

## CHAPTER 4

### ASSESSING THE COURSE DESIGN

Once the initial siting of the course has been done, a confirmatory assessment should be conducted. All of the previously discussed factors should be accounted for; the range required for possible misses, the lay of land, and obstacles which may cause ricochets. This backup assessment should be conducted by archers other than the course designer. After the assessment, notes can be compared to identify perceived problem areas and generate solutions.

In this chapter are two checklists for use as aides in designing and confirming a course. One has been constructed for assessing the initial design and layout of a single shooting lane within the course layout. The other has been developed as a pre-shoot check of the safety for the entire target/shooting lane combination after it has been prepared for a shooting event.

Once you, the designer, are satisfied that all your preparatory design work is complete, consider running a controlled test shoot by a few experienced archers with a variety of equipment. Keep in mind that traditional bows and compound equipment have different characteristics and will have slightly different requirements for safe shooting. Have these archers bring their old shafts and don't be afraid to stage deliberate misses to confirm estimates of overshot misses where your assessment showed potential problem areas. This will often be the most significant safety requirement.

#### CHECKLIST I - DESIGN VERIFICATION CHECKLIST

In most cases where I found problems with the layout of an archery course, these problems would have been discovered if a detailed safety assessment had been conducted by the club. The assessment of an archery course design must be done systematically (for completeness), in detail (for thoroughness), and recorded (for later verification). A careful course assessment can identify safety problems before they become a hazard. It will look at not only the shooting lane from shooting station to target, but also the areas beside the shooting lane, behind the target and those sections of trail to, from and in the vicinity of the entire shooting lane.

The course designer should begin by completing his own assessment of the course. In addition, draft two or three other club members (of different backgrounds and shooting interests) to individually assess the course. Each person should work independently to ensure that a number of opinions are recorded, not just a single group consensus.

The following chart may be used as an assessment checklist for a single archery course shooting lane. These assessment factors can be reproduced and applied to each target on a course. The chart is also reproduced at Annex C for ease of removal and reproduction.

<b>3-D ARCHERY A GUIDE TO COURSE DESIGN</b>			
<b>ARCHERY SHOOTING LANE ASSESSMENT SHEET</b>			
<b>COURSE/CLUB NAME</b>		<b>TARGET NUMBER</b>	
<b>ASSESSOR</b>		<b>DATE OF INSPECTION</b>	
<b>MAXIMUM SAFE RANGE FOR TARGET ON LANE</b>	20 YDS - 30 YDS - 40 YDS - 50 YDS		

**SHOOTING STATION (SPACE, FOOTING, ROOM FOR BOW LIMBS, VISIBILITY OF TARGET FOR ARCHERS OF VARIOUS HEIGHTS)**

**OBSTACLES TO SHOOTING:**

**DENSITY OF OBSTACLES - THIN - MODERATE - THICK**

**GENERAL LIE OF LAND FROM SHOOTING STATION TO TARGET**

**LEVEL - FALLING - RISING**

**GENERAL LIE OF LAND BEYOND TARGET**

**LEVEL - FALLING - RISING**

**ESTIMATED SAFE DISTANCE REQUIRED BEHIND TARGET**

**20 - 30 - 40 - 50 - 60**

**LIE OF LAND TO RIGHT OF TARGET**

**LEVEL - FALLING - RISING**

**ESTIMATED SAFE DISTANCE REQUIRED RIGHT OF TARGET**

**20 - 30 - 40**

**LIE OF LAND TO LEFT OF TARGET**

**LEVEL - FALLING - RISING**

**ESTIMATED SAFE DISTANCE REQUIRED LEFT OF TARGET**

**20 - 30 - 40**

**SUITABLE WAITING AREA FOR ARCHERS - YES - NO**

**TRAIL (SAFE APPROACHES, PASSABLE, MARKINGS):**

**TRAIL APPROACHING SHOOTING STATION**

**TRAIL LEAVING SHOOTING STATION**

**TRAIL FROM SHOOTING STATION TO TARGET**

**MISCELLANEOUS POINTS**

**TREESTAND (GENERAL SAFETY, GUARDRAILS, LADDER, ROPE TO RAISE BOW)**

### AMENDMENT AND PROOFING THE COURSE

Amendment. Based on the observations gathered during the assessment, the course may need changes. These may be as simple as the alteration of a trail route, or as drastic as the need to eliminate a target from the course layout. Plan and make the changes, repeat the assessment phase to confirm that the noted problems were corrected. When the designer and his assessors are satisfied that the course is safe, it is time to prove the course.

Proofing. To prove the course a limited or controlled club shoot is the best option. Enough club members have probably been involved to this point to ensure that all participating members can be safely guided on this first run at your new course. Get feedback from everyone on the course layout. Remember, we are aiming for good, safe shooting practice for all archers, regardless of equipment and experience.

### SHOOTING LANE INSPECTION CHECKLIST

After the initial design of the course has been established, the above inspection checklist will help to determine possible design safety hazards for correction. Once this is complete it must be kept in mind that the "design" of a course will change. This happens every time a club member rearranges the shooting station markings or selects a different place on the shooting lane for the target. Once a course is set up for a 3-D event, someone should conduct a formal inspection tour to ensure no safety hazards have been inadvertently created.

The following checklist is a series of questions which can be applied to each target and shooting lane to identify problems areas. It is not meant to be applied as rigidly and formally as the design inspection. But it should be employed systematically. This ensures that all points are covered and that the "inspector" does not miss checking the design while admiring the "shot."

The Shooting Lane Inspection Checklist is a series of questions which takes an inspector through a detailed examination of each aspect of every shooting lane. When first used, it may take a few minutes to go through the checklist for each target, but after a few targets, the sequence will be familiar and its application will go much more smoothly and quickly. Take care, however, not to let familiarity with the checklist result in taking the purpose of the inspection too lightly. The checklist is also repeated in Annex C for ease of reproduction and use.

## THE SHOOTING LANE INSPECTION CHECKLIST

### GENERAL OBSERVATIONS:

1. IS THE TRAIL CLEARLY MARKED TO THE SHOOTING STATION?
2. DOES THE TRAIL NEED SOME MORE TAPES?
3. IS THE STATION NUMBER SIGN CLEARLY VISIBLE FROM THE TRAIL ON APPROACH?
4. **SHOULD THE TRAIL BE MOVED?**
5. ARE THE SHOOTING RIBBONS VISIBLE FROM THE AREA OF THE NUMBER BOARD (WHERE PEOPLE WILL STOP TO LOOK)?
6. ARE THERE SEPARATE SHOOTING RIBBONS FOR JUNIORS? TRADITIONAL?
7. **IF THERE ARE NOT, SHOULD THERE BE RIBBONS FOR SEPARATE CLASSES FOR THIS TARGET?**

### AT THE SHOOTING RIBBON (EACH ONE):

8. IS THERE SAFE FOOTING?
9. IS THE TARGET CLEARLY VISIBLE?
10. IF ONE OF THE CLUB'S OR RANGE'S OBJECTIVES IS THE PREPARATION OF BOWHUNTERS, IS IT A REALISTIC HUNTING SHOT?
11. IS THERE ENOUGH OF A LANE FOR ARCHERS TO SHOOT SAFELY?
12. CAN BOTH RIGHT AND LEFT-HANDED ARCHERS SHOOT SAFELY?
13. WILL SHORTER OR TALLER ARCHERS BE AT A DISADVANTAGE BECAUSE OF BRUSH, BRANCHES, ETC.?
14. IS THERE CLEARANCE FOR THE HIGHER ARCING ARROW TRAJECTORY REQUIRED BY TRADITIONAL BOWS?
15. **SHOULD ANY OF THE RIBBONS BE ADJUSTED?**

### AT THE TARGET:

16. IS THE TARGET SECURELY MOUNTED?
17. WHAT IS THE SHAPE OF THE LAND AROUND THE TARGET? IN WHAT DIRECTION IS THERE A GREATER NEED FOR SAFETY OF PASSING TRAILS, ETC.?
18. DOES THE GROUND FALL AWAY BEHIND THE TARGET? HOW FAR WILL AN ARROW MISSING HIGH TRAVEL?
19. WHAT IS THE BACKSTOP? IS IT TOO HARD (BROKEN ARROWS)? TOO SOFT (BURIED ARROWS)?
20. **SHOULD THE TARGET BE ADJUSTED?**

### THE OUTGOING TRAIL:

21. WHERE DOES THE TRAIL START AGAIN? AT THE STATION SIGN, OR AT THE TARGET?
22. IS THE TRAIL MARKED PROPERLY AND SUFFICIENTLY?
23. ARE THERE BOWHANGERS AT THE POINT WHERE THE TRAIL CONTINUES?
24. IS THE TRAIL AWAY CLEARLY MARKED?
25. SHOULD THERE BE MORE TAPE MARKS?

26. IS ANY PART OF THE TRAIL LEADING AWAY FROM THE TARGET/SHOOTING STAND IN DANGER FROM THE NEXT GROUP OF ARCHERS?
27. IS A WARNING AT THE MORNING BRIEF NECESSARY?
28. IS A WARNING SIGN AT THE SHOOTING STATION NEEDED?
29. SHOULD BRUSH BE CLEARED SO THAT THE NEXT GROUP OF ARCHERS CAN BE SURE THE AREA IS CLEAR?
  
30. **SHOULD THE TRAIL BE MOVED?**