB, the sport's national governing body. Many more shoot informally at activity centres, holiday parks and outdoor shows.

Archery has a great reputation as a disciplined sport which is steadily increasing in popularity. Nearly everyone is familiar with archery: the bows and arrows, the iconic gold-centred targets, the Olympic and Paralympic archery competition and the legendary Robin Hood splitting his opponent's arrow at a hundred paces.



Former World 3D Champion, Lucy Holderness, poses with a full size 3D animal.

This guide has been designed to encourage and assist those considering whether or not field archery could be an activity they could offer or help to provide.

It also works for landowners with suitable forested areas, agencies which provide holiday and recreational activity. It outlines the spatial requirements and key operational considerations to take into account when setting up bespoke facilities for field archery and fitting the sport into existing woodland.

The information explains how to make it cost effective for landowners as well as affordable for clubs and participant groups. Valuable layouts, across a wide range of settings, illustrate how archery can fit into plans by architects, commercial operators, managers of leisure facilities and people considering alternative uses pieces of land.

In common with all sports, safety is a factor when providing archery. This guide shows how by following a few simple common sense 'ABC' rules, it is possible to remove virtually all such concerns.

2. ARCHERY FIELD COURSES

Whilst a few clubs have courses which are permanent, field archery courses are often fixed solely for the duration of a tournament. Courses are planned and laid in the weeks preceding the tournament and then can be cleared away immediately afterwards, the time required being dependent on terrain, accessibility and available manpower. Courses on open ground need little preliminary work, whereas overgrown woodland may need clearing for both shooting lanes and paths between targets. Other than the network of paths, once a temporary course has been dismantled, it is often difficult to see any evidence that a shoot has taken place.

Individuals, clubs or associations seeking land for field archery may want permanent practise facilities or a small permanent course of eight or twelve targets for the sole use of club members. Clubs with established facilities elsewhere may be seeking temporary use of a larger area on which they can stage an open tournament.

Where does archery take place?

Archery can be done almost anywhere. Archery typically takes place on outdoor pitches and in sports halls (of all shapes and sizes, on school sites (indoors and outdoors), golf driving ranges and in adapted buildings: warehouses, mills and barns.

Target archery, as seen in the Olympics and Paralympics, sees archers shoot at neatly arranged lines of targets shooting 'ends' of three or six arrows from a fixed line at targets set at various known distances on flat ground.

Field archery is different. Targets, may be placed on a hillside, in the open or in woods, and on up, down or cross-slopes: flat ground is the exception, not the rule.



In the manner of golf, archers progress around a 'course' of 12 or 24 targets, which may be conventional paper faces fixed to target butts or may be life sized, three dimensional figures of animals, known as 3Ds.

Topography and vegetation

Field archers look for a course that have level access to sloping land with both woodland and grassland available to shoot over. Streams, ponds and small lakes are also desirable features.



Shooting 40m from the red peg across the lake at a 60cm paper field face.

A field archery course should strive to find land that has significant topographical variation. Having natural "hills and dales" on a range can greatly reduce the effort and space needed to make each target safely separated from the next. Since the targets can be set up against the hills, archers who miss the targets will merely stick their arrows into the slope.

Shooting distances

As previously described, field archery is similar to golf. Where archers move around the course from target to target. Targets are shot at from specific positions which are marked by ground pegs.

Distances can vary between 5m and 60m, depending on the size of target being shot and the type of bow being used. The distance to each target may be marked on the peg or left unmarked, depending on the round being shot. Rounds commonly consist of 12 or 24 targets, with distances all unmarked, all marked or shared equally between the two.

Laying out a course

To create a field archery course, course designers would first produce a working plan of the course. Using a map of the area, plan where you are going to shoot and where you will place ancillary facilities and the entrance and exit routes for the site. Walk around the site looking for

potential good shooting points, marking them on the map along with dips, gullies, water features, banks and potential hazards.

Using the initial course map, a preliminary clearance of obvious obstructions can be undertaken on the shooting lanes and safe paths. Then course designers would walk the course and place pegs indicating the shooting positions and the target position.

This will then allow clearance of the shooting lane for each target on the course, where necessary. This could involve removal of any overhanging branches or foliage.



Shooting lane cleared of bracken

Next a boss or 3D target is positioned at each target peg, together with a number board at the access point for each target.

After shooting, archers will walk to the target and retrieve their arrows. Then they will walk from the target to the next shooting peg. Therefore safe paths need to be marked out between targets. Signs are placed on the top of each boss indicating the safe path to the next target. The safe paths should not cross any shooting lane and therefore the laying out of each shooting lane is dictated by several considerations.

Finally all necessary safety notices should be placed within, and on the boundary of, the entire shooting area.

Course designers can then walk the course and check that it is clear, safe and conforms to Archery GB's Rules of Shooting. A suitably qualified judge will be required if the shoot is registered as a UK Record Status shoot, and time will need to be set aside to allow the judges access to the course.

Length of set up time

Provided that the shooting area is not seriously overgrown, two experienced archers, using a map of the site, should be able to produce a sketch plan of a 24 target course layout over two or three site visits of between four to five hours.

During that time they should be able to consider all prospective shots and their safety implications. Once the on-site work has finished, a scaled sketch is produced, detailing all shooting lanes, target distances and safe paths. This will often be subjected to an on-site review over a further half day, before work on the course commences.

3. ANCILLARY REQUIREMENTS

Toilets

Where open tournaments are staged, 'portaloos' are invariably provided by the host club. Commercial ventures would require permanent facilities, which might be combined with existing farm operations.

Car parking

It is not possible to stipulate a standard or ratio for all circumstances and locations. Where open competitions are staged, it is necessary to have parking for around sixty vehicles, many of which will not be all terrain. Firm ground with safe access and exit are essential.

Other facilities

Permanent storage is not necessarily needed, as archers will bring their equipment with them, and take everything away. However, if storage is available then this would be useful.

Old barns which are no longer suitable for modern farming are suitable for storage of equipment such as bosses, tents and catering equipment. Caravan or camping facilities with shower block and toilets, water and electricity supplies, will always be an added attraction to competitors at open tournaments.

Archery equipment

It is difficult to be specific about exactly what is needed as this reflects factors such as the number of people to be catered for (at any one time), distances being shot and whether recognised competitions are to be hosted or the venue is for informal / recreational participation.

The basics for the sport indoors include bows, arrows, targets and backstop netting. It does not need to be expensive and is simple and easy to purchase, set up and store safely.

Equipment for outdoor archery includes:

- Target stands, numbers and flags.
- Target faces (initially a roll of 100 x 122cm and 100 x 80cm faces).
- Shooting line tape or ground markings.
- Tape measure to check distances.
- Equipment to secure the targets safely - pegs, guy ropes, hammers etc.
- Ropes for roping off the shooting area.
- Safety notices (appropriate number).
- Metal detector(s) for lost arrows.
- Backstop netting

Competitions/events may also require:

- Scoreboards and scorecards.
- An Archery GB rule book

Vehicular access

For practise facilities that are available every day, it would be ideal to have hard standing for a half dozen vehicles, within a couple of hundred metres of the targets: a corner of a farmyard would be ideal. However, it is sufficient if safe parking is available on an adjacent public highway, provided no obstruction is caused.

With participants drawn to field courses from a wide area, it is essential that there is reasonable road access at the periphery of any course: this will provide primary access for emergency personnel and their vehicles. Due to the topography of field courses, vehicular access to particular points within the course may be impossible. Landowners should have a clear schematic of the course which can be used by emergency personnel, together with the co-ordinates of a suitable landing area for an air ambulance.



Open shoot on land at Kingsclere, Hampshire - flat land for parking and the sloping chalk scarp beyond which is used for the field course.

4. SAFETY

It is natural for non-archers to be concerned, but precisely because archery has the potential for harm, it has evolved as an extremely safe and safety conscious sport. Through the use of, and adherence to, a comprehensive set of rules covering how, where and when shooting takes place, archery has maintained an excellent safety record. The possibility of an accident is always inherent in any sport, but under these rules, every archer's awareness of their duty of care towards people, animals and property, has evolved into an all-pervasive culture of safety.

Safety in archery is straightforward and built around common sense principles. The fundamentals are:

- Never shoot alone
- Never allow people to stand ahead of the shooting line or peg
- People must shoot in one direction only - at the designated target
- People can only shoot when permitted
- Only allow people to collect arrows or scores when specifically permitted
- Ensure that people always handle bows correctly and responsibly
- Always store bows and arrows securely (and preferably separately)

✓ *Never shoot alone*

Club members are generally precluded from shooting alone and it is suggested that a similar principle is applied to all venues. This is most likely to be deemed a reasonable expectation in order to cover insurance requirements.

✓ *Shooting direction*

Archers must shoot at the target directly opposite their shooting position. This must be in one direction only.

✓ *When to shoot*

For paper faces, groups cannot exceed four archers, whilst for 3D targets up to six archers can shoot together, provided the course is provided with pairs of the smallest targets which are shot at close range.

When shooting at paper target faces, each member of the group shoots three arrows at every target, whilst groups shooting 3Ds may shoot up to three arrows, though each archer stops their individual attempts when he or she first hits the target.



A typical field archery group shooting in woods

✓ *Handling bows correctly*

Archers should aim continuously toward their target when drawing their bow. The bow must not be drawn in such a way that if the string was accidentally released the arrow would fly out of the safety zone. These rules must be followed at all times, whether practicing or at a tournament. They are the preconditions for safe archery.

✓ *Storage*

Bows and arrows must be securely (and preferably separately) stored.

✓ *Backstop netting*

Backstop netting, mainly used indoors, can never guarantee to stop all arrows. Backstop netting is hung, loosely, behind the targets and in front of walls. It should not be relied upon as the only safety precaution, and therefore under no circumstances can additional activity take place behind netting. Outdoors, netting can be erected to aid with collection of arrows when taking part in beginner's or taster sessions.

Activity should not take place in the overshoot area behind the targets. Archery netting is a tough, close woven mesh and available in green or white. It can be purchased from most archery retailers and sports equipment retailers. It can be ordered in varying widths and hangs behind the targets to the ground. It is never to be hung tight, as this reduces the stopping power of the netting.

✓ *Recording and dealing with accidents*

Accidents in archery are rare but it is still important to maintain an accident book to record any incidents. Venues should also maintain a fully stocked first aid kit in an easy to find location. Ideally, a trained first aider should be on site at all times.

✓ *Lost arrows*

It is important that the landowner is aware that the occasional loss of an arrow is inevitable, so it is important to gauge whether a loss is acceptable. In areas which are grazed or have public access, the loss of arrows presents a risk, but this may be lessened by careful positioning of targets and the use of backstops or nets behind challenging shots.

In tournament field archery, all lost arrows are reported to the tournament organiser, who will have a work party, or group of volunteers to support the organiser, equipped with metal detectors, who will search for them. Where retrieval of arrows is important, pure carbon arrows should not be used as they cannot be found using metal detectors.



5. RESTRICTING ACCESS TO SHOOTING AREAS

Whether land is used for practise, tournaments or a commercial range, access for the landowner will, for safety reasons, be restricted whilst shooting is in progress. Shooting times may be unlimited, or restricted by arrangement with the landowner.

Livestock and archery are clearly incompatible. Areas used for field archery must be livestock free. Where grazed areas are used for occasional open shoots, livestock will need to be removed while setting up the tournament course and not be returned until a couple of days after the tournament is concluded.

The location of public footpaths and other rights of way on, or adjacent to, land used for archery, is not necessarily a problem. Public rights of way must be respected and any public footpath crossing an area used for shooting must be maintained. Practise facilities should not have public rights of way within the safety areas to the side and beyond the targets and their shooting lanes.



Field archers in action adjacent to a public footpath in Pen Selwood, Somerset. The path is marked by tape running down to a stile. The archers are shooting away from the footpath.

If a public right of way crosses the areas used for an open tournament, the path should be clearly marked with continuous tape and warning signs erected at all points where the path enters the land on which shooting takes place. No shooting lanes should cross the path and no side safety area, or overshoot area, should impinge on it.

6. ENVIRONMENTAL CONCERNS

Field archery has a very low environmental impact. In woodland, undergrowth needs to be cleared in shooting lanes and minor overhanging branches may need to be trimmed, but no substantial branches should ever need to be cut.

On open ground and grassland, tall grass around a target will need to be cut down. Where there is bracken, shooting lanes may have to be cleared, depending on target position. In both woodland and grassland, stakes will need to be driven into the soil to provide support for the target butts.

Field archery takes place throughout the year. Dry, warm weather is obviously favoured, but provided that the progression round the course is unimpeded, field archers will shoot in most weather conditions.

Extreme cold makes it difficult to keep fingers supple enough to shoot, whilst high winds present real difficulty in forested areas, due to the risk of falling branches.

Vehicular access to any ground may be desirable for course laying, but would be in designated areas by agreement only.

An open club tournament, shot over one or two days, is likely to attract around 60 archers and, if successful, this could rise to between 80 and 100 in subsequent years.



Open ground shooting in Pen Selwood, Somerset: note, in the background, the deciduous and coniferous woodland which also forms part of the field course.

7. OTHER CONSIDERATIONS

Insurance

All archers and clubs belonging to Archery GB are fully covered by insurance, details of which are available, on request, from the Archery GB. Private insurance would be essential where a commercial 'pay as you shoot' course is opened outside the auspices of Archery GB.

Tournaments

Clubs generally favour staging open tournaments at the same time each year, with most clubs hosting no more than two tournaments per annum.

Club tournaments are nearly always staged over the two days of a weekend. Ideally, course designers would have access to the land for several weeks before a tournament; this especially when clearing of woodland undergrowth is required. The setting of bosses and shooting pegs would normally be completed in the two weekends before a tournament.

For the tournament itself, access for all of Friday is necessary for the erection of tents and inspection of the course by the Judges. Shooting takes place on Saturday and Sunday, with Monday needed for the removal of tents and the dismantling of the course itself.

Inclusivity

Archery is a highly inclusive sport, with disabled archers always able to shoot at target tournaments. However, whilst a whole field course may not be suitable for those with impaired mobility, access for all archers is desirable for participation and equality.

Commercial opportunities

Many landowners may welcome a small, but steady, supplement to their annual income. Marginal areas of land that provide low agricultural returns, for example scarps or hillsides used for seasonal or rotational grazing, may be well suited to the requirements of field archery, whilst areas of woodland, retained for long term investment, can also provide a modest short-term income.

There is an extensive network for field archers, which is supported by archery magazines, websites and social media. Clubs are very adept at promotion of tournaments and the same channels could quickly advertise and promote any commercial field archery provision.

8. FREQUENTLY ASKED QUESTIONS

Q. Is it possible to visit a venue and see field archery in action?

A. With commercial 'pay as you shoot' facilities yet to appear on this side of the English Channel, this would be easiest when a club is staging an open tournament. The Archery GB Field Committee will be able to assist with dates, times and introductions.

Q. What if I wished to create my own commercial field archery course?

A. Archery GB has expertise available to help in the design of courses and advise on all aspects of field archery: we are only too happy to help.

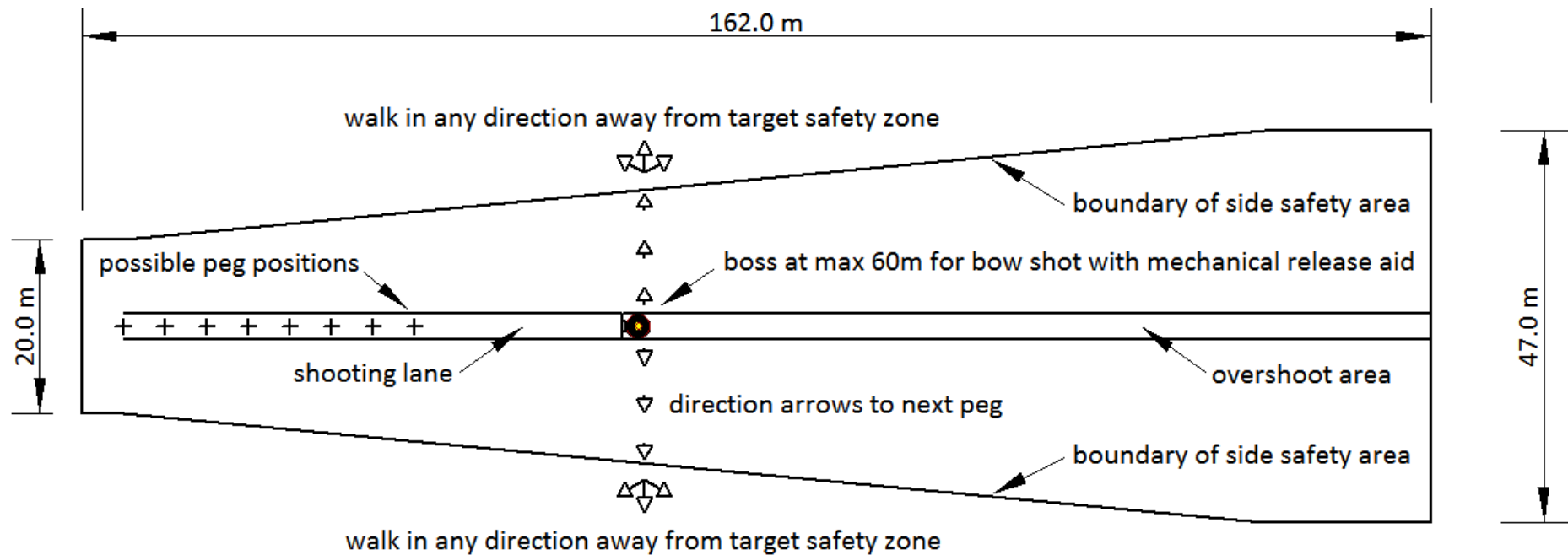
Q. How do I find out more information?

A. Contact Archery GB on 01952 602795 or email development@archerygb.org

9. DRAWINGS

Practice facilities

Minimal practise facilities need about a hectare of land in a block measuring approximately 170m x 55m. This would allow for a four target practice range with necessary overshoot and side safety areas.



LAYOUT PLAN OF A LONG FIELD ARCHERY TARGET

Note that the overshoot lengths for flat ground may be decreased when shooting towards a bank or hillside.

Field courses

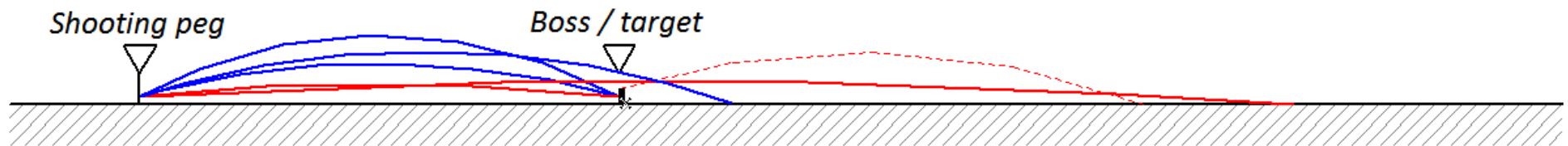
The minimum size for a field archery course suitable for open competition is unlikely to be less than four or five hectares. It should be noted that much of that area is taken up by safe overshoot areas beyond targets, rather than by shooting lanes.

In the following illustrations:

Blue lines indicate trajectories for arrows shot from bows shot off the fingers.

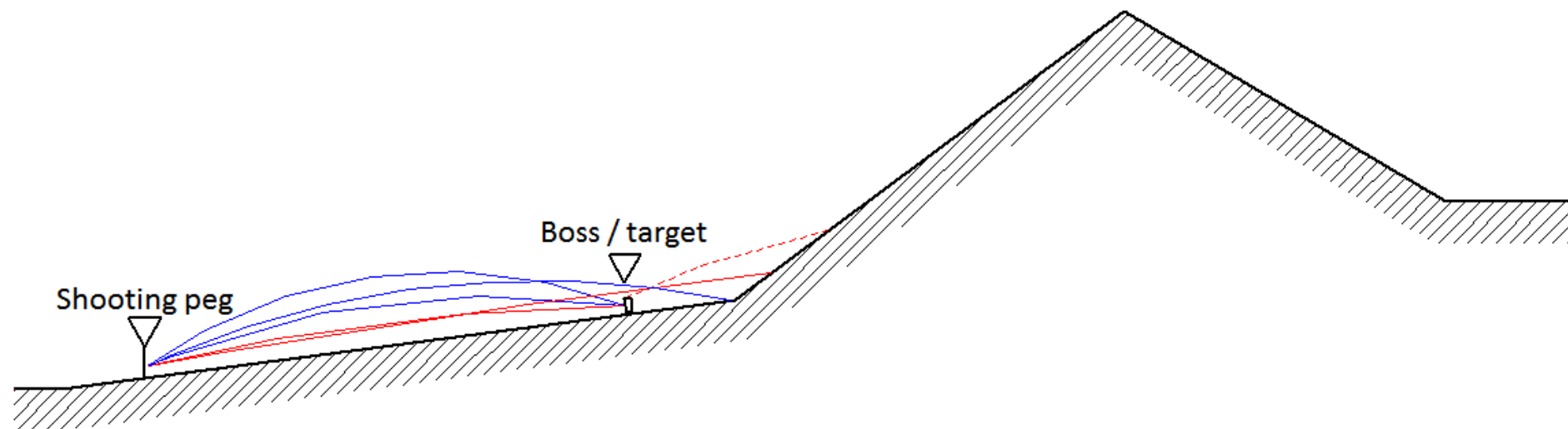
Red lines indicate trajectories for arrows from bows shot with mechanical release aids.

Dotted line indicates possible trajectory for arrow striking the top of the boss.



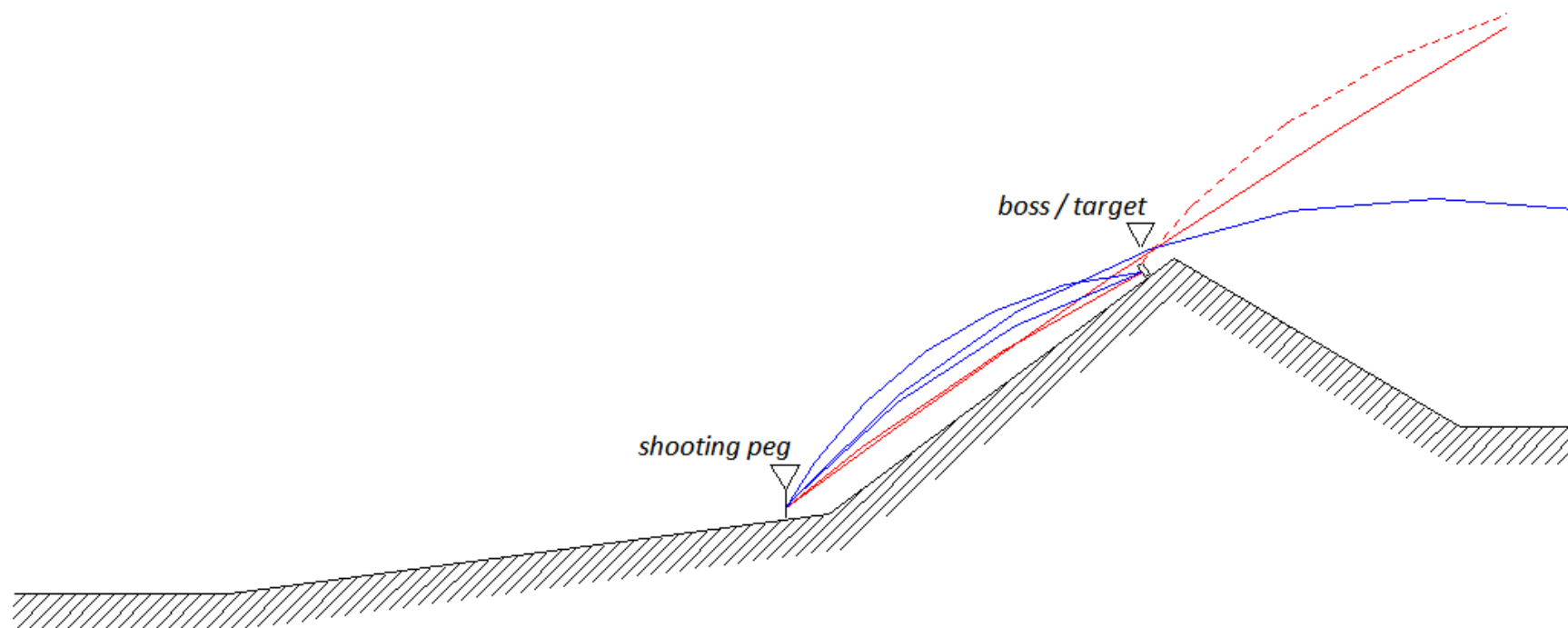
SHOOTING A TARGET ON FLAT GROUND

The overshoot should be not less than 140m from peg when shooting a bow with a mechanical release aid. Although a lesser overshoot is permitted for bows shot off the fingers, the greater distance should be used unless bows with release aids are prohibited at that venue.



SHOOTING A TARGET WITH RISING GROUND BEHIND

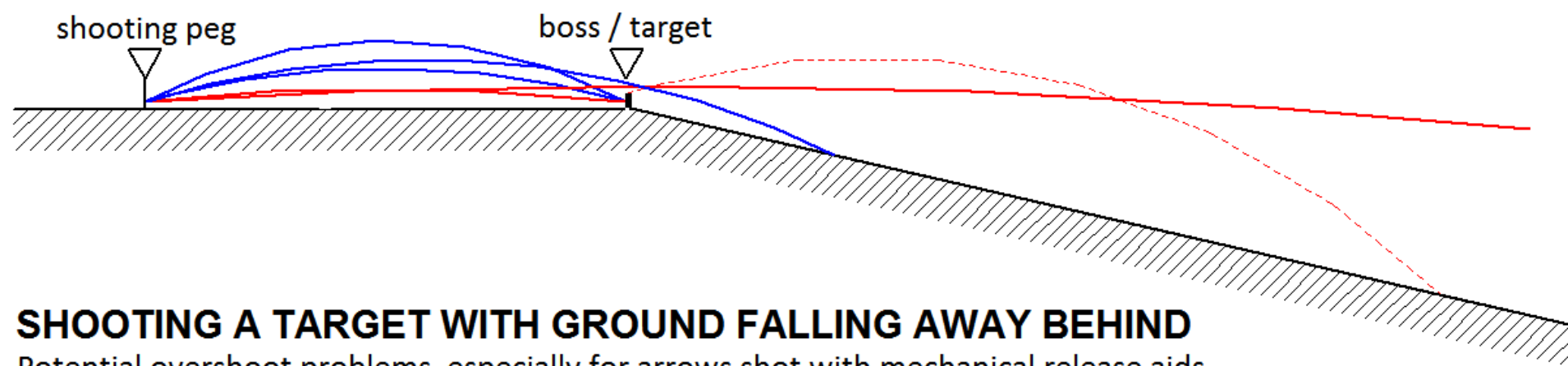
Where the ground behind a target provides a natural backstop, the required overshoot may be substantially reduced.



✕
SHOOTING A TARGET PLACED AT THE TOP OF A SLOPE.

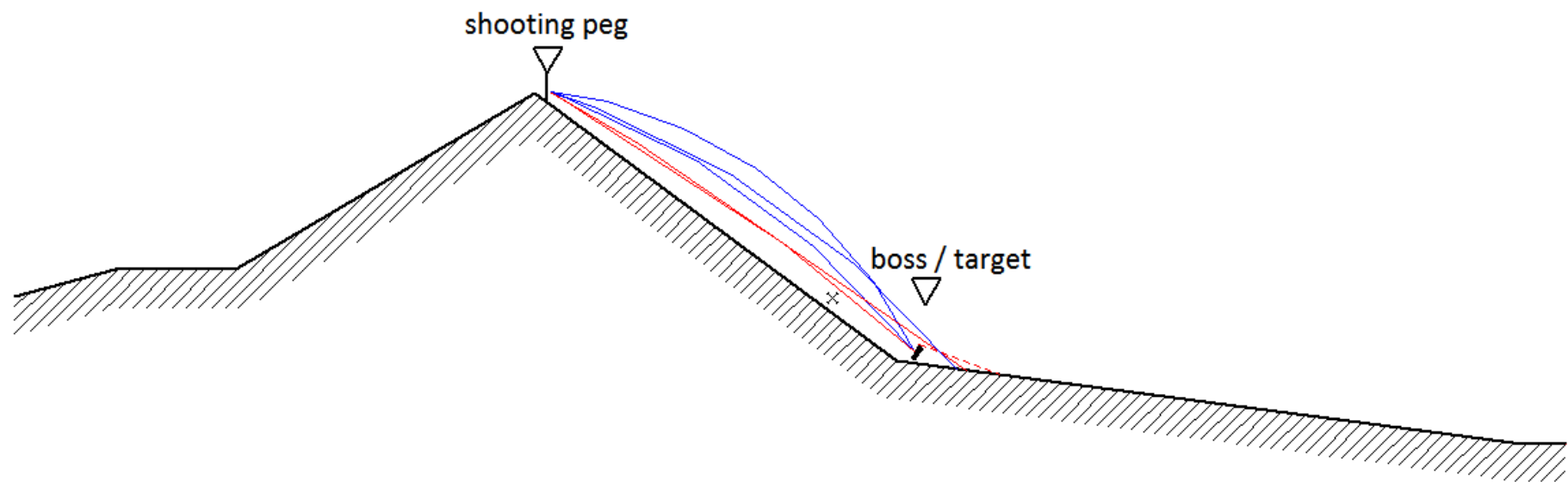
Rising ground is not always a benefit: targets placed at the top of a slope may pose considerable risk because of uncontrolled overshoot.

Arrows from recurve bows can travel more than 300m, whilst those from compound bows could easily travel 600m: this poses an unacceptable risk.



SHOOTING A TARGET WITH GROUND FALLING AWAY BEHIND

Potential overshoot problems, especially for arrows shot with mechanical release aids.



SHOOTING A DOWNHILL TARGET WITH NEAR-FLAT GROUND BEHIND

Where ground behind a downhill target provides a natural backstop, required overshoot distances may be substantially reduced.

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