

KIT BASHING WITH TOWNSTREET CASTINGS – STRUCTURES

Part 2 – Bridge Abutments

By David Wager

By spending time on some prototypical research, an acceptable design can be pulled together. This can be restricted to some extent by the range of components that are available when kit bashing. However, even though it may be 'freelance', photographs and details from reference books such as 'Bridges for Modellers' by L.V.Wood enable the design to be plausible and realistic.

The photographs below are for the left hand abutment (as viewed on the layout). Following on from that there will be more detail of the construction for the right hand abutment for which the steps were more readily recorded.

LEFT HAND ABUTMENT

A single archway and two different styles of wing wall



Note the pads for the bridge feet and detail inside the arch

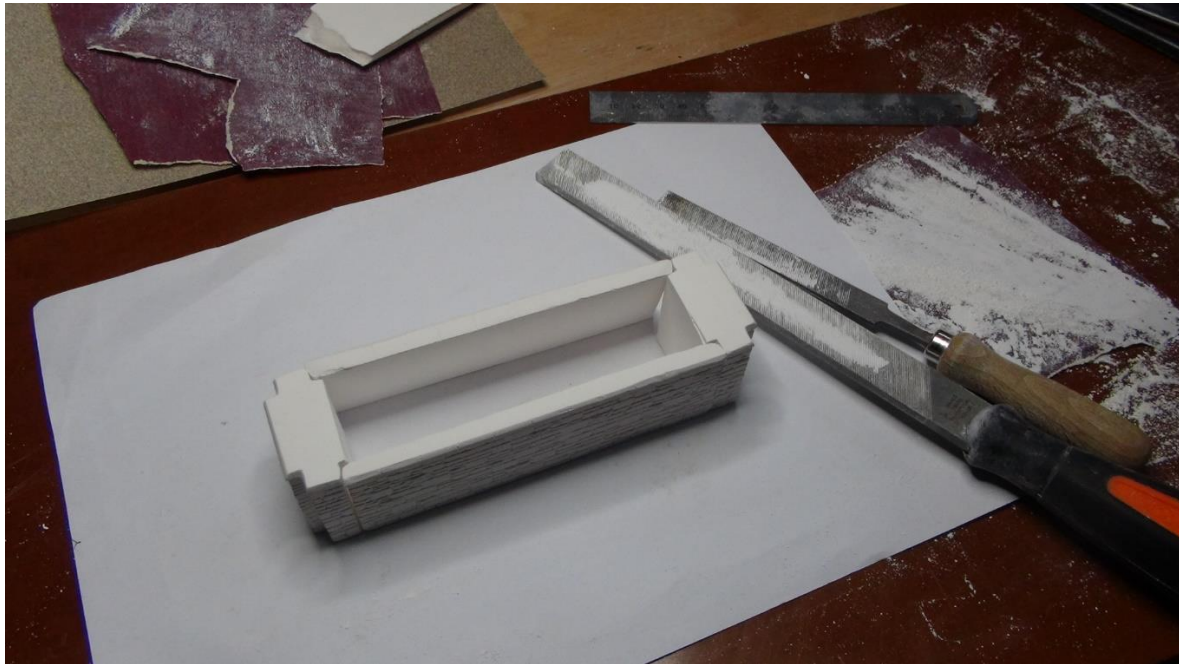


RIGHT HAND ABUTMENT

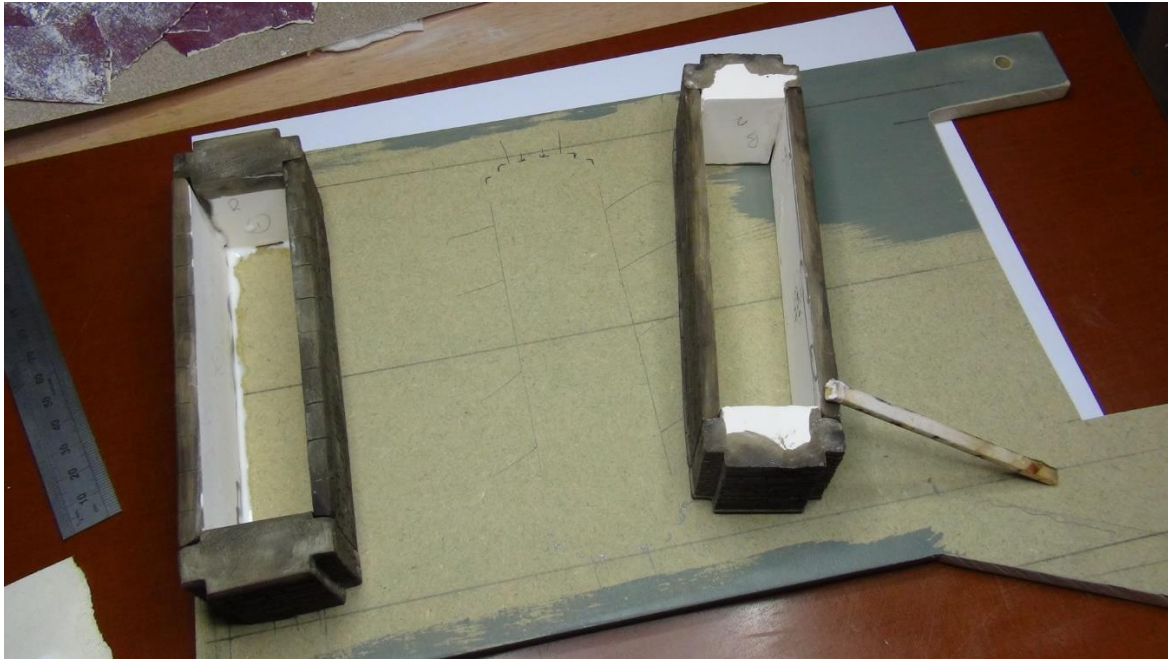
A double archway with two different styles of wing wall

Starting with the platforms for the bridge feet and the pier between the two arches

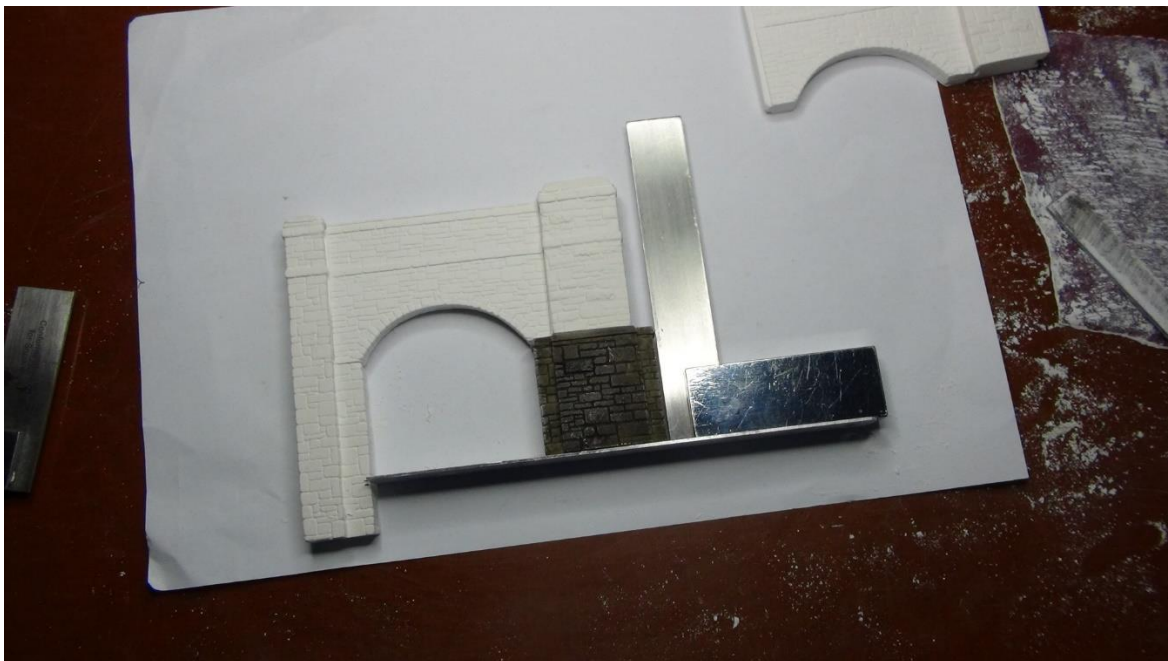
These are standard parts for which the joints are fettled to enable: a) best fit of the joints, b) sub-assembly to sit level, c) faces to be square to each other. The PVA is applied to the edges (after painting), keeping it well away from the final visible surfaces. When assembled further PVA can be added to the inside of the joint.



The platforms are glued to the MDF base



The remaining components are prepared. These consist of parts from the viaduct and tunnel portal component kits



And painted



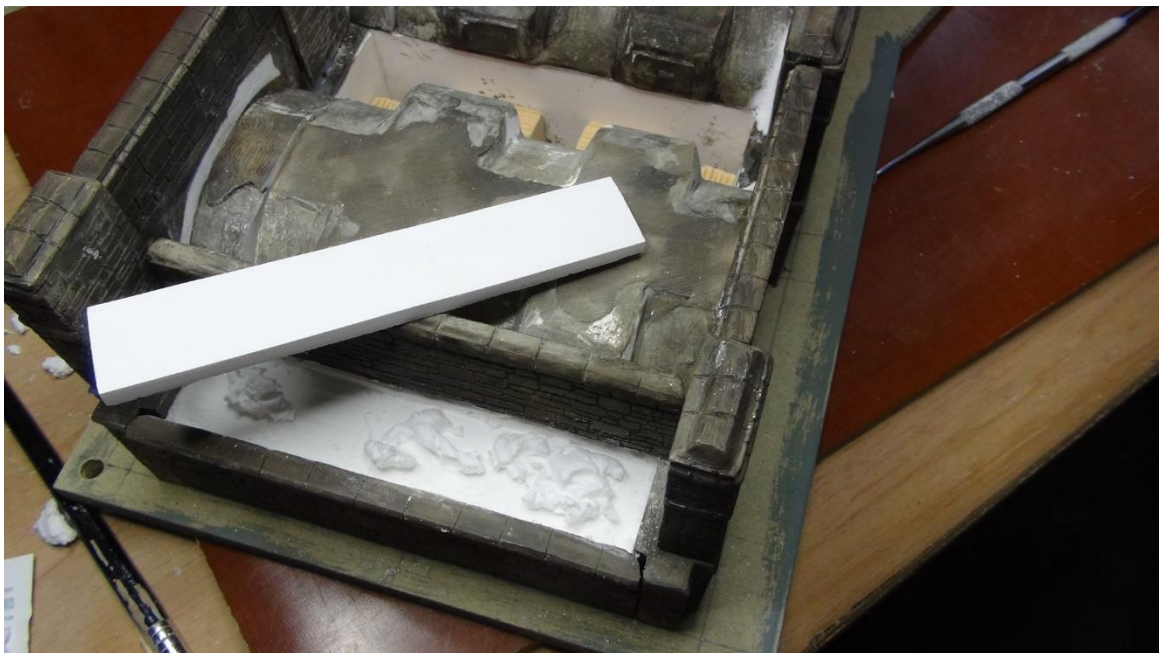
As well as gluing components to the MDF base, support wood blocks are glued in. This will give additional rigidity when handling the assemblies.



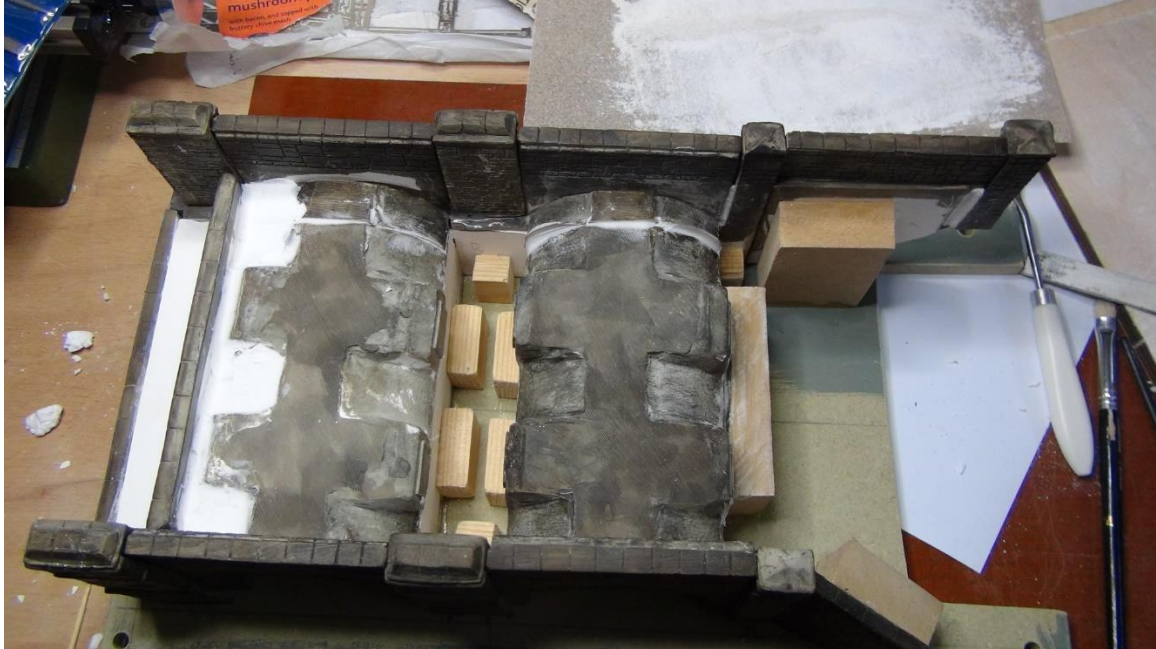
Second archway installed. Some of the pilasters need to be thinned (using a razor saw and file), and additional scribing of stonework done as their original application was for tunnel portals which do not normally have inside surfaces visible.



For the abutment deck (where the bridge feet sit), a piece of stonecast (offcut) is smoothed and inserted into the top of the platform. The surface is scribed to represent dressed stone slabs.



The process continues with support blocks and filling of voids using the Polyfilla 'One Fill'. The joining and filling of the curved archways is shown below. A good deal of material was removed from the back of the arches to enable clearance for the track deck. Matching of the arch radii is not easy but the best fit of the archway internally reduces the amount of stonecast fill and scribing that will be subsequently needed.



Filling and scribing complete prior to painting of the joints and bridge abutment deck



Supporting of sloping parts (wing wall).

As the wood block support has a vertical surface and the casting is sloping, both are first coated with PVA, and then Polyfilla is put between the surfaces. Excess filler is squeezed out and removed as the parts are aligned.



The track deck is designed so that no loading is placed directly onto the stonecast parts. There are intermediate supports within the assemblies so that the decks remain clear when cantilevered towards the bridge abutment decks.

