

# **Marquetry Workshops Series**

## **Workshop 2: Borders and Edges**

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## Workshop 2: Borders and Edges

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## 1. Introduction

Most pictures need a border of some sort to frame the masterpiece. The border may or may not include a stringer (a dividing line between picture and border).

1.1. The term border also includes the edges of the groundwork. How the edges are managed often depends on the border type.

## 2. Types of Border

There are several types of border, four of which are discussed here.

### 2.1. Directional

2.1.1. This is my name for a border where the grain runs parallel to the groundwork edges (assuming a rectangular groundwork). See Figure 2-1 below.



**Figure 2-1: A Natural Border Example**

### 2.2. Cross-banded

2.2.1. A cross-banded border has the grain of each border is at right angles to each of the picture edges as illustrated in Figure 2-2 below.



**Figure 2-2: A Cross-banded Border Example**

### 2.3. Natural

- 2.3.1. Natural is my name for a border which looks as if the picture has been set in a single veneer sheet with the veneer wrapped round the edges. Figure 2-3 is an example of this type of border.



**Figure 2-3: A Natural Border Example**

### 2.4. Non-directional

- 2.4.1. Non-directional is my name for a border without any particular grain direction such as a burr. See Figure 2-4 for an example of this type of border.



**Figure 2-4: An Example of a Non-directional Border**

### 3. Edge Types

- 3.1. The edges of a picture can be of several types and are generally related to the border type.
- 3.2. Assuming a square edge the grain of the edge veneer should continue the grain pattern of the border. For example, for a directional border the edge would effectively wrap round - see Figure 2-1 above. Similarly for a cross banded border the grain direction should continue to wrap round - see Figure 2-2 above.
- 3.3. For a natural border there is more choice: to continue the illusion of a single board end grain effect could be used on two sides with wrap around for the other two sides much as a plank of wood - see Figure 3-1 below.



**Figure 3-1: Natural Border Example**

- 3.4. Alternatively the grain may continue to wrap around - see Figure 2-3 above.
- 3.5. For non-directional borders a simple wrap round will suffice.

### 3.6. Contrasting Edge

- 3.6.1. It may be deemed that a contrasting veneer for the edges would look good (for any type of border). This can be laid to expose a contrasting colour on the face of the picture or not - see Figure 3-2 and Figure 3-3 respectively.



**Figure 3-2: Contrasting Edges Shown on Face**



**Figure 3-3: Clean Face with Contrasting Edges**

### 3.7. Bevelled Edges

- 3.7.1. Edges need not be square. Bevelled or rounded edges have their place but will not be discussed here.

## 4. Preliminary Considerations

### 4.1. Border Thickness

- 4.1.1. It is a general principle that the picture should be central within the groundwork. This generally means that the side borders are equal. Top and bottom borders may be of equal thickness or different depending upon the desired finished look.

### 4.2. Stringers

- 4.2.1. The thickness of stringers needs to be taken into account when determining the border thickness.

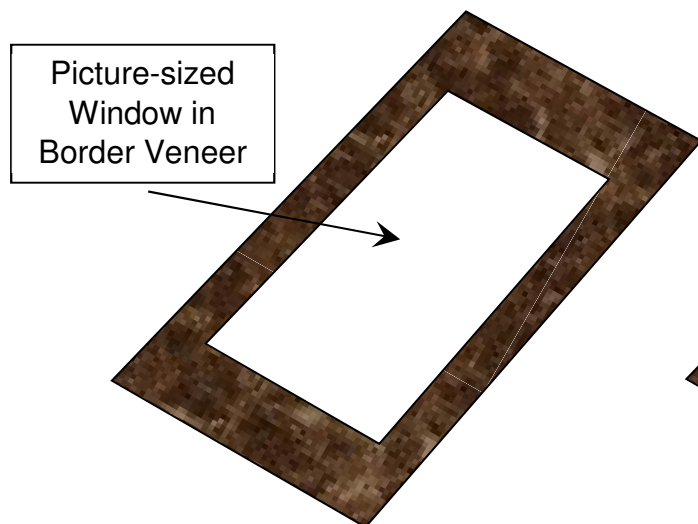
## 5. Cutting Borders

### 5.1. Directional border.

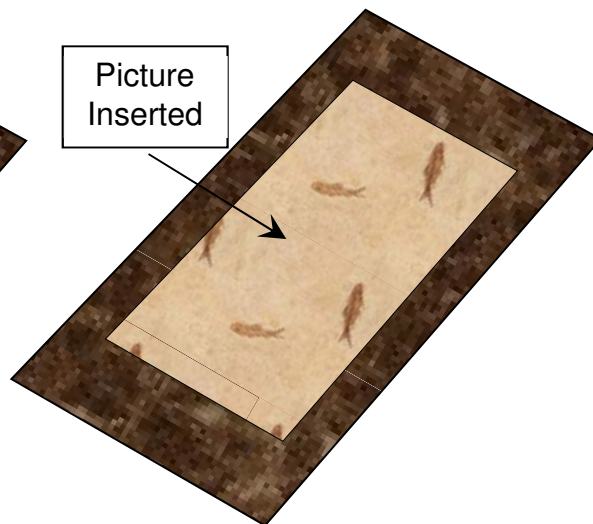
- 5.1.1. Having established the border thickness, cut each border to size in a similar manner to the strips cut for the chess board – see Workshop 1. It is likely that spacers will need to be used to obtain the desired thickness. Cut the strips slightly oversize. Carefully mark each strip with its position - top, right, bottom or left. The length of each strip must be slightly longer than the groundwork. This will allow for the mitres of the corners to be cut.

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- 5.1.2. An alternative method would be to cut a picture-sized window in a single sheet of veneer and insert the picture. See Figures 5-1 and 5-2 below. This is most easily done before the picture is mounted. See Section 7.3 below.



**Figure 5-1: Window in Complete Border**



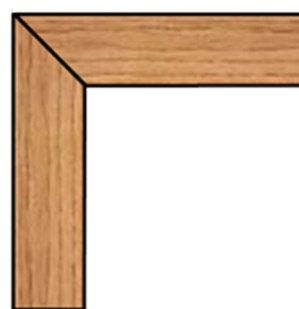
**Figure 5-2: Picture Inserted into Border Window**

### 5.2. Non-directional

- 5.2.1. Simply cut strips to either butt joint (Figure 5-3) or mitre corners (Figure 5-4).



**Figure 5-3: Example of a Butt Joint**

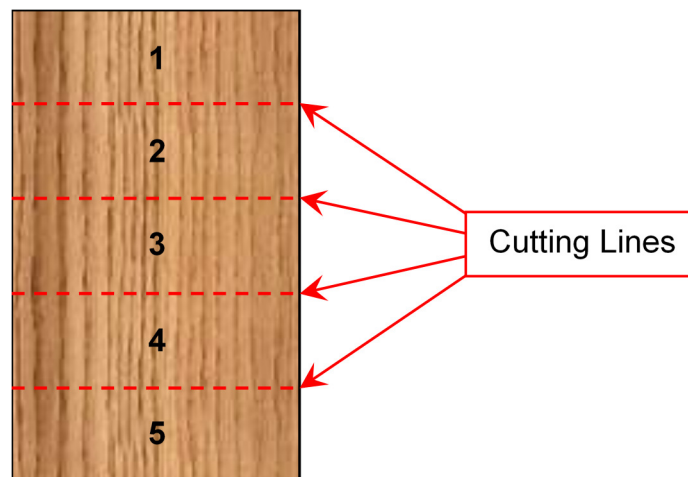


**Figure 5-4: Example of a Mitre Joint**

### 5.3. Crossbanded Edges

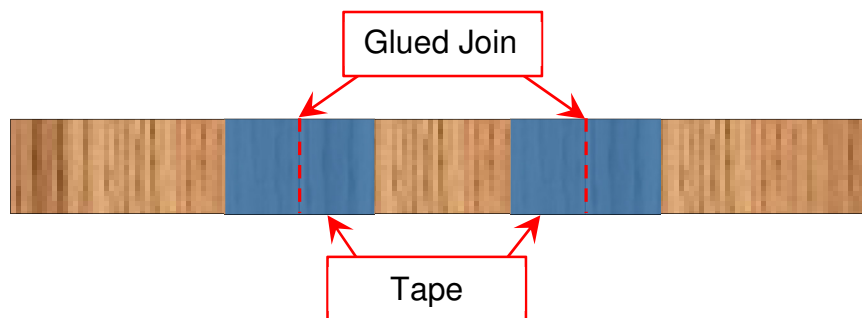
- 5.3.1. To make strips for cross-banded borders it is best to cut strips from a single piece of veneer if at all possible. Cut strips at right angles to the grain and mark to maintain the original order. See Figure 5-5 below.





**Figure 5-5: Single Veneer used to Create Cross-bands**

5.3.2. It is unlikely that a single strip will suffice so several shorter strips will need to be taped together to complete the border - see Figure 5-6.



**Figure 5-6: Strips Taped and Glued to Create Cross-banding**

#### 5.4. Natural Borders

5.4.1. Without stringers simply cut strips in the desired grain direction. Take care at the corners as the joint should be as near to invisible as possible.

### 6. Laying Edges

#### 6.1. Board preparation

6.1.1. Before any edges can be laid, the baseboard must be properly prepared.

6.1.2. Both the back and face must be clean, free from grease, tape, dust or any loose material.

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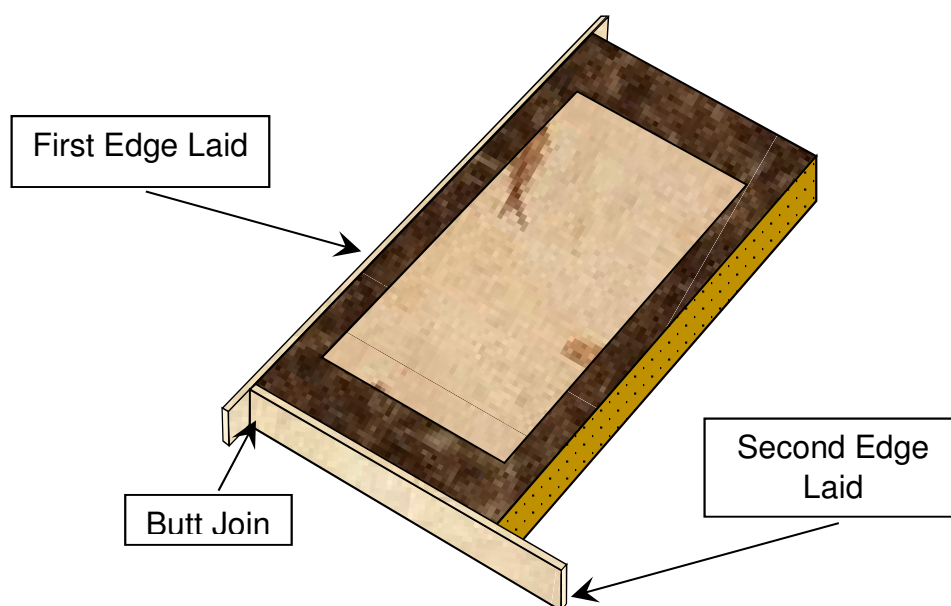
- 6.1.3. The edges should be straight, smooth and, for rectangular boards, perfectly square. This entails smoothing any roughness, saw marks, etc. and ensuring that straight edges of the board are at right angles to the face.

### 6.2. Sequence of Laying

- 6.2.1. The back should be laid first. It need not be one piece – two or more pieces could be joined and used as one piece.
- 6.2.2. If the face edges are to be covered by the picture (see Figure 3-3 above), the edges should be applied next. If the edges are to be visible on the face, i.e. as a contrasting frame to the work (see Figure 3-2 above), they should be applied after the face and borders.

### 6.3. Laying Process

- 6.3.1. Cut strips of veneer slightly oversize for each edge. This will allow for any slight misalignment in gluing.
- 6.3.2. You may use any type of adhesive but a contact adhesive is by far the easiest.
  - 6.3.2.1. Follow the manufacturer's instruction and lay the edges. Lay one at a time and trim the edge that will abut the next edge – see Figure 6-1 below.



**Figure 6-1: Edge Laying Sequence for Contrasting Edges on Face**

- 6.3.2.2. Rub some PVA in the corner joints to ensure good adhesion and to reduce the likelihood of the edge coming away.
- 6.3.3. For the 'wet' adhesives, lay the edges one at a time and trim square once the glue has set – say about half an hour for PVA. Take care to ensure that each edge does not move during this process.

6.3.4. If you wish to use PVA, Cascamite or other 'wet' adhesives, you will have to consider how you will keep the edges pressed during curing. Strong tape may suffice on its own but I have found that this can sometimes raise the middle somewhat to give a bowed effect. A cutting board modified to wedge the work together can work well for smaller pieces. Large boards and clamps may work for larger pieces but do ensure that everything remains square.

#### 6.4. Laying Curved Edges

6.4.1. For circular pieces such as coasters or oval groundwork a slightly different approach is needed.

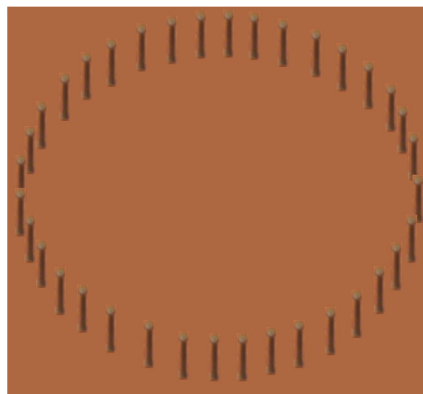
6.4.1.1. One approach is to wrap the border veneer round the edge to form a ring. This can be glued using a contact glue (best), PVA or any other adhesive of your choice.

6.4.1.2. The main considerations are the flexibility of the veneer for smaller diameter curves and the joins.

6.4.1.2.1. For brittle veneers, it is easier to use a strip with vertical grain as for cross-banding – this allows the curve to be less stressed.

6.4.1.2.2. Should the grain need to be longitudinal and the curve tight, such as a small oval, you may wish to consider pre-forming the strip. Create a template or former of the correct shape – it doesn't need to be exact. The strip then needs to be softened. This is easily done by steaming the strip with the steam from a kettle or even boiling the strip in a pan. When soft, work quickly in placing the strip in the former – careful it will be hot so use tongs. Allow to dry before use.

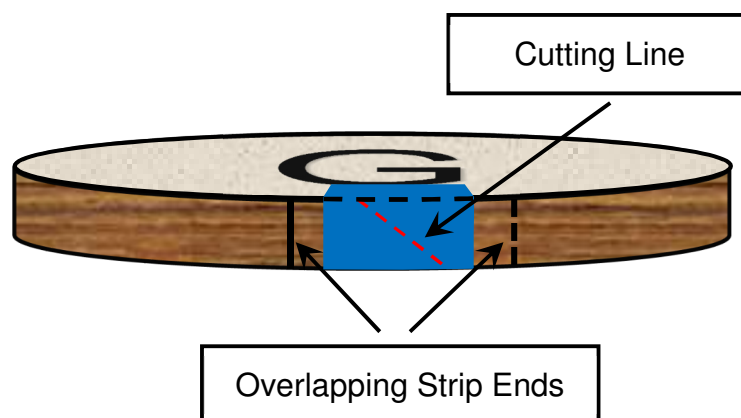
6.4.1.2.3. I have found that a few nails in some wood will allow the veneer to be bent to shape by threading slalom style – see Figure 6-2 below.



**Figure 6-2: A Former to Help Strip Bending**

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- 6.4.1.3. When taken out of the former, it is likely that the strip will spring out a bit. Provided that there is sufficient set the strip should easily be manipulated to fit the groundwork.
- 6.4.1.4. There will necessarily be a join. To make sure of a good fit, overlap the two ends of the strip and tape firmly into position as shown in Figure 6-3 below.



**Figure 6-3: Joining the strips on a Curved Groundwork**

- 6.4.1.5. With a sharp knife, cut through both layers at an angle of about 30°. This will allow for some movement to make the perfect join.
- 6.4.1.6. Remove the tape and the two waste pieces. Unwrap the strip and apply the adhesive according to the manufacturer's instructions.
- 6.4.1.7. If using PVA or Cascamite, hold in place with lots of tight tape. Alternatively elastic bands placed around the piece and/or across the diameter will help to apply the necessary pressure. Make sure that the veneer stays in the correct place and that the join remains good before the glue cures.
- 6.4.1.8. Before the glue has set ensure that the join is clean and the ends come together without gaps.
- 6.4.1.9. Apply some PVA to the join which should then become virtually invisible.
- 6.4.1.10. If several layers are to be applied to give a thicker frame to the face of the work, apply the subsequent strips so that the joins occur at different places around the work. Be sure that the previous layer has cured before applying the next.

## 7. Laying Borders With Stringers

- 7.1. There are two approaches: either attach the stringers to the borders before laying (recommended) or lay the stringers to the picture prior to laying the borders.

- 7.1.1. Attaching the stringers to the borders first is generally the easiest method. Simply add the stringer to the inside edge of each border (use tape and glue) then lay each border as one.

## 7.2. To an Unmounted Picture

- 7.2.1. For borders added to the picture prior to mounting, simply trim the picture to the exact size, surround with stringers if wanted and then add the borders.
- 7.2.2. Take care to ensure that the corners land up in the exactly the right position – this is especially so for mitred corners.
- 7.2.3. Mount the picture, stringers and borders in one operation.
- 7.2.4. The drawback with this method is ensuring that the picture is laid in the correct position on a board of the exact size.

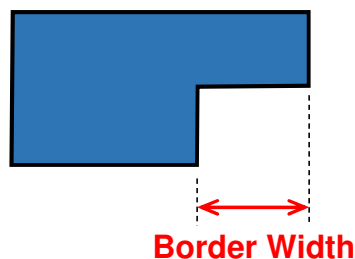
**Note:** With a natural border it is easiest to attach the stringer to the picture first.

## 7.3. To a Mounted Picture

- 7.3.1. Attaching the stringer to a mounted picture first requires the picture to be trimmed exactly to size.
- 7.3.2. Ensure that the baseboard is clean and free from glue, tape or straggly bits right up to the picture edge. Lay the stringer tight up against the picture edge using your preferred glue. Butt join or mitre the corners as seen fit. Clean up the board before the glue sets hard to make ready for the border.

## 7.4. Laying Any Borders (Mounted Picture)

- 7.4.1. The mounted picture must be trimmed with an even distance between the picture and parallel baseboard edges. Top and bottom borders may be different as you may wish for aesthetic reasons. Use an 'L' template to help in this - ruler measurements are rarely good enough – see Figure 7-1.

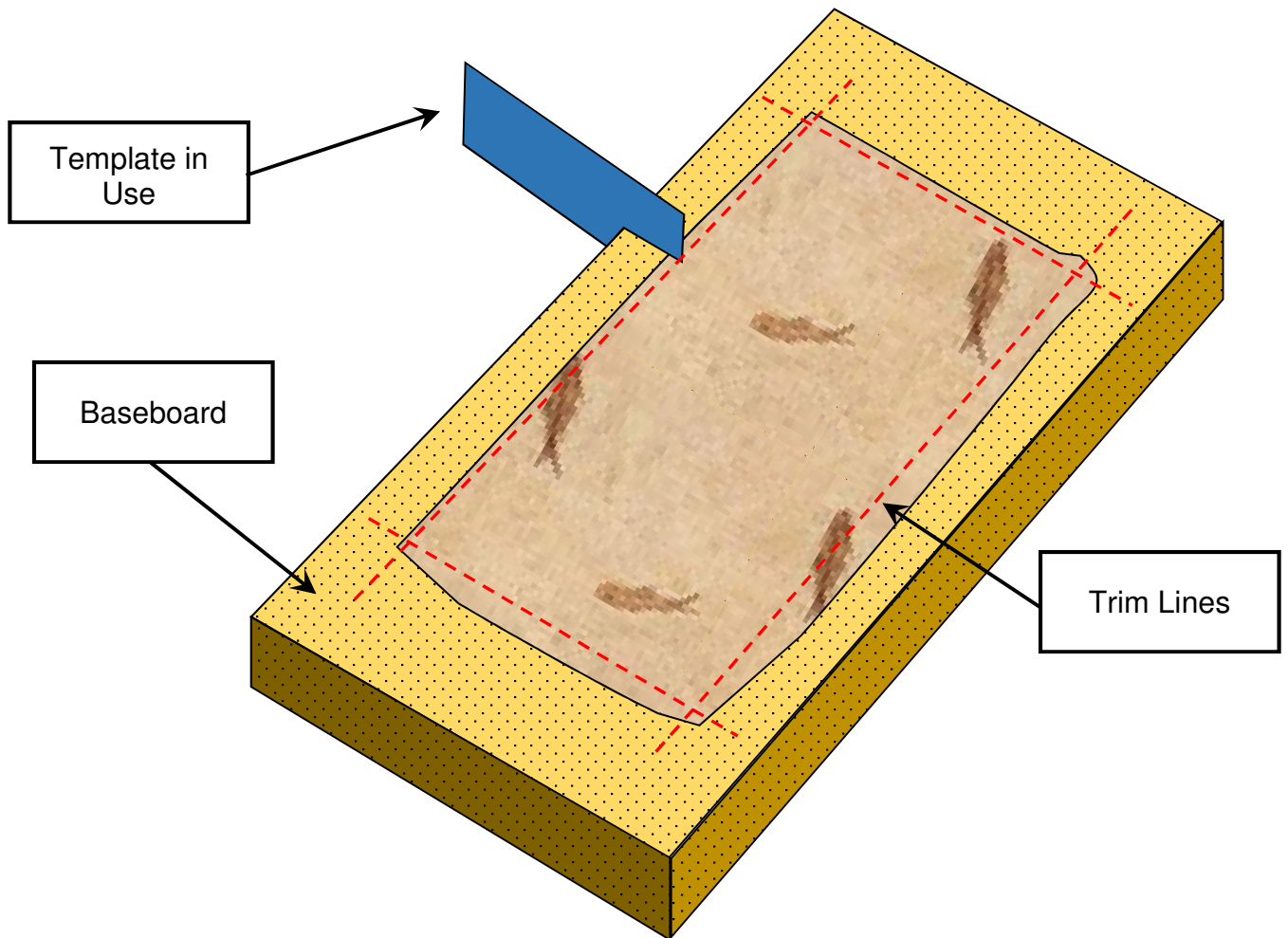


**Figure 7-1: Template for Border Width**

- 7.4.2. Use the knife point to mark the trim line in several places then cut through the veneer using a straight edge (steel is best, aluminium can easily get damaged) to join up the knife points.

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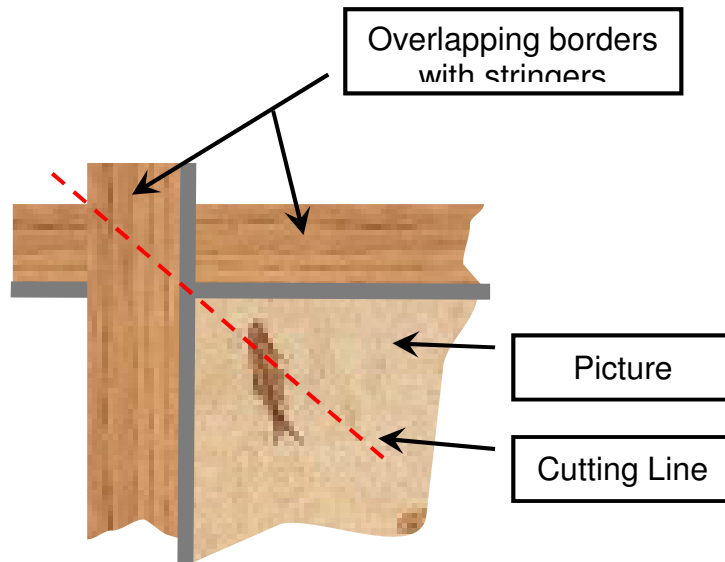
- 7.4.3. Remove trimmed veneer from the baseboard and clean up any old glue as illustrated in Figure 7-2. A square edged scraper, chisel or metal rule can be useful here.



**Figure 7-2: Preparation for Laying Borders (Picture Mounted)**

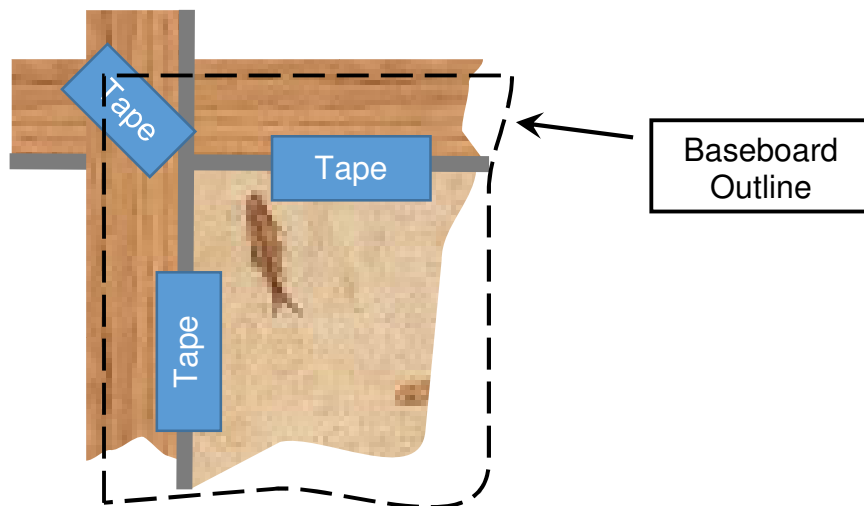
- 7.4.4. Place the borders tight against the picture and tape firmly in place (no glue yet!) as illustrated in Figure 7-3.

**Note:** Each border should be oversized to allow for trimming back to the edges.



**Figure 7-3: Position of Borders for Mitred Corners**

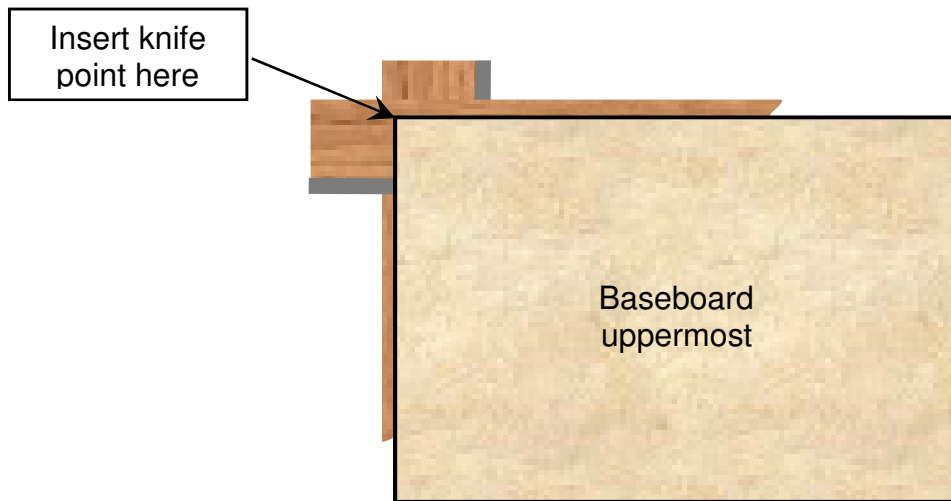
7.4.5. The corners will overlap. Place a piece of veneer tape on each corner – see Figure 7-4 for example for one corner.



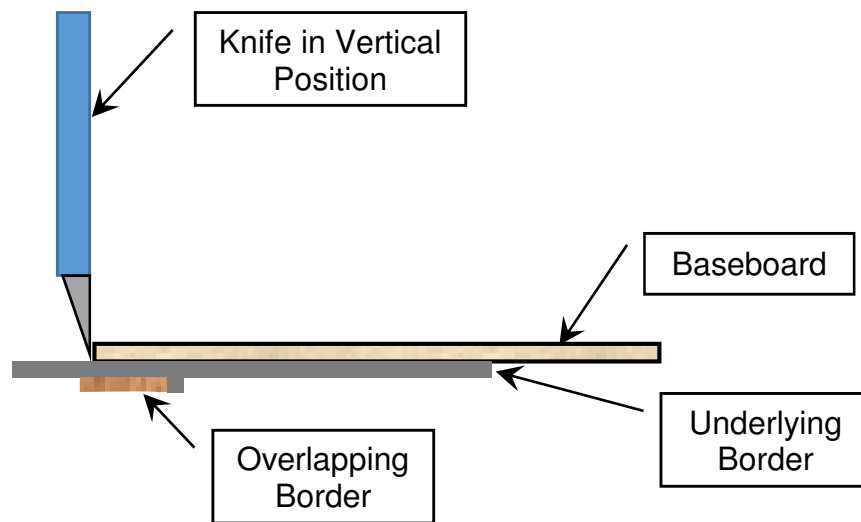
**Figure 7-4: Borders taped in Position**

7.4.6. Turn the workpiece over. At each corner pierce both borders at the very point of the corner. It is important to keep the knife blade vertical. See Figures 7-5 and 7-6 below.

7.4.7. Turn over the workpiece once more (face side up) to reveal the knife points on the paper tape at each corner. See Figure 7-7.

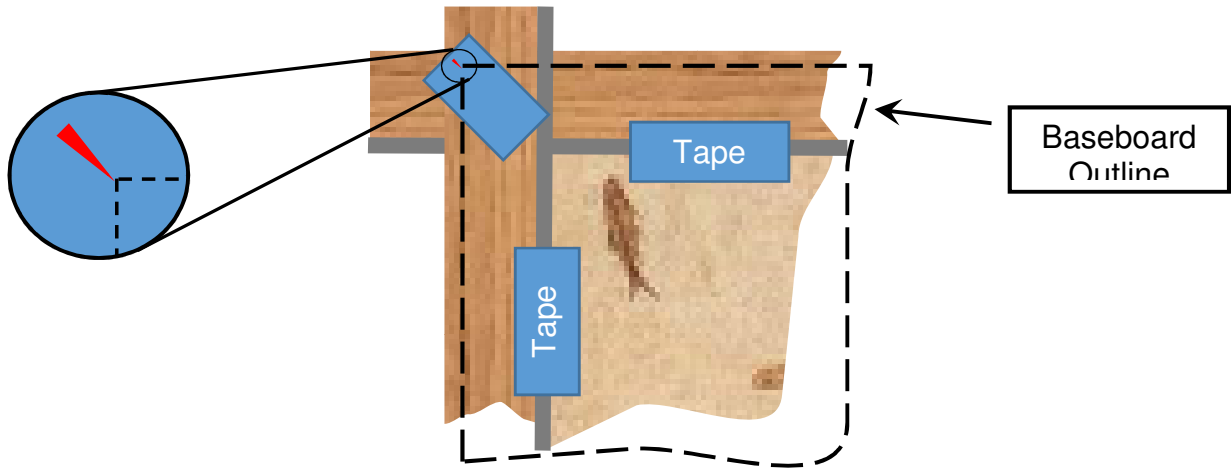


**Figure 7-5: Workpiece Turned Over to Aid Corner Cutting**



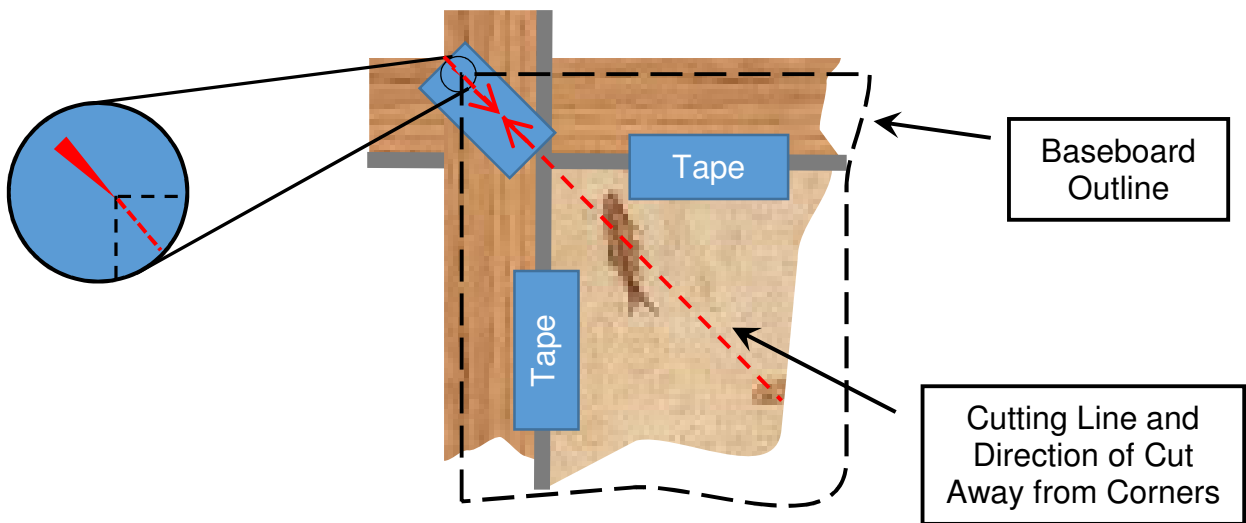
**Figure 7-6: Side View of Workpiece Showing Knife Position**





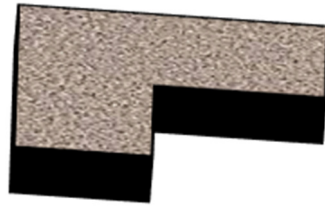
**Figure 7-7: Knife Points Shown on Tape**

7.4.8. To mitre the corners place a straight edge from the knife point mark to the corner point of the picture. Cut with very light strokes along the straight edge in the direction away from the picture and away from the border corner as shown by the arrows in Figure 7-8. Be careful near the unsupported edge of the border by the knife point mark as too much pressure could split the veneer.



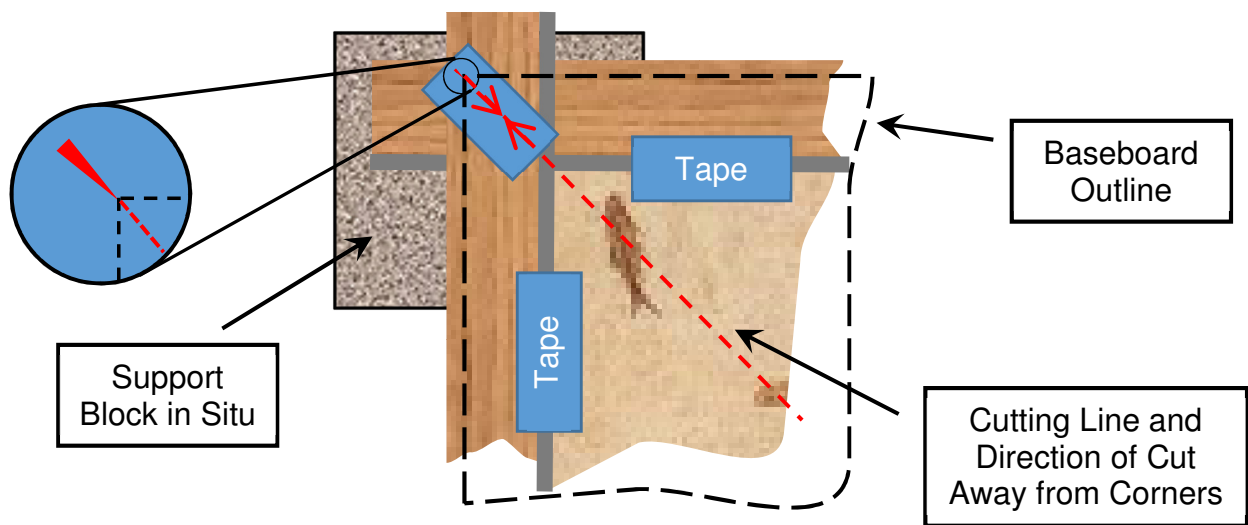
**Figure 7-8: Illustration of Cutting Direction**

7.4.9. A support block to be cut of the same thickness as the baseboard placed under the border can be helpful here - see Figure 7-9.



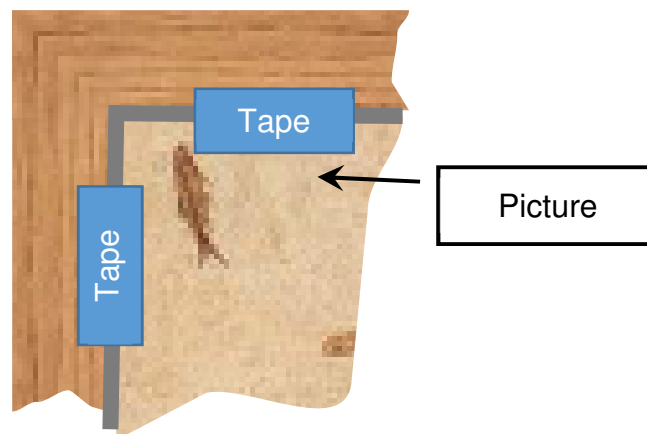
**Figure 7-9: Corner Support Block**

7.4.10. The support block allows a good clean cut to be made without any danger of splitting the border by applying too much pressure. Light strokes are always best! See Figure 7-10 for an illustration of the use of such a support block.



**Figure 7-10: Illustration of Support Block in Position**

7.4.11. With the borders now cut, remove the waste. The mitre should now be a perfect fit on each corner as shown on Figure 7-11.



**Figure 7-11: A Perfectly Mitred Corner**

- 7.4.12. With the picture was already mounted and trimmed (see Paragraph 7.4.1 above) the taped borders can now be hinged back and glue applied according to the manufacturer's instructions.
- 7.4.13. Ensure that all the borders are correctly placed before pressing into place.
- 7.4.14. All that remains is to trim the borders flush to the edges prior to cleaning up and finishing.