

PN146/7 N Scale RAILWAY BRIDGE

READ THROUGH ALL THE INSTRUCTIONS BEFORE YOU START.

To construct this kit you will need the following:

1. A Modellers knife.
2. A steel ruler.
3. Glue - UHU Clear Adhesive is our favourite.
4. Ultra Fine Tip Glue Applicator, *see right*.
5. A cutting surface - a sheet of card or a cutting mat.
6. Fine point tweezers to hold the smaller components.
7. Water colour paints and a very fine brush, for painting the edges and corners.

GETTING STARTED

1 EXTRACTING COMPONENTS FROM SHEETS.

To stop the components from falling off the sheets, they are held secure with scorelines. These are cuts that only go about 75% of the way through the card.

To release them simply run the point of your knife along the scorelines and they will come seamlessly away.

These scorelines are indicated with blue arrows: →

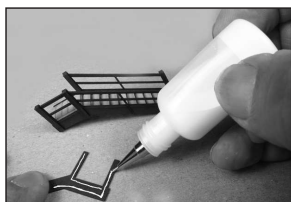
WARNING, Cut with care using a knife that is not too sharp, this will reduce the risk of the blade running out of the score and cutting the kit components.

ONLY CUT THE COMPONENTS OFF THE BACKING SHEETS AS YOU NEED THEM.

Have a separate area away from your working area where you can cut out and store the kit sheets.

2 GLUES & APPLICATORS

The **METCALFE Ultra Fine Tip Glue Bottles** are essential for gluing the smaller components in this kit.



Tiny strips or spots of glue can be accurately laid down with precision.



Always replace the pin after use and store the bottles upside down to keep the glue moist.

UHU All Purpose Adhesive Glue

Is available in standard and solvent free. Both types are fine for use in our glue bottles, even though the instructions on the back of the packs warn against solvent based glues, we have tested the UHU solvent based glue and it works fine. The solvent free glue doesn't string as much, but can be a little harder to clean off if it drips onto unwanted areas.

Speed Bond by Deluxe Materials

This is an excellent PVA. based glue that dries quickly, but also allows time to get parts into position. It has the added advantage that it dries clear leaving little evidence if it oozes out of joints etc. Used in our fine glue applicator bottles a 112g bottle lasts for ages. www.deluxematerials.com

INSTRUCTION SHEET 1

CHECK LIST

This kit pack should contain the following:

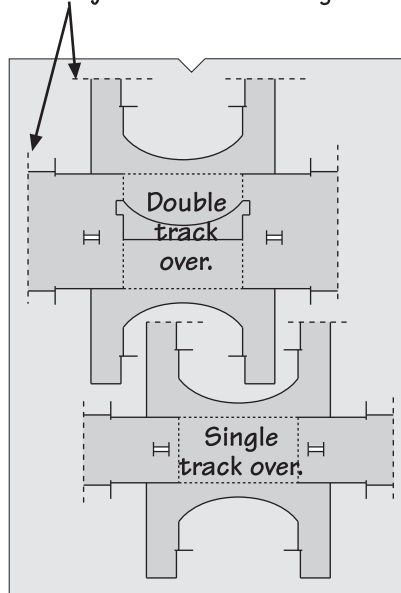
- 1 x SHEET A - Bridge outer walls.
- 1 x SHEET B - Smaller side walls and tarmac road surface.
- 1 x SHEET C - Brick arches and inner walls.
- 4 x PLAIN GREY CARDS - Strengthening parts.
- 1 x Small Laser cut grey card with wall top strips.
- 2 x INSTRUCTION SHEETS.

GREY CARD STRENGTHENERS

These sheets contains all the un-printed components that fit inside the bridge to hold it together and make it stronger.

There are four of these sheets in this kit.

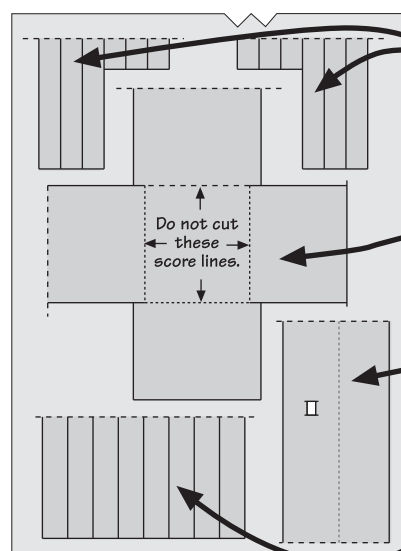
Note: The dotted lines shown here represent the scores you need to cut along to release components.



GREY SHEET 1.

This sheet contains the inner formers for the main bridge.

You only need one of these depending on whether you want your bridge double track or single over the top.



GREY SHEET 2

Abutment inner spacers 3 long and 3 short per set.

Wing wall former for double track bridge.

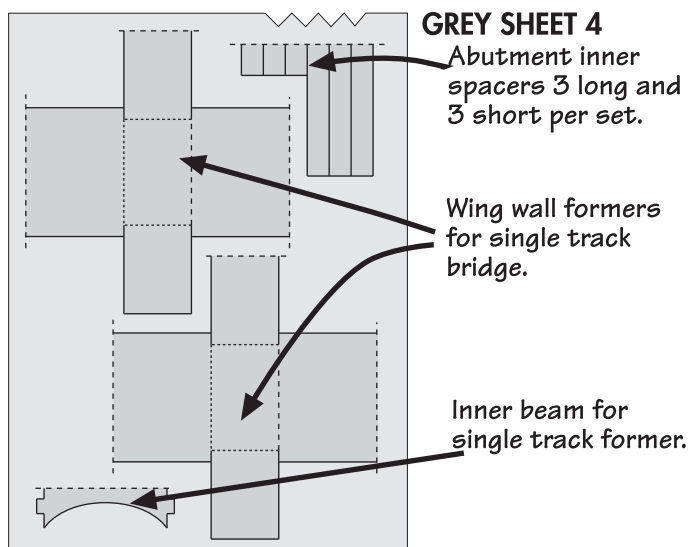
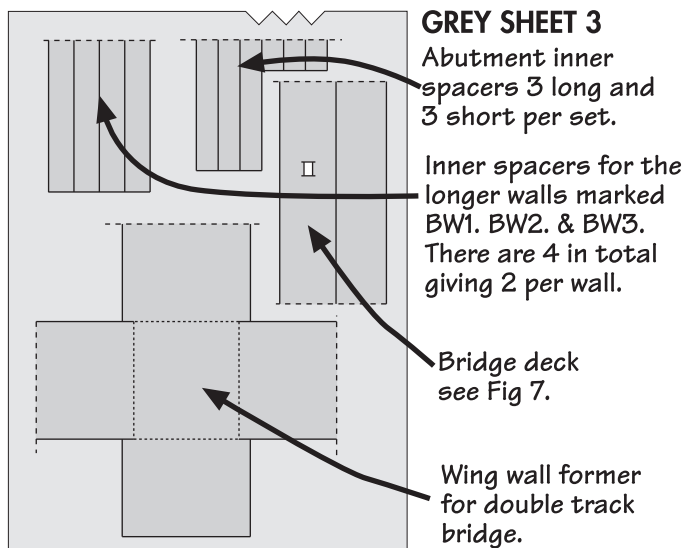
Bridge deck.

Inner spacers for the shorter walls marked W1, W2, & W3. There are 8 in total giving 2 per wall.

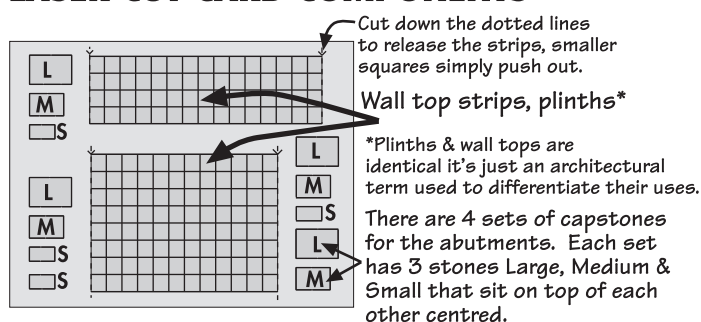
NOTE:

The grey sheets have notches cut in the top edge for identification.

One notch - sheet 1. Two notches - sheet 2. and so on.



LASER CUT CARD COMPONENTS



PAINTING CORNERS & EDGES.

Because the kit is printed on white card, there are one or two corners and edges that just need touching up with a little paint to cover the exposed backing card.

A set of very simple child's water colour paints is all you need and a fine paint brush.

Mix your colour with lots and lots of water, apx. 1 part paint to 8 parts water, maybe more. TEST ON WASTE CARD FIRST UNTIL YOU HAVE THE CORRECT SHADE AND COLOUR.

Fold the edges of the card back fully and gently run the point of your brush along the exposed white card. Rub the paint into the corner with tissue and wipe off any paint that has run onto the printed card. You will be shown which parts to paint as you build.

Fig.1. BRIDGE INNER FORMER

Whether you are building a single track or double track over bridge (The under part of both styles is double track) They both assemble in exactly the same way, so we are showing the double track version.

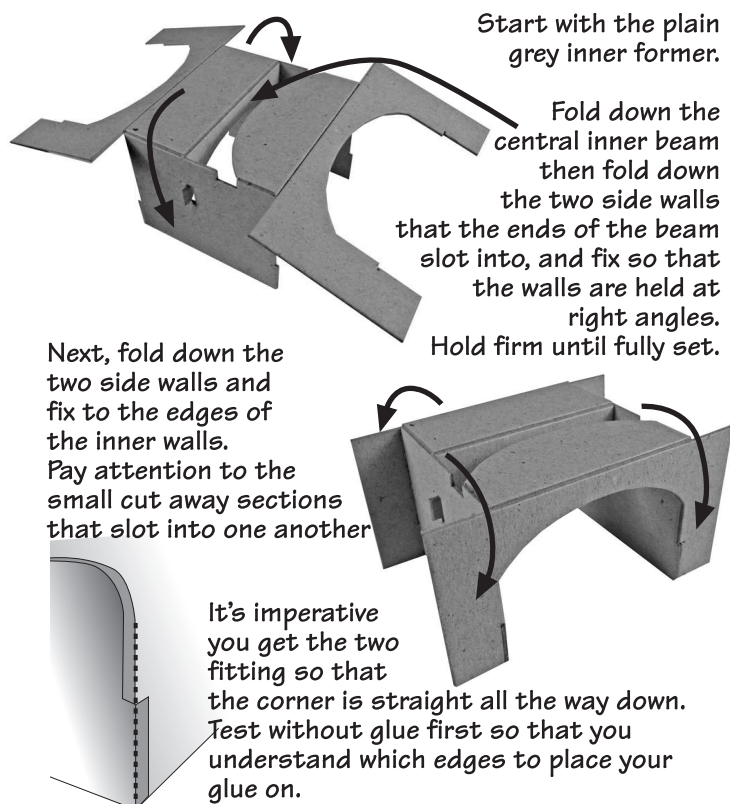
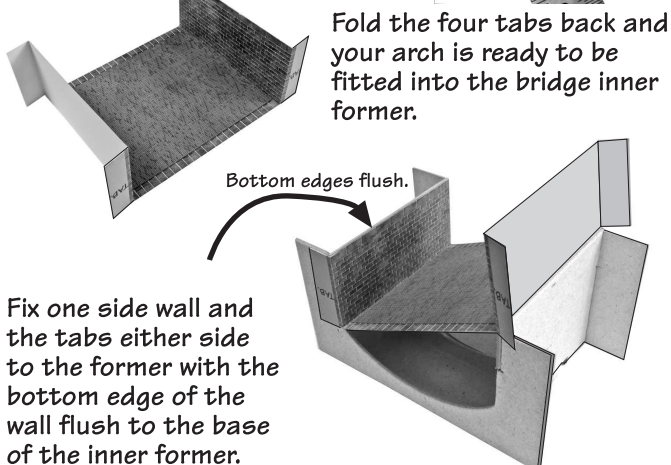
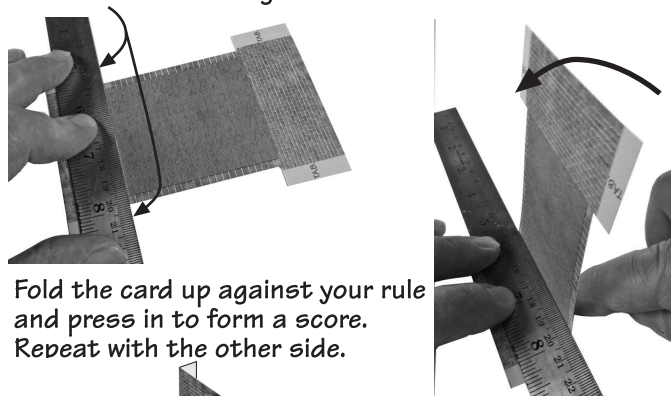


Fig.2. FITTING THE ARCH.

Lay the arch on a flat surface, and place a ruler across the top of the inner wall so that its edge lines up EXACTLY with the edges of the tabs on either side.



PN146/7 N Scale RAILWAY BRIDGE INSTRUCTION SHEET 2

Fig.2. Continued.

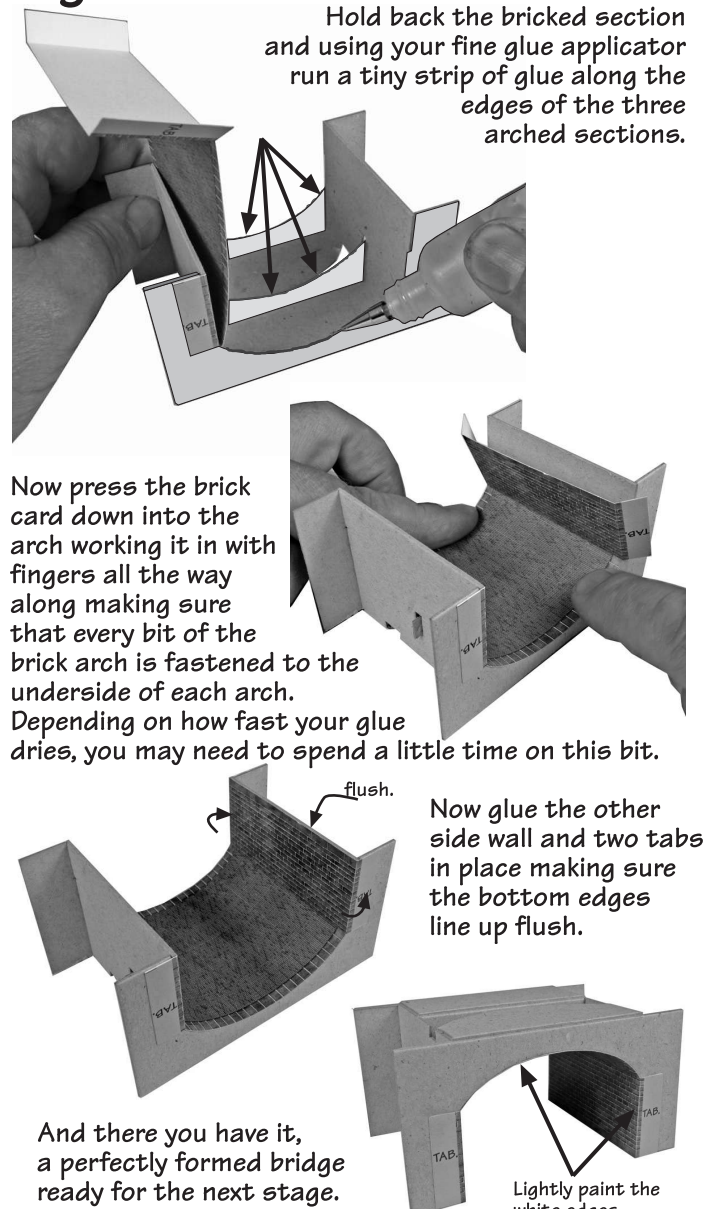


Fig.3. OUTER BRIDGE WALLS.

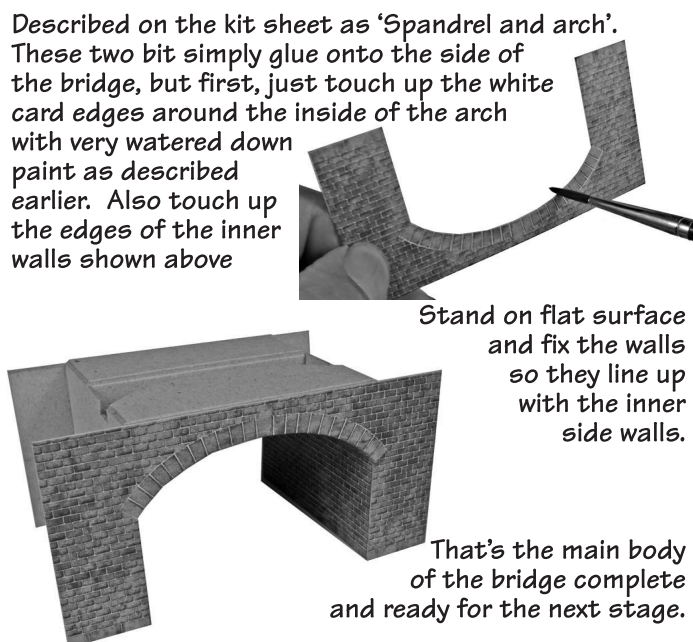


Fig.4. ABUTMENTS.

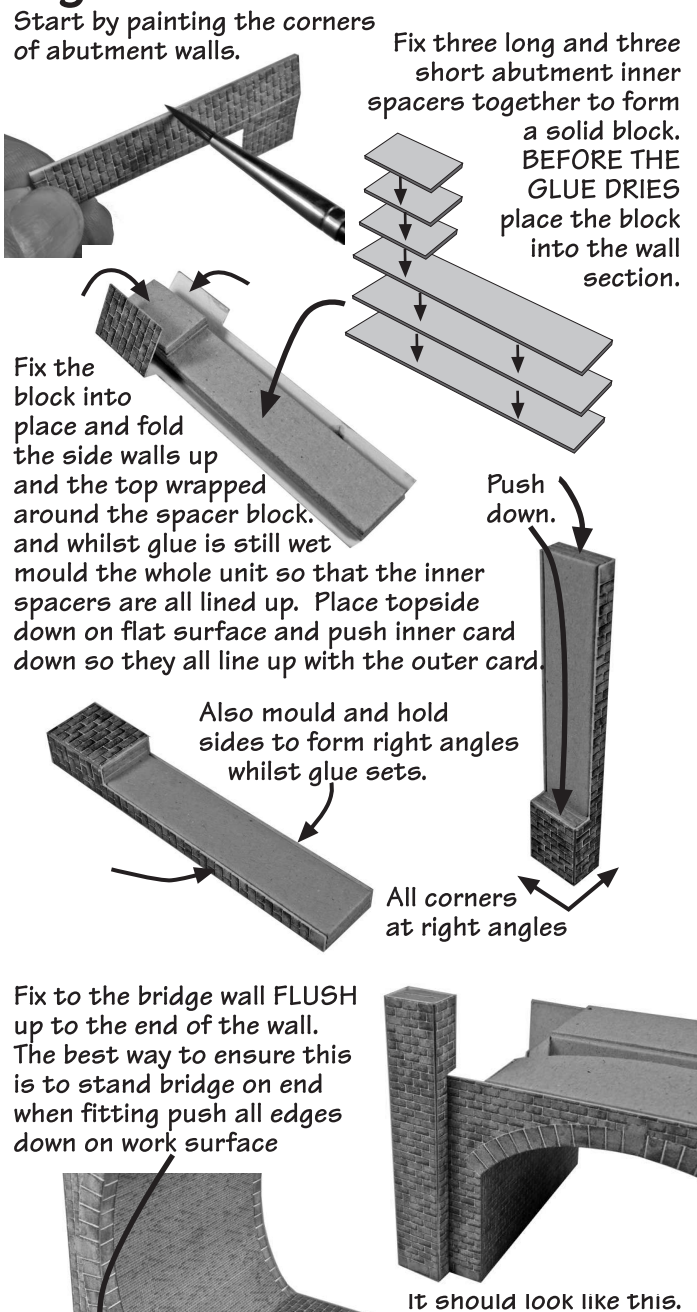


Fig.5. BRIDGE TOP WALL.

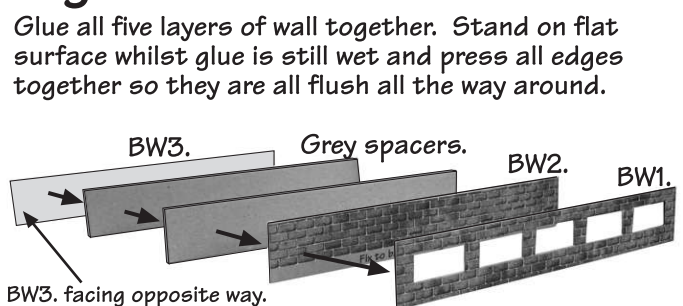


Fig.5. Continued.

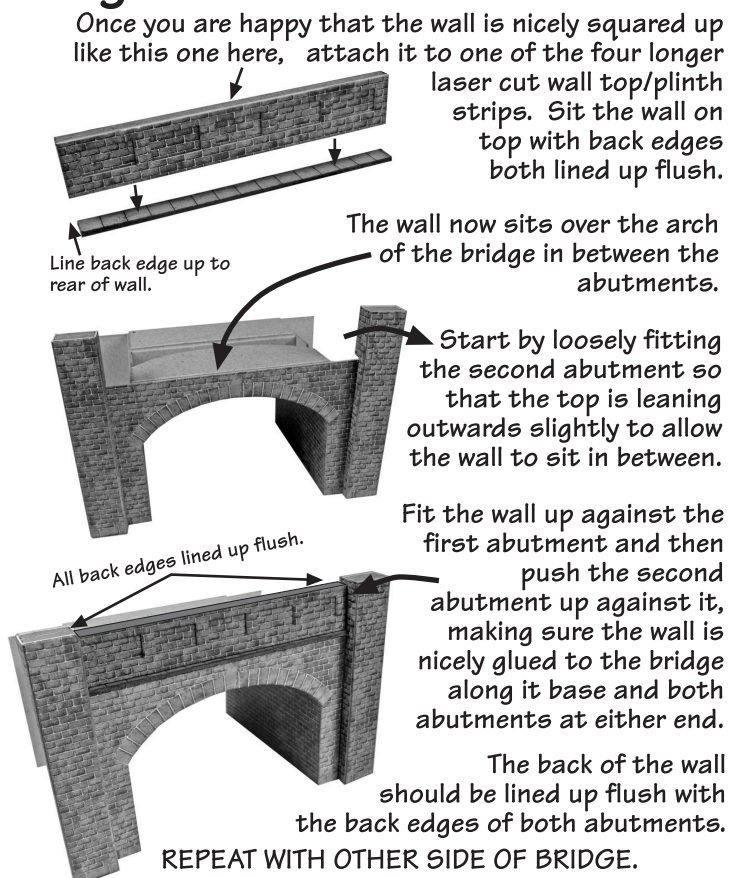
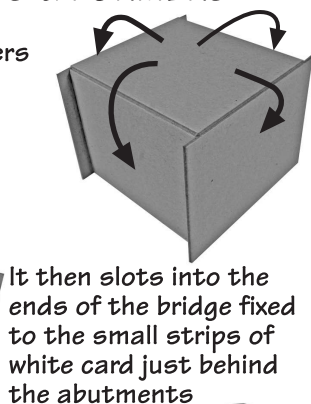
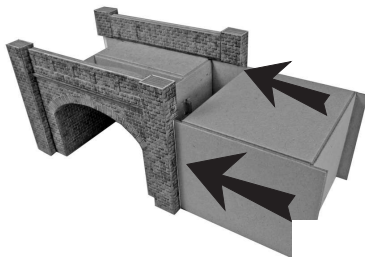


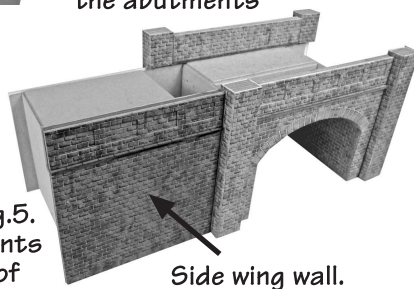
Fig.6. WING WALLS & FORMERS

The two wing wall inner formers have sides that fold down to form a box structure. Glue together and hold firm until the sides are fast.



Fit the side wing wall, then assemble the four shorter upper walls in exactly the same way as you did with the bridge upper walls in Fig.5. but using wall components W1. W2. & W3. and two of the shorter spacers on gray sheet 2.

BEFORE FITTING TOP WALLS see Fig.7. The decking described there can act as a good template to keep the walls aligned when fitting.



Side wing wall.

The rest of the bridge assembles in the same way, but you will need to make adjustments depending on how you are fitting it into your layout. For instance if you are using our PN148/9 tapered walls kit to make a ramp up to the bridge, as shown to your right, you will need to make various adjustments.

Fig.7. THE DECK

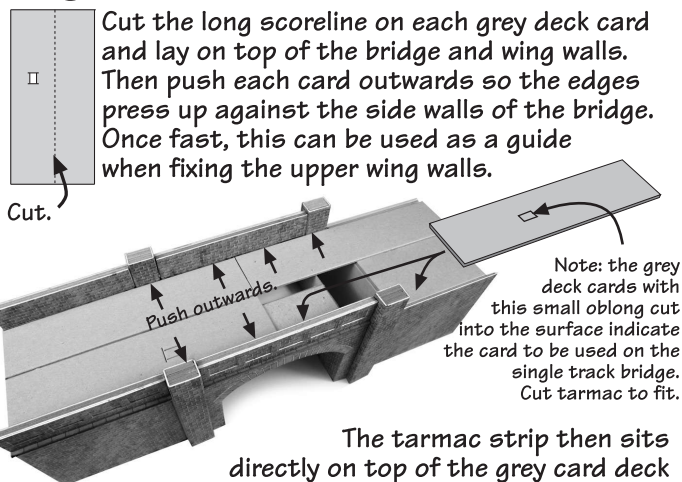
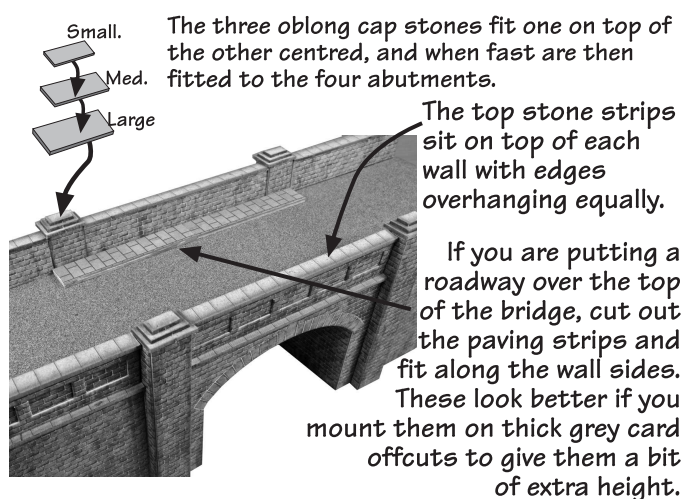


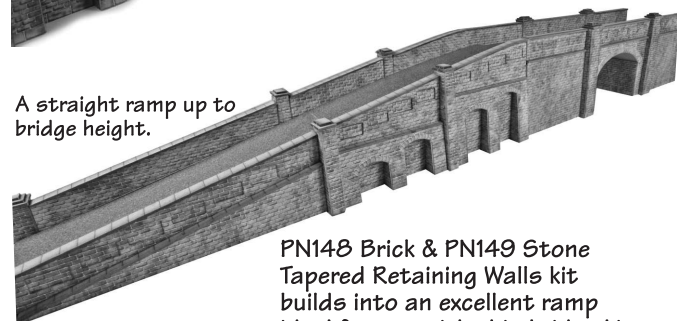
Fig.8. THE CAPPING STONES



This bridge kit is designed to stand with our retaining walls kits shown below, helping you build a whole variety of structures at different levels.

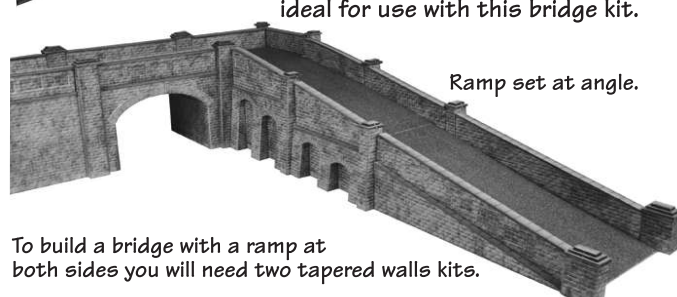


Used here with retaining walls kit, PN144 Stone & PN145 Brick.



A straight ramp up to bridge height.

PN148 Brick & PN149 Stone Tapered Retaining Walls kit builds into an excellent ramp ideal for use with this bridge kit.



Ramp set at angle.

To build a bridge with a ramp at both sides you will need two tapered walls kits.