

# Cambridge University Bowmen (CUB) Risk Assessment 2020-21

## STEP 1: NATURE OF THE ACTIVITY

### *Brief Description of Activity and Equipment Used*

The club participates in target archery.

This occurs indoors at distances up to 25m (usually 18m/20yds) at the University of Cambridge Sports Centre three times a week, and the Elizabeth Way Rifle Range up to three times a week during the indoor season (September to March).

Shooting also occurs outdoors at distances up to 100yds on the Churchill College Playing Fields or at the Wilberforce Road Sports Ground during the outdoor season (March to September). This usually occurs three to four times per week, but it may occur daily at the discretion of the club committee.

Some club members may additionally attend tournaments approximately once per fortnight, which may be hosted at one of the venues listed above or at an external location.

The equipment used is predominantly recurve bows and aluminium/carbon arrows, shooting at straw or foam targets. A minority may use compound bows or traditional-style bows (such as longbows). Archers also make use of a number of accessories, such as quivers, tabs, arm-guards/bracers, finger slings, and chest guards.

## STEP 2: LIST HAZARDS

1. Equipment failure
2. Bowstring
3. Bow assembly
4. Boss/stand
5. Short arrows
6. Heavy bows
7. Collection of arrows
8. Shooting control
9. Range layout
10. Arrows shot outside safety area
11. People/animals straying into safety area
12. Weather
13. Travel to external competitions
14. Social activities

### STEP 3: ASSESS HAZARDS AND COUNTERMEASURES TO DETERMINE RISK

<b>Hazard 1: Equipment Failure</b>					
<b>Nature of Hazard</b>					
Equipment failure: string may snap, bow limbs or riser may fail while shooting. Arrows may break on release.					
<b>Persons at Risk</b>					
Archer, those in the immediate vicinity.					
<b>Control Measures</b>					
Regularly (monthly) inspect strings and bows for wear. Replace equipment deemed to be unsafe.					
Regularly (weekly) check arrows for loose or damaged nocks, loose points. Replace damaged or loose components. Check carbon arrows for splintering, discard if deemed unsafe.					
Instruct new archers against "dry firing" bows, as this can lead to early limb failure. Do not use Fastflight strings or carbon arrows on wooden bows, as these can overstress the riser.					
<b>Assessment of Risk</b>					
	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					
Acceptable level of risk					

**Hazard 2: Bowstring****Nature of Hazard**

Bowstring may become caught on loose hair or clothing or hit arm on release. Shooting without suitable finger protection (e.g. tab, glove) can cause injury to the fingers. Drawing a compound bowstring without a release aid can cause the string to derail from the cams, leading to equipment damage and the potential for severe injury.

**Persons at Risk**

Archer.

**Control Measures**

Ensure that archers tie back long hair and remove jewellery or loose outer garments, which could become caught.

Require archers to wear arm protection to minimise possible injury and instruct in proper release technique.

Require non-compound archers to shoot with a tab/glove at all times. Require compound archers to use a release aid.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 3: Bow Assembly****Nature of Hazard**

Bow is assembled or disassembled incorrectly, and may come apart while in use (consequences as per failure of bow limb or riser).

**Persons at Risk**

Archer.

**Control Measures**

Instruct archers in correct assembly of equipment, including limb assembly and stringing/de-stringing.

Annually inspect limb bolts and nuts for signs of excess wear, replacing where necessary.

Check novices' bow setups before allowing them to shoot.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 4: Boss/stand****Nature of Hazard**

Target boss and/or stand mishandled, possibly resulting in boss falling on archer and causing injury.

Target boss/stand not secured, possibly resulting in injury to archer and/or damage to arrows.

Potential for injury when lifting and carrying bosses due to improper lifting technique, obstructions while carrying, or splintering of wooden stands.

**Persons at Risk**

Those in the immediate vicinity of the boss/stand.

**Control Measures**

Instruct archers in the correct handling of bosses/stands.

Instruct archers not to lift bosses alone, and advise as to correct technique for mounting boss to stand. At Churchill College, make use of a trolley to transport bosses long distances. See Manual Handling risk assessment.

Instruct archers in method for securing bosses to stand/ground.

Do not allow shooting to commence until all targets are appropriately secured and cease shooting if targets become insecure.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 5: Short Arrows****Nature of Hazard**

Arrows too short for the archer may be drawn off the arrow rest and loosed into the back of the riser or the bow hand.

**Persons at Risk**

Archer.

**Control Measures**

Check arrow length for all new archers using prescribed technique, issuing only arrows of required minimum length.

Do not allow archers to shoot if arrows of the required minimum length are unavailable.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 6: Heavy Bows****Nature of Hazard**

Use of an inappropriate draw-weight bow may result in muscular or other soft tissue injury.

**Persons at Risk**

Archer.

**Control Measures**

Instruct beginners using lightweight bows, ensure they employ correct draw technique before graduating to heavier bows.

Ensure archers who purchase their own equipment receive appropriate advice.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 7: Collection of Arrows****Nature of Hazard**

Arrows which land in the ground may cause injury if walked/run into.

Arrows in target represent various hazards, in approaching the target, or when being removed from the boss.

Carbon arrows tend to splinter when broken, and the resulting pieces are known to be highly sharp.

**Persons at Risk**

All those in the immediate vicinity.

**Control Measures**

Instruct archers in these hazards and of the importance of approaching the target with caution.

Instruct new archers in correct technique for drawing arrows from boss, including the importance of standing away from boss when others are pulling arrows. Do not allow anyone to run on the range, or to wear open-toed shoes/sandals. Ensure all lost arrows are reported and that every effort has been made to locate them. Do not allow anyone to shoot 'pure carbon' arrows outdoors, as these can be very hard to locate. Aluminium-carbon composite arrows are acceptable.

Carbon arrows may only be pulled with an arrow puller tool. Broken carbon arrows should be removed from the range with great care, and all efforts should be made to collect missing pieces.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					
Acceptable level of risk					



**Hazard 8: Shooting Control****Nature of Hazard**

Inadequate control of shooting may result in personal injury to an archer or spectator.

**Persons at Risk**

All those in the immediate vicinity.

**Control Measures**

Shooting must always be under the control of an experienced archer acting as the Field Captain, or a qualified Judge.

All archers must understand that this person is in charge of the shoot and must obey their commands.

New archers are instructed as to the role of the Field Captain/Judge, and the commands they are likely to give.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 9: Range Layout****Nature of Hazard**

Incorrect range layout may result in personal injury to spectators or archers.

**Persons at Risk**

All those in the immediate vicinity.

**Control Measures**

The range must be secure and laid out in accordance with the Archery GB Rules of Shooting. Shooting must not begin until this is the case.

Spectators and participants are advised where they may and may not stand whilst shooting is in progress.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 10: Arrows Shot Outside Safety Area****Nature of Hazard**

Arrows inadvertently shot outside of the safety area may result in personal injury to spectators or archers.

**Persons at Risk**

All those in the immediate vicinity.

**Control Measures**

Archers must be made familiar with and adhere to Archery GB Rules of Shooting. Any archer deemed by the Field Captain or Judge not to be doing so should be asked to stop shooting and leave the field.

In particular archers must not be allowed to use any form of "over-arm draw" and should ensure that the bow is not pointed at too extreme an angle.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 11: People/Animals Straying into Safety Area****Nature of Hazard**

A person or animal straying into the safety area may receive personal injury from arrows or other equipment projected towards the target.

**Persons at Risk**

Those in the safety area.

**Control Measures**

Ensure that the range is laid out in accordance with the Archery GB Rules of Shooting and that the safety area is observable at all times during shooting.

Ensure that access past the shooting line to indoor ranges is secured before shooting commences.

The Field Captain and all archers must remain vigilant and suspend shooting immediately if the safety area is violated.

People must not be able to enter the shooting area without passing a suitable barrier warning that beyond which a danger exists.

All grounds are deemed accessible to the public even if this involves trespass.

Ensure that spectators and those waiting to shoot remain behind the waiting line.

Ensure all participants are familiar with the commands to start and stop shooting. Do not allow anyone to cross the shooting line except when instructed to do so by the Field Captain/Judge.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 12: Weather****Nature of Hazard**

Competitors/officials/spectators are at risk from elements when shooting outdoors; fog may reduce visibility of the safety area, or an archer or their equipment may be struck by lightning and electrocuted. Archers are at risk of hyper/hypothermia in extreme weather conditions.

**Persons at Risk**

All those in the immediate vicinity.

**Control Measures**

Shooting must be suspended if the safety overshoot distance is not visible. Shooting must be suspended at the first sign of a thunderstorm in the immediate vicinity and not resumed until the danger is past. Archers must be prepared for extreme weather conditions, and medical attention must be sought out if there are signs that a club member is suffering from heat stroke or a similar ailment.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					
Acceptable level of risk					

**Hazard 13: Travel to external competitions****Nature of Hazard**

Club members are at risk of serious injury due to traffic accidents, caused by reckless or inattentive driving by members of the club or by other members of the public.

Accidents may also be caused by driving in adverse weather conditions, or by improper vehicle maintenance.

**Persons at Risk**

Drivers and all passengers.

**Control Measures**

Anybody driving club members to external competitions must possess a valid drivers licence and appropriate insurance, and must not drive if under the influence of alcohol or drugs. Drivers should avoid distractions while driving, such as loud music or the use of mobile devices. If a driver feels tired, they must stop at the nearest rest station.

Drivers deemed to be dangerous should be reported to the captain and prevented from driving again. Drivers who are not confident in their abilities are not to be pressured into driving for the club.

See the club's [Code of Conduct](#) for further details.

**Assessment of Risk**

	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

**Hazard 14: Social Activities****Nature of Hazard**

Social events may include shared meals with the club or visits to local pubs. These carry the usual risks associated with the consumption of alcohol and club members may risk exposure to allergenic foods.

**Persons at Risk**

All attendants at club social events.

**Control Measures**

Restaurant or college staff should be made aware of any severe allergies.

No club members are to be pressured to do something against their will. Excessive drinking should not be encouraged, and medical attention should be sought out immediately if any club members show signs of alcohol poisoning. The use of illegal drugs is forbidden at all social events.

**Assessment of Risk**



	Likely	Probable	Possible	Improbable	Remote
Fatal Injury					
Major Injury					
Minor Injury					

Acceptable level of risk

#### STEP 4: REVIEW

Review Date	Description of Changes	Name	Next Review Due
26/08/2015	None	S. Mathias	26/08/2016
11/07/2017	Switched 'improbable' and 'remote' such that 'remote' designates lowest likelihood of hazard occurring	L. Pattinson	11/07/2018
26/10/2017	Travel to external competitions and social activities added as risks	L. Pattinson	11/07/2018
30/08/2018	None	L. Pattinson	11/07/2019
29/07/2019	Updated shooting schedule and use of trolley outdoors. Introduced compound guidance. Added advice for use of carbon arrows. Minor edits throughout.	L. Pattinson	01/09/2020
26/08/2020	Updated link to Code of Conduct. Formatting changes throughout.	V. Hodgson	01/09/2021
28/08/2020	Referenced manual lifting risk assessment. Minor changes. Formatting changes.	R. Spencer	01/09/2021

#### COMPLETION AND APPROVAL

	Name	Signature	Date
<b>Club Officer Completing Form</b>	Vicki Hodgson		26/08/2020
<b>Club Captain</b>	Robert Spencer		28/08/2020
<b>Senior Treasurer</b>			