CHAPTER 2

THE 3-D COURSE
LAYOUT, SAFETY AND SITING

THE ARCHERY COURSE

From Single Shot to Course Layout. In chapter one we explored the process by which the danger area surrounding a single shooting lane may be determined. How can we now expand this idea to establish a 3-D course of twenty targets? And how much area would this require? The 3-D courses we have all seen are usually established by siting a series of interesting and challenging shots as the primary consideration. Most clubs have enough land to fit a course with well-spaced targets and relatively few safety concerns. But what approach should be taken if land is limited, or an expansion is wanted. How can we fit a course on "our" property? Or, where can targets be safely added to an existing course? The best way to develop a course is to approach the siting of each shooting lane systematically. The sequence of events to develop a course is;

1 - Siting the shooting lanes.

2 - Siting the trail.

3 - Assess the overall course plan.

4 - Making amendments to the course as needed.

5 - Proofing the course to verify safety.

Each of these steps will be explained in detail below, but at every stage we must keep in mind that our primary consideration in course planning will always be safety.

Safety First. Certainly in the situations of limited space or course modification, and whenever a course is reviewed, safety will be a primary consideration. Safety can never be overstated. Remember; the best courses will be safe by design. Safety cannot be firmly established nor positively controlled through the use of movement control and extensive pre-shoot briefings. The course designer must consider the safety of each shooting lane. Archers (or spectators) on the trail and of all surrounding property for which the club does not exercise control of access during shoots (remember, no points for the bull) must be kept safe at all times.

SITING THE SHOOTING LANES

Siting Lanes. Though we often pay close attention to where targets have been sited, it is more important that we remember to consider all aspects of each shooting lane early in the course planning and design stages. For our purposes at this stage, the shooting lane will include the following parts;

- The shooting station, consisting of one or a series of points from which the archers shoot.
- The target.
- The danger area required to ensure missed arrows and ricochets will land safely (IE, in the template area).

- An archer's waiting area, big enough for the shooting group and perhaps the next group which has overtaken them.

- The sections of the course trail which approach and lead from the shooting lane.

A simple depiction of a shooting lane and its components is illustrated at figure 6 to illustrate these parts.

Preliminary Siting Work. During the planning stage and initial forays over the property, notes and sketches will be invaluable. They will help you retrace your steps accurately later. Use surveyors tape of various colours to identify each lane feature to help you keep track of details. At this stage you should temporarily mark the predicted end and sides (at the widest point) of the danger area for each target. This will give visible reference points in case your trail loops on itself and the danger areas of two targets happen to overlap. This would present a danger to archers seeking missed arrows near one target or the other, drawing arrows from the nearby targets or moving on the adjacent trails. Repeatedly ask yourself: could I (or my wife, my son or . . . even my dog) comfortably look for arrows around this target while the targets on all sides are being shot?

SITING THE TRAIL

The Trail. How will the trail run? The safest and most flexible option has a continuous trail with shooting stations off to the sides. This allows free movement on the trail without interrupting shooting. If the trail incorporates the lanes from shooting station to target care must be taken that each shooting station is safely sited outside the template of the previous target. Figures seven and eight illustrate the two basic approaches to course design; all shooting lanes can lay off the course trail or the path from shooting station to target may be part of the course trail.

Trail Options. For the purpose of describing the trail options I will discuss two basic types of trail layouts. I prefer to call these the "continuous" and the "linked" trail designs. Some 3-D courses combine aspects of both design types but inconsistency in design can be very confusing to the archers on the course.

The Continuous Trail. With this course design, the trail forms a continuous loop on which it is safe to walk during the use of the course. This type of trail may even double back on itself. At no time does a shooting lane lie along, across, or dangerously near the trail, see figure 7.

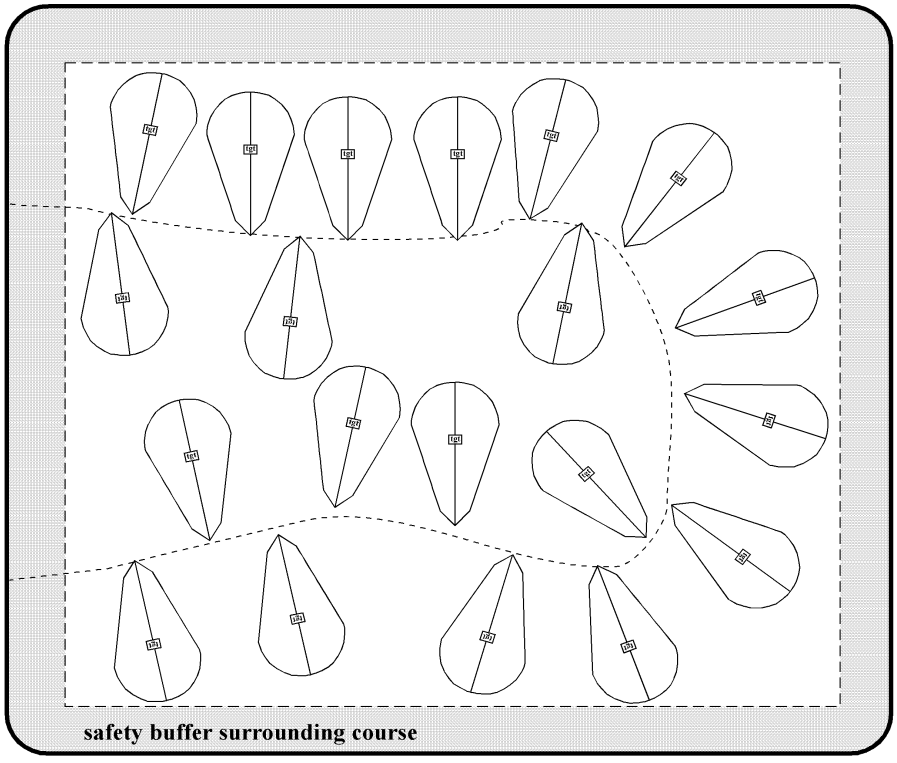
Advantages of the continuous trail are;

- Spectators can move along the trail at different speeds than the archers' groups.
- An archer can be sure of the safe opportunity to shoot by verifying at the shooting station that the last group has departed.
- An individual who must leave the course (perhaps due to equipment failure or a minor injury) is not restricted in his/her movements along the trail in either direction.
- The presences of archers looking for arrows at the target are indicated by bows left at the shooting station.

Disadvantages of the continuous trail include;

- The course designer must identify and clear both the trail and separate shooting lanes.
- The effective length of the course is longer as each group of archers must walk to and from each target and along the trail.

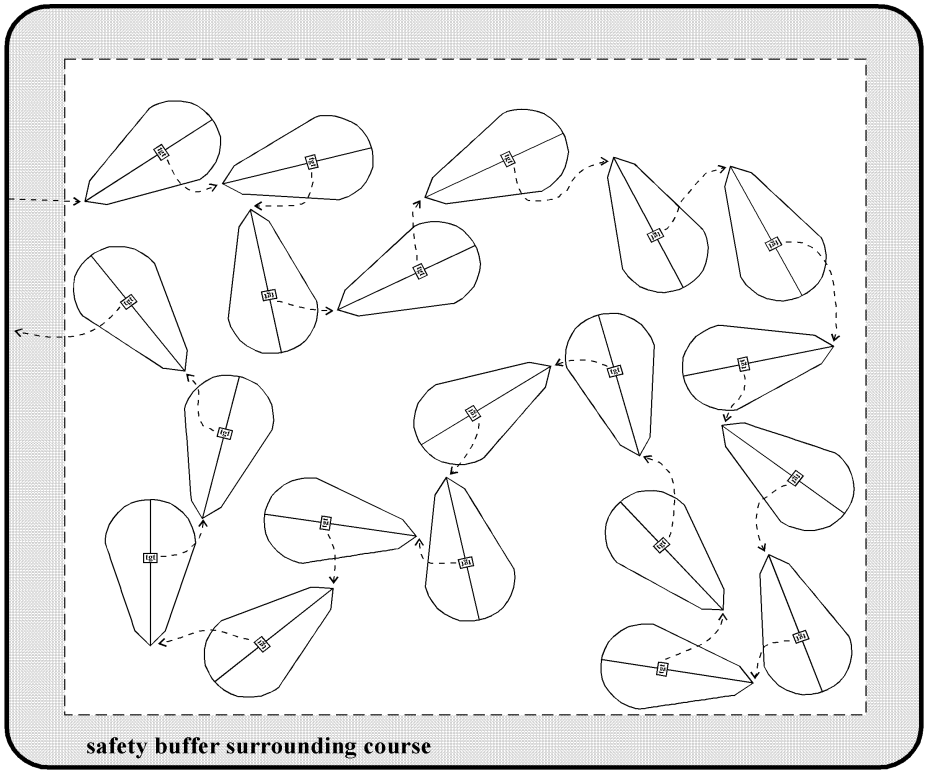
CONTINUOUS TRAIL ARCHERY COURSE



The Linked Trail. With this course design, the trail includes sections of the shooting lanes, with paths between the shooting stations and target being part of the course trail. You can picture this type of trail as being similar to the layout of a golf course, with each "tee" being in close proximity to the last "hole," see figure 8.

Advantages of the linked trail are;

- The course designer has a reduced requirement to establish and clear the trail, using shooting lanes as a means to move along the course.



LINKED TRAIL ARCHERY COURSE

- The effective length of the course is shorter as each group of archers walks from each target directly to the next shooting station.

Disadvantages of the linked trail include;

- Spectators cannot move along the trail other than with a group of archers.
- Archers cannot be absolutely sure of the safe opportunity to shoot as the previous archers are hidden by trees long before they are truly away from the target.
- An individual who must leave the course (perhaps due to equipment failure or a minor injury) is restricted in his/her movements.
- When archers carry their bows forward to look for arrows there are no indicators at the shooting station that they have not finished and moved safely away from the target.

Seldom do archery clubs give serious consideration to the type of trail layout they are going to use. Often the trail is whatever best joins the variously chosen “interesting” shots. Primarily, a course trail should be consistent, a mixture of continuous and linked targets can be confusing and dangerous. Although space limitations may dictate that a club build a linked trail course on a particular piece of property, the better design from a safety perspective is the continuous trail.