

# WHEELBARROW

## Tools required to make this design

Cutting; Practical Punch/Shear (or Master Punch/Shear or XL5+ Power Bender)  
 Punching; Practical Punch/Shear (or Master Punch/Shear or XL5+ Power Bender)  
 3mm punch pin & punch block)  
 Riveting; Practical Riveting Bending & Rolling  
 Rolling; Practical Riveting Bending & Rolling  
 Bending; Practical Riveting Bending & Rolling  
 Scrolling; Mk 1/2 Scroll Former + Mk 2/2H Former/ 2/3Scroll Former

We recommend that before starting you wipe all steel bars down so that they are free of grease, scale or dirt. After cutting any component, we also recommend that you trim the corners for a neater finish, if preferred, unless these instructions tell you otherwise. Use a fine tip marker pen, pencil or scribe for marking hole, bend, scroll, roll points on the bars.

### Component 1 Bucket Bar 12mm x 2mm x 457mm (5)

Using the Practical Punch/Shear Tool (PPS), cut 3 lengths of 12 x 2 x 914mm at 457mm and put aside the remaining strip for component 3. Using the same tool chamfer all the corners of the strips. Mark all scroll, hole and bend positions as indicated on Component Sheet 1. **Note only 2 of these will need holes H2 + H4.** Using the Mk 1/2 Scroll former, scroll all 5 strips up to S1. Bend each strip at B1 and B2, using the template on Template Sheet 1 as a guide. Punch 3mm holes centrally in each strip as marked. **N.B. Only 2 of these need hole**

### Component 2 Legs 12mm x 2mm x 442mm (2)

Cut 2 pieces of 12 x 2 x 914mm steel strip at 442mm and chamfer all the corners of each strip. Mark all scroll, hole and bend positions as indicated on Component Sheet 1. Using the **Mk1/2** Scroll former, scroll both strips up to S2 Bend each strip at B3, B4, B5 and B6, using the template on Template Sheet 1 as a guide. Using the Practical Riveting, Bending & Rolling Tool (PBR), roll between B6/R1 on each strip to the end to form the curved section of the leg, see template as guide. Punch 3mm dia holes centrally in each strip as marked.

### Component 3 Wheel 12mm x 2mm x 300mm (1)

From the left over off-cut steel from Component 1, cut 1 length of steel strip down to 300mm. Chamfer all corners. Mark all scroll and hole positions as indicated on Component Sheet 1. Using the **Mk 2/2H or 2/3** Scroll Former, scroll up to S3 and then punch hole, H7.

### Component 4 Side Scrolls 12mm x 2mm x 620mm (2)

From 2 lengths of 12x 2 x 914 (3ft) steel strip, cut 2 strips each 620mm long. Chamfer all corners. Mark all hole and scroll positions as indicated on Component Sheet 1. Using the **Mk 2/2H or 2/3** Scroll Former, scroll strip up S4. Turn the strip over and scroll the other end up to S5. Use component 4 on template sheet as guide.

### Component 5 Cross Bars 12mm x 2mm x 120mm (2)

From remaining off-cuts, cut 2 strips, each 120mm long. Chamfer all corners. Mark and punch holes positions as indicated on Component Sheet 1.

## ASSEMBLY INSTRUCTIONS

Using an 8mm x 3mm Rivet join components 1 **without** the 2 extra holes (H2+H4) component 3 and 5 together through hole positions H1, H7 and H10. Placing component 1 at the top and component 3 at the bottom. You may need to twist the components to rivet these 3 components together.

At the other end of this component 1 using a 6mm x 3mm rivet join the second component 5 at H10 and component 1 at H3. this should be in the centre of component 5. Twist both pieces of component 5 in a diagonal position parallel with each other. This is to allow you to rivet the next pieces in position.

Taking the two remaining pieces of component 1 (**without the extra holes H2 and H4**) using 6mm X 3mm rivets (and ensuring component 1 scrolls are all facing the same way) rivet together using hole locations H1-and H3 on component 1 and holes H9-H11 on component 5. Once these are in position you can now twist your components out of the diagonal position to straighten your wheelbarrow out.

Take the two pieces of components 1 with the two extra holes, and assemble to the outer position of component 5 using hole positions. H8 to H1 and H12 to H3.

Finally taking the partly assembled wheelbarrow, offer up with component 2 and 4 as shown on assembly sheet. Mark on the scrolls (Component 4) where points H2 and H6 meet and again at positions H4 and H5. Using the Practical Punch and Shear, punch the scrolls where marked and rivet the 3 components together using 8mm X 3mm Rivets making sure everything is symmetrical.

## APPLIED DECORATION AND FINISHES

The finished item can now be painted in a wide variety of finishes (smooth, satin, hammer and metallic) either by aerosol or by brush application. Powder coating and plastic dip finishes can also be applied but these type of finishes are more for commercial/industrial finishing. However, even with aerosol or paint finish you can make your finished item look professional. In this case we use paints from the Plasti-kote and Hammerite ranges - available from most DIY and Painting/Decorating outlets. For best results, always follow instructions on the tin and make sure the metal is free of all scale, dirt, grease or rust.



## Design Pack

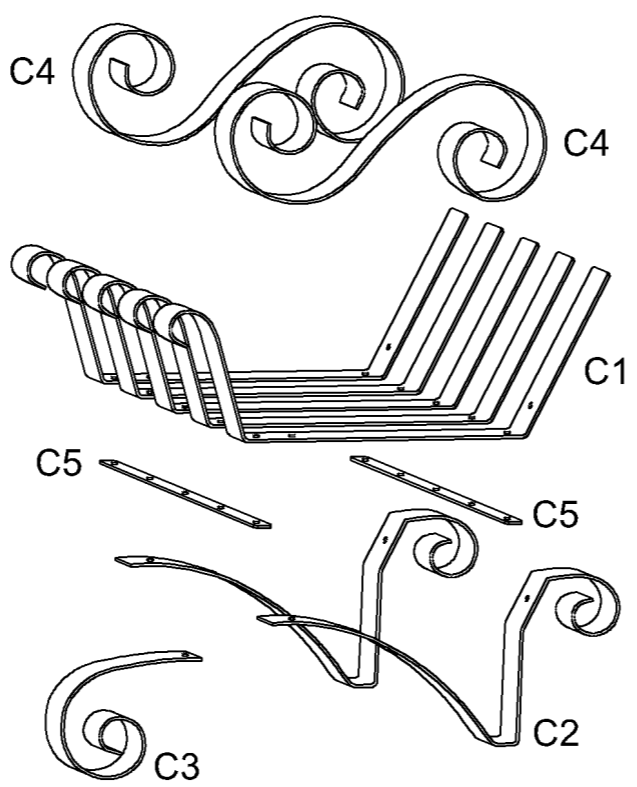
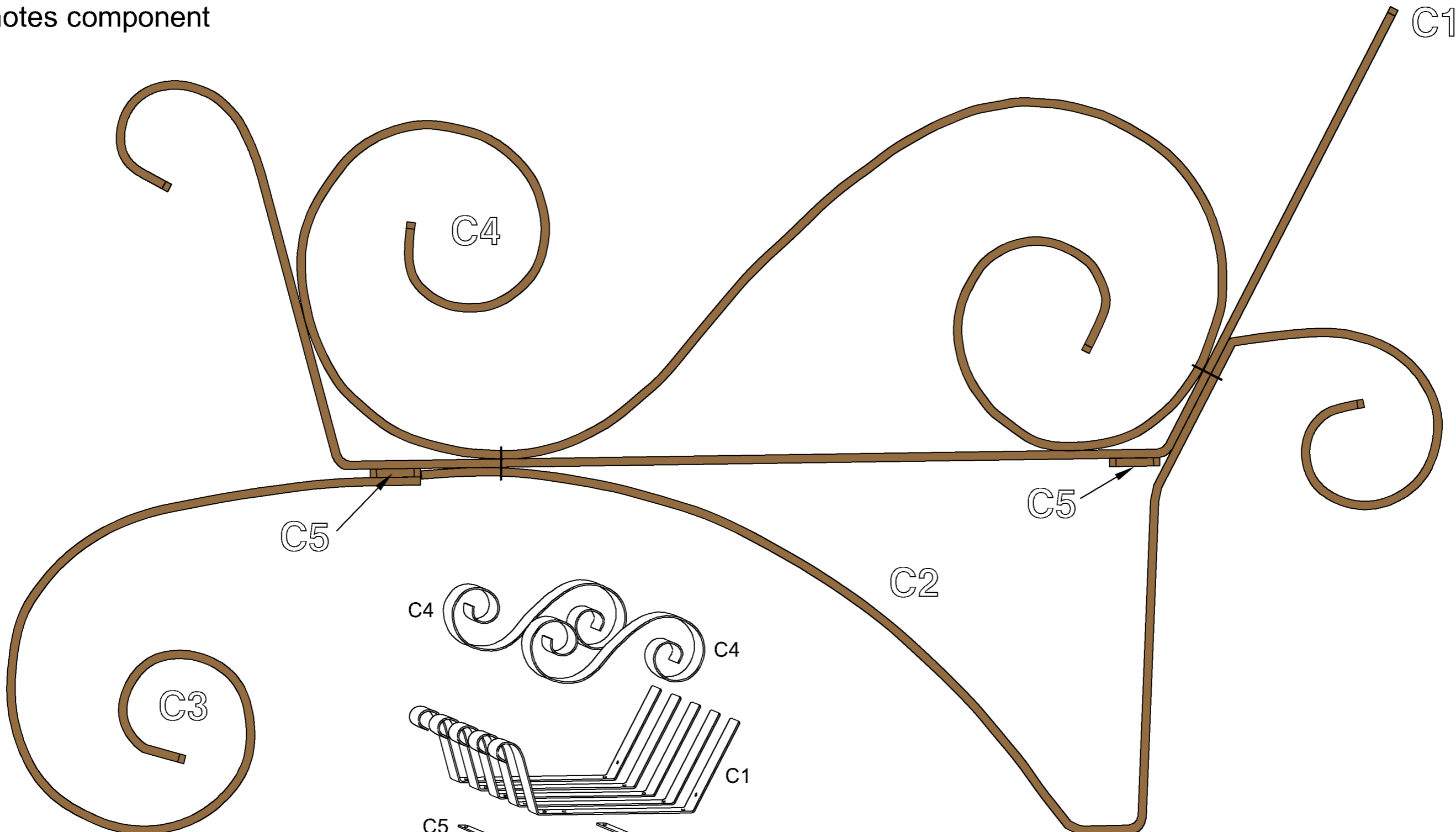
## Wheelbarrow



Difficulty Rating:	
Easy	
Straightforward	✓
More complex	

KEY

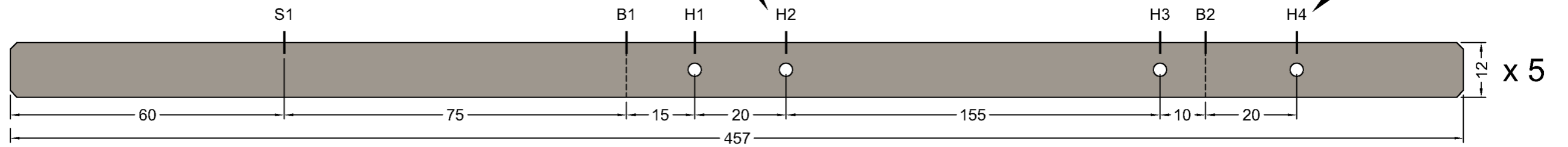
C denotes component



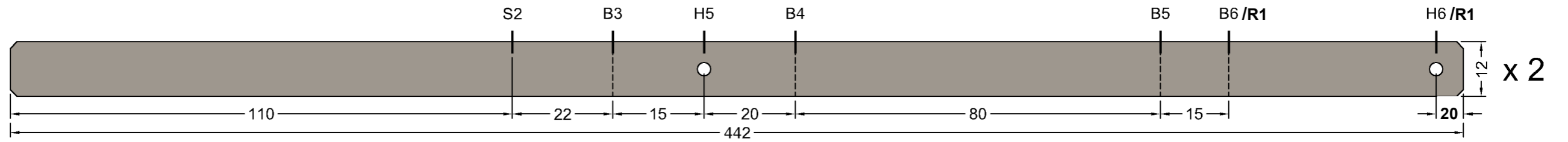
NOT TO SCALE

NOTE HOLES H2 AND H4 ARE ONLY REQUIRED FOR THE "OUTSIDE" TWO STRIPS FOR CONNECTION TO THE WHEELBARROW LEGS/HANDLES.

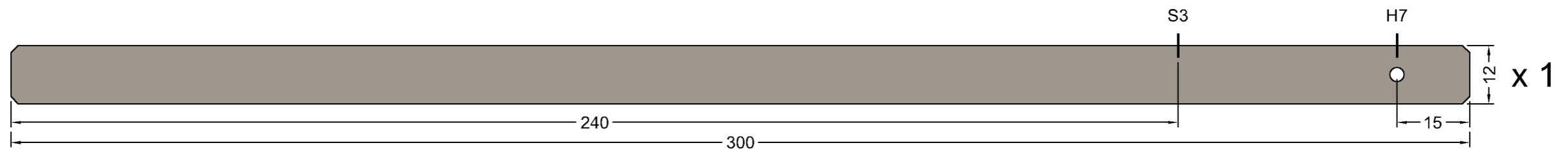
**Component 1**  
457 x 12 x 2mm



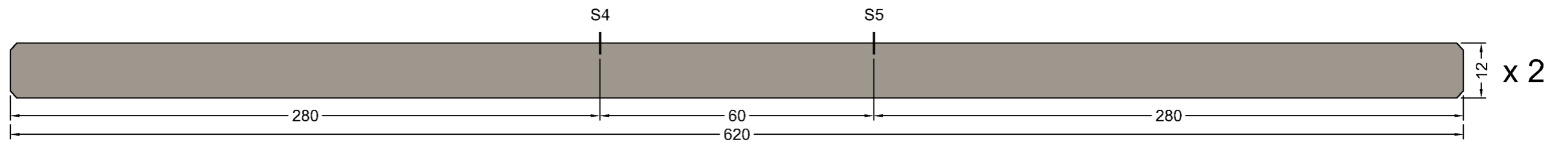
**Component 2**  
442 x 12 x 2mm



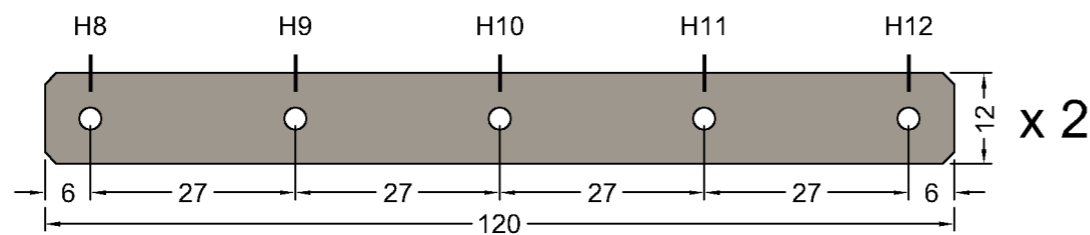
**Component 3**  
300 x 12 x 2mm



**Component 4**  
620 x 12 x 2mm



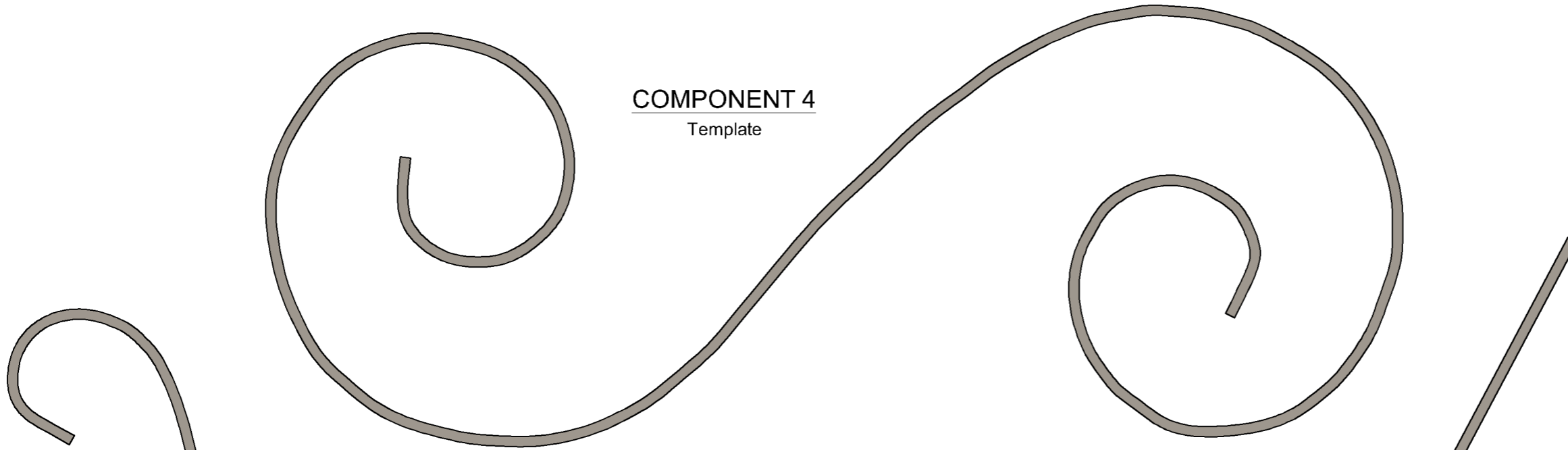
**Component 5**  
120 x 12 x 2mm



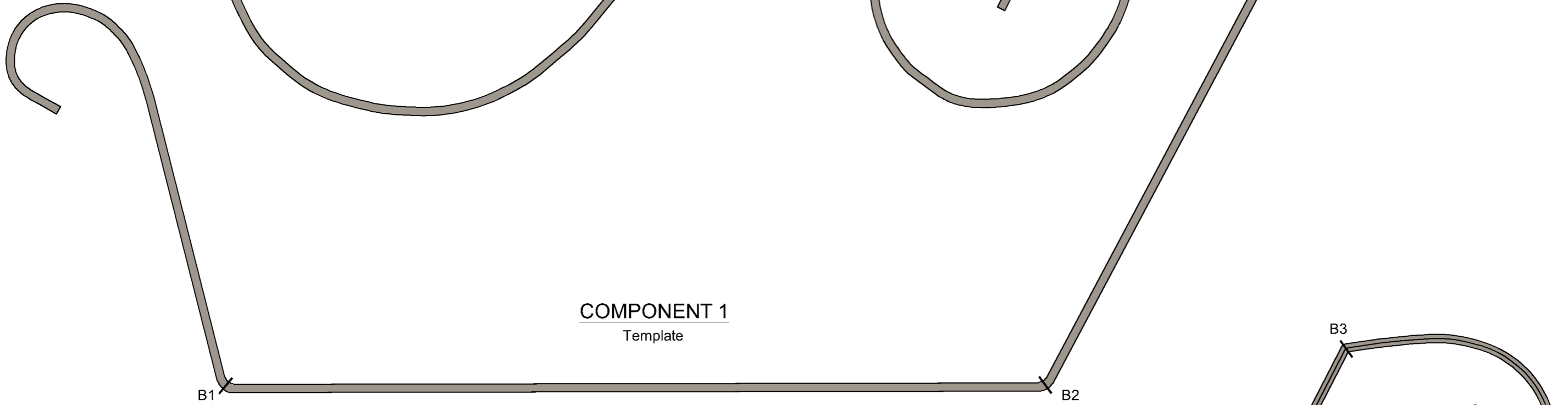
**List of Materials Required:**

- 6 x 914mm (3ft) Lengths of 12mm 2mm Steel Strip (Re-Order Ref: MC034)
- 9 x 6mm x 3mm Rivets (Re-Order Ref: MC050L)
- 5 x 8mm x 3mm Rivet (Re-Order Ref: MC051L)

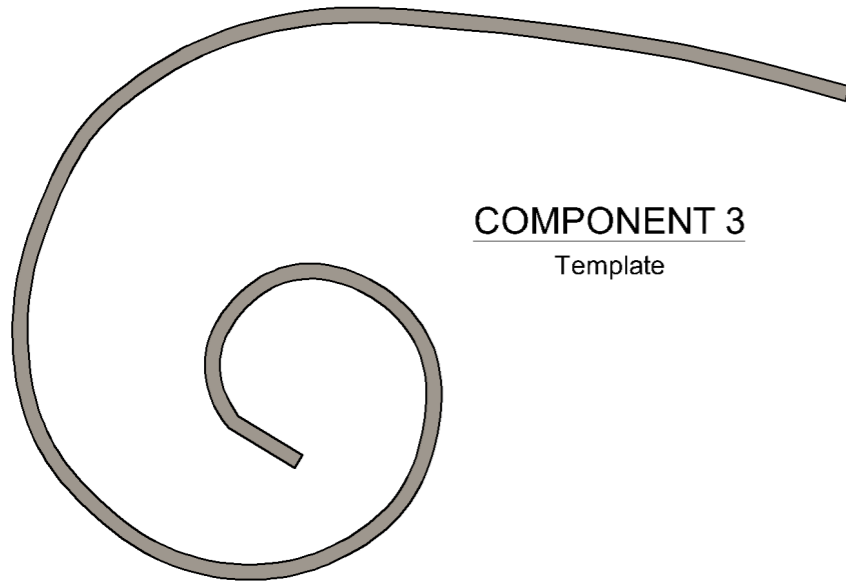
COMPONENT 4  
Template



COMPONENT 1  
Template



COMPONENT 3  
Template



COMPONENT 2  
Template

