

# **Marquetry Workshops Series**

## **Workshop 1: Chess Boards**

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**Workshop notes by Peter Goucher**



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# Chess Boards

## 1. Introduction

- 1.1. Chess boards are relatively straightforward to make in marquetry. Designs can be as simple or as complex as you wish, but there are one or two points to consider before you start. The following sections will discuss these points, show you the tools required and a simple technique for cutting the main board.
- 1.2. This workshop will show how to use Parquetry techniques to cut strips of two contrasting veneers, re-assemble the strips and then re-cut and generate a chequer pattern.

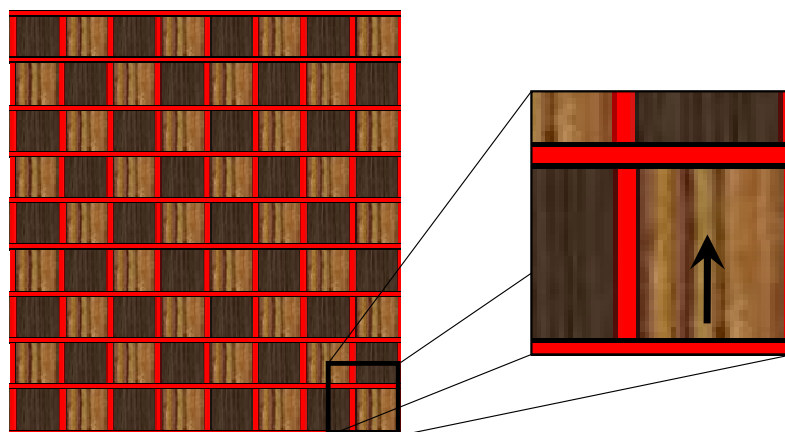
## 2. Discussion Points

### 2.1. Veneer Choices

- 2.1.1. You will need two contrasting veneers for the board squares. 'Easy cut' veneers are best if possible.
- 2.1.2. Select veneers with more or less straight grain or none (such as a burr or something like bird's eye maple). The choice is of course up to you.
- 2.1.3. One of the veneers will have a minimum size of  $5n$  by  $8n$  where  $n$  is the square size. For example, for a board with 3cm squares, you will need a veneer of at least 15cm wide by 24cm long (along the grain).
- 2.1.4. The other veneer must be of a size  $4n$  by  $8n$ .

### 2.2. Points for consideration

- 2.2.1. According to a chess player many years ago, the near most right hand square should be 'white' with the grain (if present) along the line of play - see Figure 2-1 below.



**Figure 2-1: Grain Direction of Playing Area**

- 2.2.2. The size of square should be commensurate with the chess or draughts pieces.
- 2.2.3. Finished board size including borders.

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2.2.4. What type of border is required? For example, an even space all round or a larger border at each end for non-playing pieces.

2.2.5. Is a stringer between the playing area and the border needed?

2.2.6. Are stringers required around each of the individual squares?

### 3. Tools

The only tools required are:

3.1. A sharp cutting blade

3.1.1. Any of scalpel, craft or Stanley types will do but must be sharp.

3.2. Straight Edge

3.2.1. It is essential that you use a metal (preferably a steel) straight edge.

This will make it easier for the knife blade to follow the edge rather than the veneer grain and obtain clean, straight cuts.

3.2.2. If possible, stick some abrasive paper to the underside of the straight edge. This helps to prevent slippage that can ruin everything at a stroke!

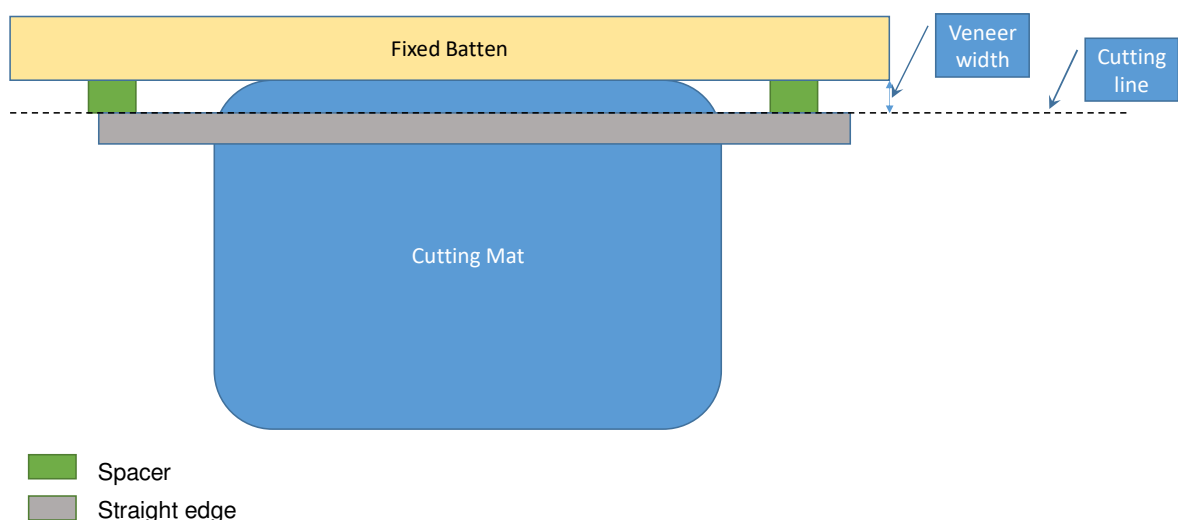
3.2.3. The width of the straight edge should ideally be the size of the square (n in paragraph 2.1.3 above). If this is not possible, use some spacers help you cut to the correct width – see paragraph 3.4 below. These could be coins, washers, bottle tops, in fact a pair of anything of uniform size.

3.3. Standard cutting mat of appropriate size.

3.3.1. The mat will prevent a score line developing on the cutting board.

3.3.2. Rotate the mat after a few cuts to allow the mat to 'heal' and prevent permanent score damage.

3.4. Modified cutting board - see Figure 3-1.



**Figure 3-1: Cutting Board**

#### 4. Sundry Equipment

##### 4.1. Sticky Tape

4.1.1. You may use a sticky tape such as low tack masking tape, Scotch Magic Tape, gummed paper tape or veneer tape (with or without holes). See paragraphs 5.4, 6.2 and 6.6 below for when to use it.

4.1.2. If you use any tape other than veneer tape, be sure to remove it after assembly and joint glueing to prevent pick up of veneer.

##### 4.2. PVA wood glue

##### 4.3. Pencil to mark veneer strips

#### 5. Cutting strips

5.1. Use the straight edge to trim the long side of the veneers parallel to the grain - see Figure 5-1 below.

5.2. Place one of the trimmed veneers tight against the stop of the cutting board. Place the straight edge on top of the veneer, again pushed tightly against the stop – see Figure 5-2 below.

5.3. With the knife blade vertical and lightly pressed against the straight edge cut a strip using several light cutting strokes until the strip comes free. Don't attempt to separate by tugging at it. Place to one side.

5.4. Using a pencil and a piece of tape, mark one end of the veneer with number 1 - see Figure 5.3.

5.5. Keeping the veneer the same way up, repeat steps 5.3 and 5.4 above making sure that the veneer and straight edge are tight against the stop. Increment the marking number.

5.6. Repeat step 5.5 until five strips marked 1 to 5 have been cut.

5.7. Repeat steps 5.2 to 5.5 with the contrasting veneer until 4 strips have been cut. Mark these with letters A to D instead of numbers. See Figure 5-4 for an illustration of all the cut strips.

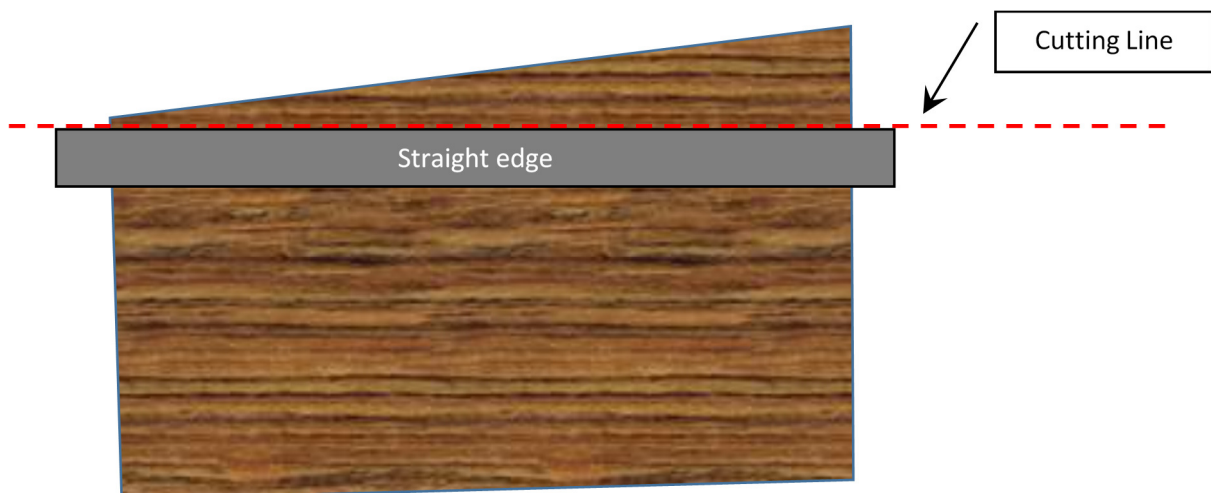


Figure 5-1: Trimming the Veneer to Grain Direction

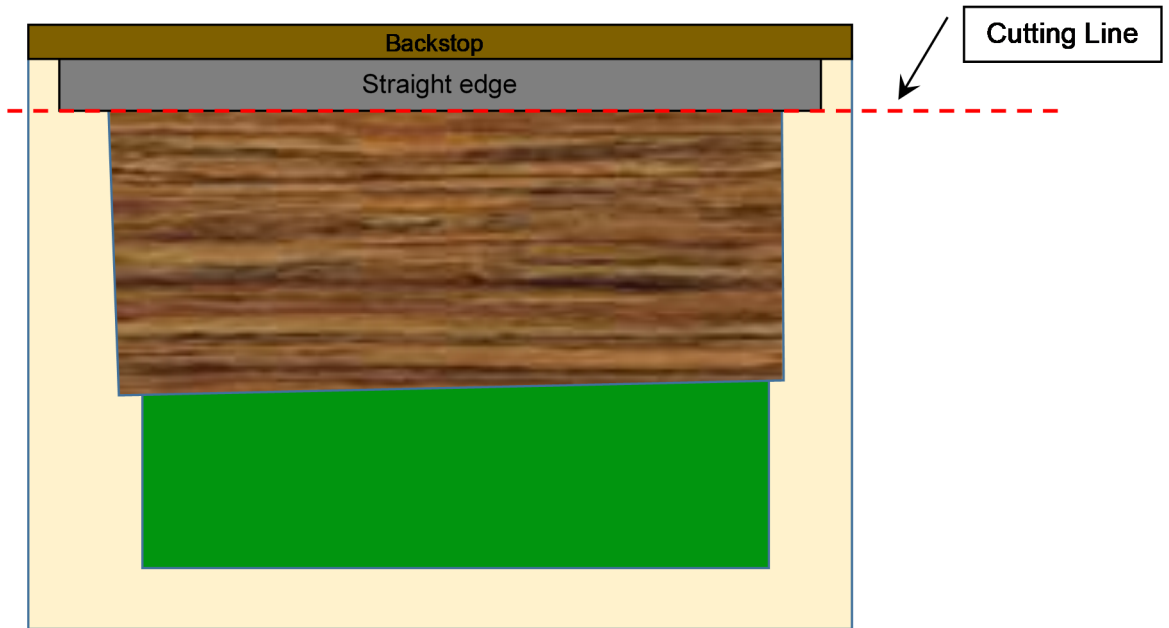
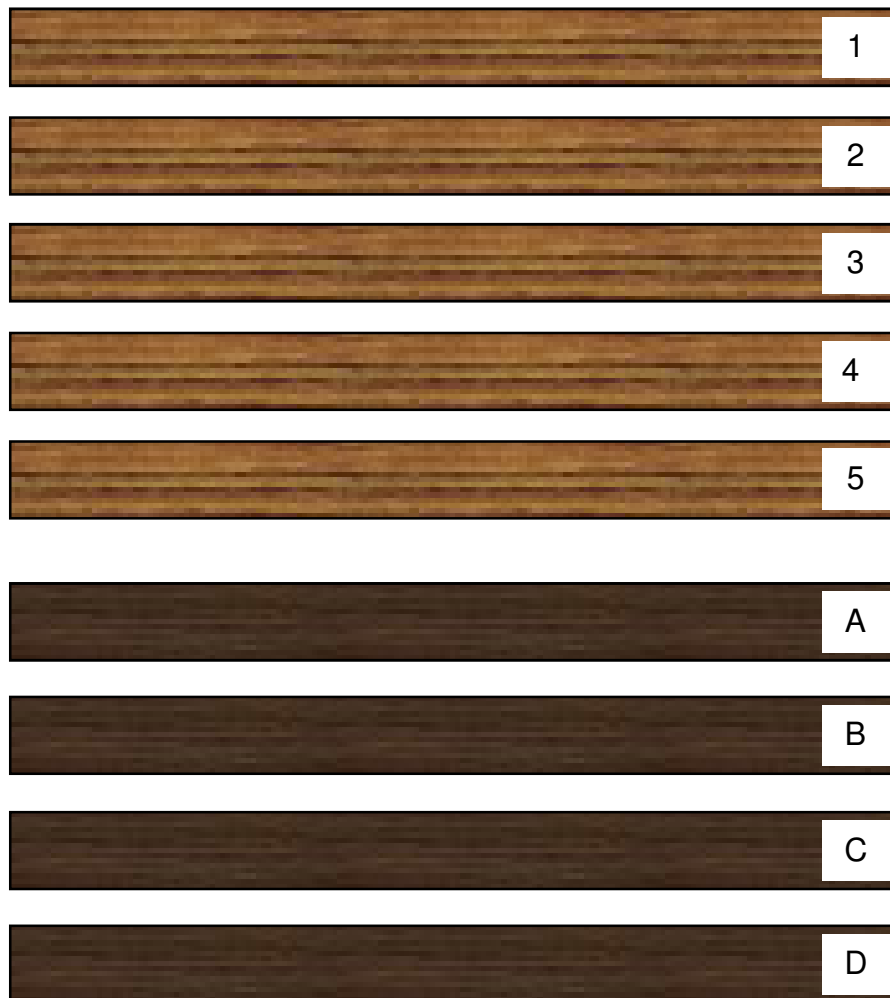


Figure 5-2: Cutting the Veneer Strips



Figure 5-3: The First Strip





**Figure 5-4: All the Cut Strips**

## 6. Assembly of Strips

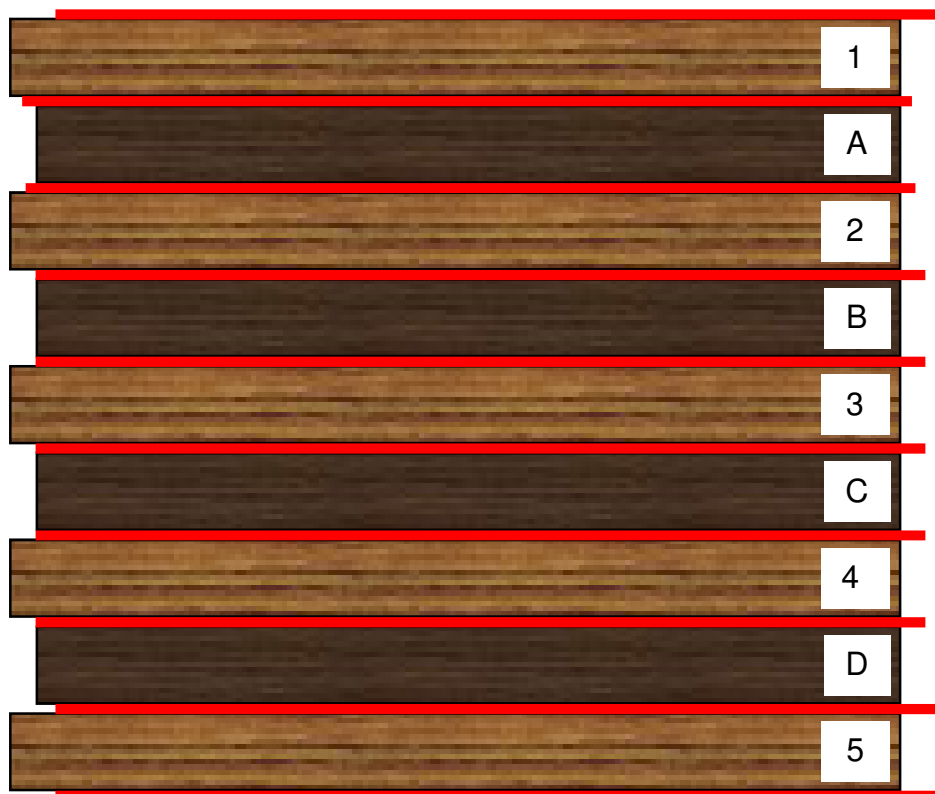
- 6.1. Place the strips together as indicated in Figure 6-1. If you require each playing square to be surrounded by a stringer, place the stringers as shown in Figure 6-2.
- 6.2. Tape the strips together. A little PVA glue may be added to the joint on the other side for security.
- 6.3. The workpiece now has to be squared off to enable further strips to be cut at 90°. See Figure 6-3 for details.
- 6.4. Cut 8 strips in a similar manner to the original strips of exactly the same width – see Figure 6-4. Add one stringer between each strip if stringers are required - see Figure 6-5. Note that the first strip will require an additional stringer as shown in Figure 6-6.
- 6.5. Place the strips together in order with a lateral offset as indicated on Figure 6-7.
- 6.6. Tape the strips and stringers and apply PVA glue as for the original strips to keep the work together.

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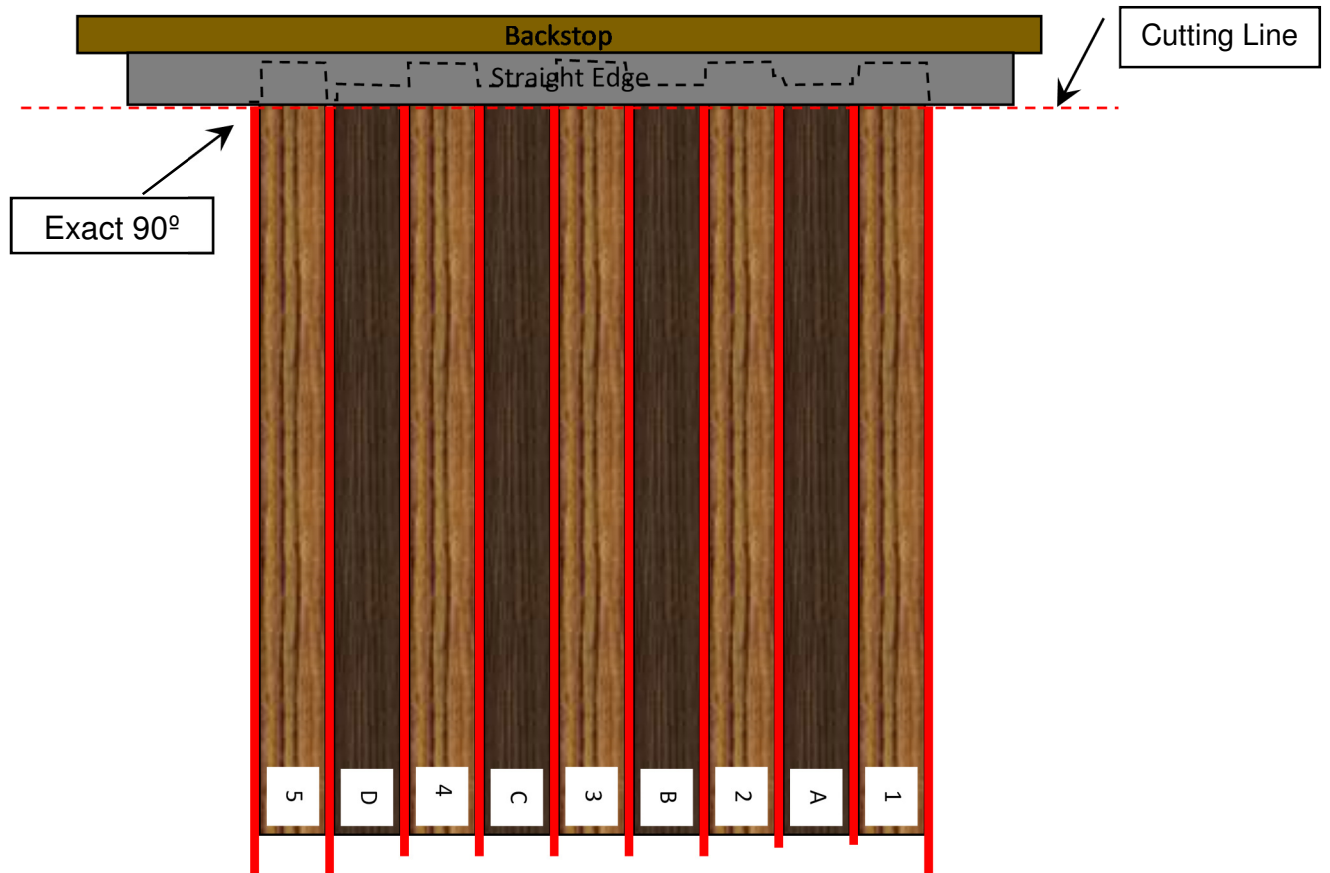
- 6.7. Trim the work square to cut off the displaced extra squares as shown in Figure 6-8 to make the final playing area as shown in Figure 6-9.



**Figure 6-1: Placement of the Strips**



**Figure 6-2: Placement of the Strips with Stringers**



**Note:** To get an exact 90° use your cutting mat, A4 sheet of paper or a set square. Set against the cutting board backstop and mark the line at exactly 90°.

**Figure 6-3: Trimming to Square Up Assembled Strips**



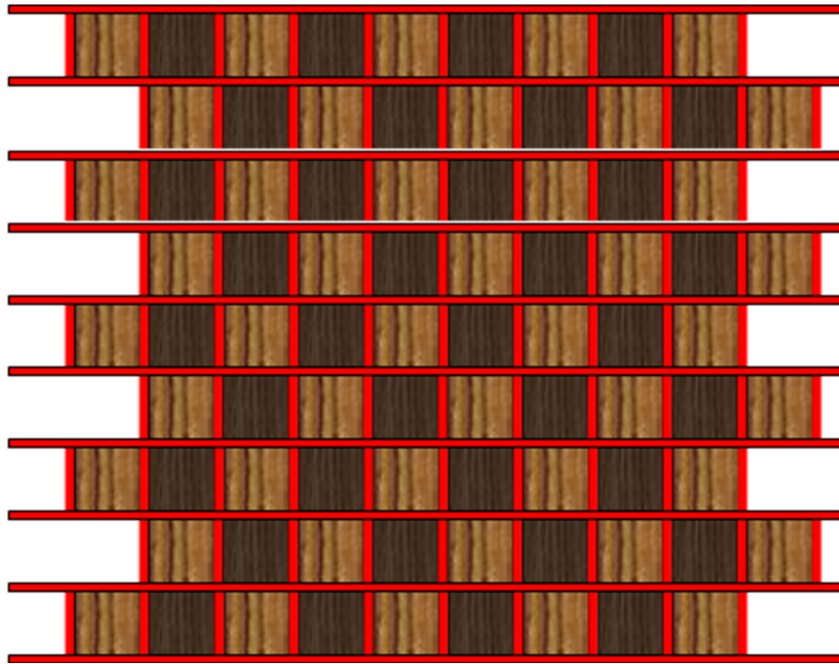
**Figure 6-4: Cut Strips**



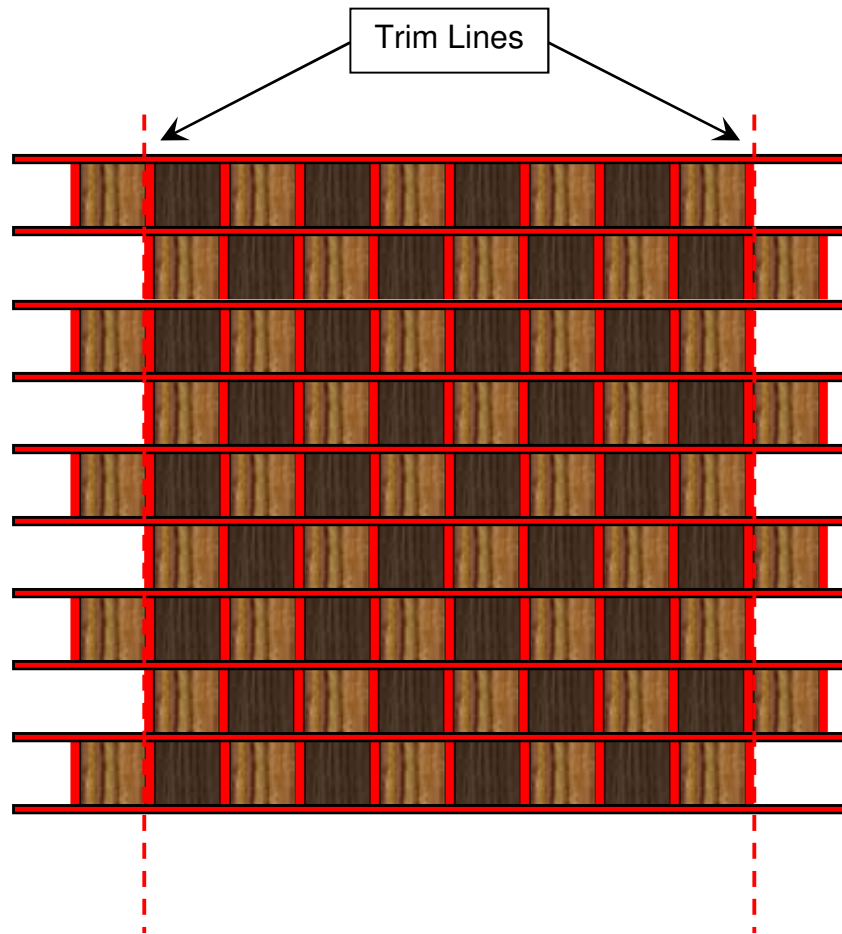
**Figure 6-5: Strips With Stringers**



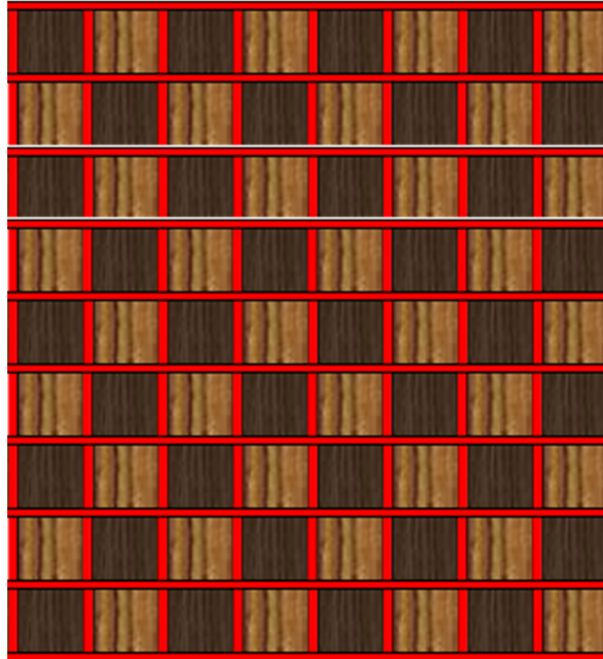
**Figure 6-6: Strip With Additional Stringer**



**Figure 6-7: Strips Laid in Order of Cutting and Offset**



**Figure 6-8: Trim Lines**



**Figure 6-9: Final Chessboard Grid**

## **7. Completing the Chess Board**

- 7.1. To complete the chess board, the playing area has to be mounted on a board with a suitable surround or border.
- 7.2. The types of border will depend on personal preference of course, but it may be useful to consider a thicker border at each of the playing ends to accommodate spare or captured pieces.
- 7.3. Ensure that the grain is in the same direction as the playing squares grain direction (if applicable).
- 7.4. Once laid and glue properly cured, scrape and sand smooth then apply a finish of your choice (matt or satin recommended).

### **NOTE**

For full directions as to how to finish the board with borders, edges and finish see the appropriate Workshop notes (under compilation July 2023).