



Archery Range Health & Safety Guidelines

Responsible for review of procedures
Chief Executive

Change History			
Version	Approved by	Date of approval	Next review date
Proc-04-01	Chief Executive	January 2016	January 2017

1 Introduction

In order to provide an acceptable level of safety for archers and the public on all ranges, health and safety management must operate successfully at three levels - Strategic, Systematic and Dynamic.

2. Range Health and Safety Management

2.1 Strategic

Strategic health and safety management is carried out by The Board of Directors. They demonstrate their commitment to safety by setting the Societies Health and Safety policy, deciding priorities, providing the necessary resources for the training of Judges and Coaches, and promoting a positive health and safety culture.

2.2 Systematic

Systematic health and safety management is carried out as appropriate by:

1. Judges, Coaching and Operations Directors assisted by their sub committees
Initially, risk assessors identify the generic hazards likely to be encountered on the various types of range and assess the level of risk presented by these hazards.

The results of the risk assessments are acted upon and the development and implementation of suitable generic control measures are put in place. These include;

- i. "Rules of Shooting" which includes the generic control measures necessary to operate a standard range, in safety.
 - ii. Training of Senior Coaches and Judges in safety rules etc.
2. Regional Society's and County Associations
 - i. Training of Coaches, Judges and Field captains, in safety rules etc.
 - ii. Assistance in provision of suitable Judges, for Regional, County and Club Tournaments via Judges Liaison Officers
 3. Associated Clubs
 - i. At Club level, "Systematic Management of risk" includes the instruction, training and safety supervision of new members through provision of "Beginners Courses"
 - ii. The development of any control measures / local rules which are site or time specific to each individual club range.

2.3 Dynamic

Dynamic risk management must be carried out by all persons, using an archery range. The main responsibility lies with the appointed "Field Captain" who may be a qualified Judge, Club Field Captain, Deputy Field Captain or an individual archer, usually the most experienced archer present. They must identify the site specific hazards (e.g. requirement for safety barriers) and time specific (e.g. weather) hazards, assess the risks and then take suitable control measures to control the risk in order to use the range in a safe manner.

All persons using the range should monitor conditions and reassess the risk assessment to ensure that safety rules are in place and complied with.

If safe conditions cannot be maintained for both archers and the general public, shooting should not start or continue if already underway.

3 Risk Level Assessors

A simple risk level assessor, which is based on the “BS 8800 Management of Health and Safety”, matrix, is detailed below. It can be used as a tool to assess the level of risk by a particular hazard. There are 3 levels of **harm** and three levels of **likelihood** of harm occurring. A combination of these gives the **level of risk** from a particular hazard and thus the type of **action (control measure)** necessary to reduce the risk to an acceptable level. No activity can be made completely free of risk, but the level of that risk can usually be controlled.

A. Levels of Harm

i. Slightly Harmful

The injured party requires First Aid treatment, e.g. superficial injuries, minor cuts and bruises, ill health leading to temporary discomfort. Such injuries are unlikely to result in absence from work and could occur for example if an archer walks into an arrow protruding from the grass.

ii. Harmful

The injured party requires more than First Aid treatment e.g. a visit to a Hospital Accident and Emergency Department or General Practitioner. Injuries might include lacerations, burns, concussion, serious sprains, minor fractures. Such injuries are likely to result in absence from work and for example, could occur if a target blew over whilst scoring was under way.

iii. Extremely Harmful

Injuries include amputations, major fractures, poisoning, multiple and fatal injuries. Such injuries are likely to result in absence from work for extended periods. An arrow strike would almost certainly be in this category.

B. Likelihood of Harm Occurring.

i. Likely

Only one event i.e. one thing going wrong will result in harm or the potential for harm occurring. An example would be shooting whilst persons are at the target scoring. Harm under these conditions is “Likely”.

ii. Unlikely

More than one event must occur at the same time to cause harm or the potential for harm arising. For example (1) a trespasser runs in front of the targets, (2) the archers do not see him and continue shooting.

Under normal circumstances the archers would be aware of his presence and would stop shooting in time to avoid hitting the trespasser. So whilst harm is still possible it is “Unlikely” to occur unless both conditions (1) and (2) apply.

iii. Highly Unlikely

More than two events must occur at the same time to cause harm or the potential for harm arising. For example (1) a spectator walks along the end boundary of the over shoot area, (2) the overshoot is 15 yards shorter than it should be, (3) an archer shoots, misses and the arrow goes over the target and the boundary rope just as the spectator passes behind the target.

Note. “Highly unlikely” events can and do occur. Just because it is assessed as “Highly Unlikely” does not mean it cannot or will not happen, it is merely a measure of likelihood.

3 Risk Assessment Matrix

RISK ASSESSMENT MATRIX	Slightly Harmful	Harmful	Extremely harmful
	Highly Unlikely	Trivial Risk	Tolerable Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate Risk	Substantial Risk	Intolerable Risk

Table 1. Risk Assessment Matrix

Risk Level	Action Required
Trivial Risk	No action required.
Tolerable Risk	No action required but monitor and review.
Moderate Risk	Efforts should be made to reduce the risk. When moderate risk is associated with "Extremely harmful" consequences, extra control measures must be put in place to reduce the risk.
Substantial Risk	Shooting must not commence until the risk has been reduced considerably.
Intolerable Risk	Shooting must not commence until the risk has been reduced considerably. If it is not possible to reduce the risk shooting may have to remain prohibited.

Table 2. Actions Required

3.1 Example 1.

Targets are placed out on the range and the stands are pegged down but the target bosses are not tied to the stands. There is a risk of them being pulled over whilst recovering arrows and injuring an archer.

Likelihood:

- To cause the target to be pulled over it must first be untied and the archers must fail to hold i.e. put weight on the boss whilst drawing arrows. It is “**Unlikely**” that both things will occur.

Level of Harm:

- A Target boss is heavy, if it was accidentally pulled off the stand striking an archer, it could cause injury such as bruising, minor fracture or the like. It would certainly be “**harmful**”.

RISK ASSESSMENT MATRIX	Slightly Harmful	HARMFUL	Extremely harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
UNLIKELY	Tolerable Risk	MODERATE RISK	Substantial Risk
Likely	Moderate Risk	Substantial Risk	Intolerable Risk

Table 3. Risk Assessment of Example 1

The Risk Level from the combination of “**Unlikely** and **Harmful**” is “**Moderate**” and therefore some action is required. The target bosses are securely tied to the stands making this occurrence “**Highly Unlikely**” and reduces the risk level to “**tolerable.**”

RISK ASSESSMENT MATRIX	Slightly Harmful	HARMFUL	Extremely harmful
HIGHLY UNLIKELY	Trivial Risk	TOLERABLE RISK	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate Risk	Substantial Risk	Intolerable Risk

Table 4. Risk Assessment after tying bosses to stands.

No further action required but monitor and review as necessary.

3.2 Example 2.

If targets are set up on a ground where the public have access and there is no barrier to such movement, there is a possibility that persons will accidentally stray into the overshoot area where arrows may land and be struck by an arrow.

Likelihood:

- If there is no barrier to such movement this type of event is “**likely**” to happen.

Level of Harm:

- Death or serious injury is possible therefore “**Extremely Harmful**”.

RISK ASSESSMENT MATRIX	Slightly Harmful	Harmful	EXTREMELY HARMFUL
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
LIKELY	Moderate Risk	Substantial Risk	INTOLERABLE RISK

Table 5. Risk Assessment of Example 2

The Risk Level from the combination of “**Likely** and **Extremely Harmful**” is “**Intolerable**” and therefore some action is required.

“Shooting must not commence until the risk has been reduced considerably. If it is not possible to reduce the risk shooting may have to remain prohibited.”

Suitable Control Measures are detailed in the rules of shooting e.g.,

- The overshoot area on grounds where the public have access must be roped off, and
- The overshoot area must be of a specified length and width.

Once the control measures are in place a reassessment of the situation would indicate that a person would be “Highly Unlikely” to accidentally stray into the overshoot area when a barrier rope is in place. From the Matrix we see that the risk has been reduced to a “Moderate Level”.

RISK ASSESSMENT MATRIX	Slightly Harmful	Harmful	EXTREMELY HARMFUL
HIGHLY UNLIKELY	Trivial Risk	Tolerable Risk	MODERATE RISK
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate Risk	Substantial Risk	Intolerable Risk

Table 6. Risk Assessment after putting control measures in place..

Further action is still required to reduce the risk.

When moderate risk is associated with “Extremely harmful” consequences, extra control measures must be put in place to control the risk.

In this case there are further controls contained in the rules of shooting e.g. at least two archers must be shooting and control of shooting must be under the control of a “Field Captain”. It is reasonable to consider that these archers will cause shooting to stop, if a person strays into the overshoot. Therefore the required controls are in place although the risk level cannot reduce below “Moderate” because of the possible outcome. All concerned must therefore remain alert and monitor safety on the range at all times.



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