

PO244/5 00/HO RETAINING WALLS

INSTRUCTION SHEET

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 or Speed Bond, *see right*.
4. Ultra Fine Tip Glue Applicator, *see below*.
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.

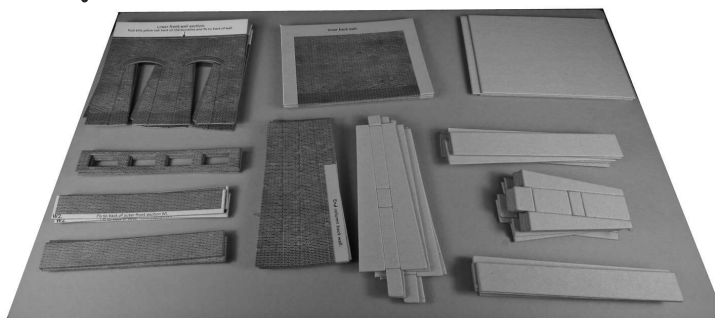
These scorelines are indicated with blue arrows: →

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.

2 MAKE YOUR 'BUILDERS YARD'.

This is an area kept away from your working surface, where you store ALL components extracted from the base sheets until needed.

Use a piece of thick card or a tray to make your builders yard then cut out all the components and place them in neat piles ready for use. Laser bits are best left in base sheet till needed.



Your **WORKING** area should have a clean flat surface, and should only contain the kit parts you are actually working on.

EVERYTHING ELSE SHOULD BE KEPT NEATLY ARRANGED IN THE BUILDERS YARD, UNTIL NEEDED.

PLEASE NOTE: Don't throw anything away. Keep all offcuts and waste card in a box until the kit is finished, just in case you can't find anything. The chances are that it will be there.

The **METCALFE Ultra Fine Tip Glue Bottles** are useful 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.

CHECK LIST

This kit pack should contain the following:

- 2 x SHEET A - Main lower walls and piers.
- 2 x LARGE PLAIN GREY CARDS - Strengthening parts.
- 1 x SMALL PLAIN GREY CARD - Wall spacer strips
- 1 x Small Laser cut grey card with wall top strips.
- 1 x INSTRUCTION SHEETS.

UHU All Purpose Adhesive Glue

Is available in standard and solvent free. Both types are fine for use in our glue bottles, contrary to the warning on the back of the pack.

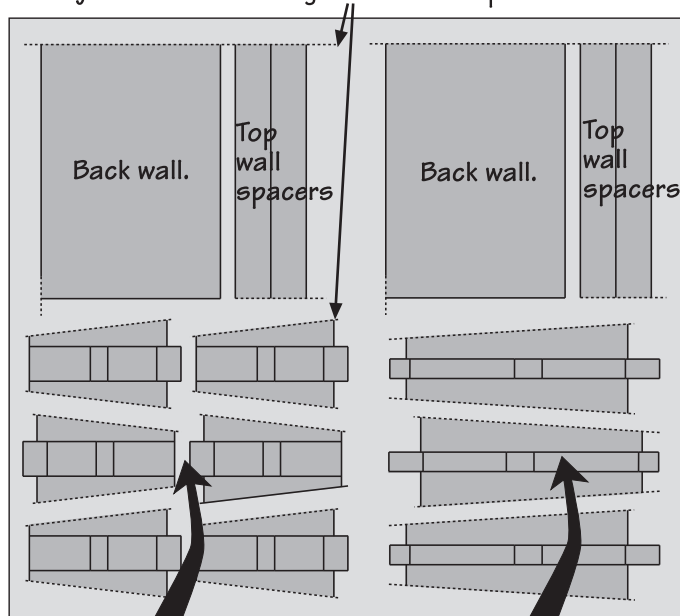
Speed Bond by Deluxe Materials

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

LARGE GREY CARD STRENGTHENERS

These sheets contains all the un-printed components that fit inside the walls to make them thicker and stronger. There are two of these sheets in this kit.

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

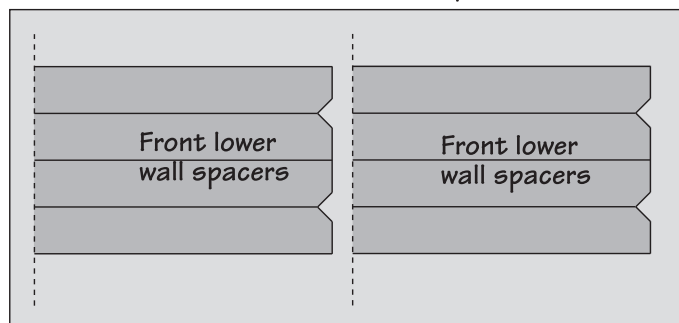


Inner frames for lower front walls.
Six per sheet.

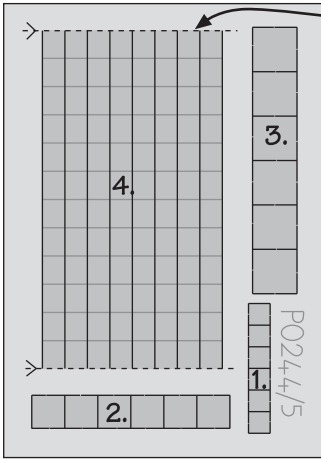
Inner frames for end columns.
Three per sheet.

SMALL GREY CARD STRENGTHENER

This card contains the front lower wall spacers. *see Fig.1.*



LASER CUT CARD COMPONENTS



Cut down the dotted lines to release the strips, smaller squares simply push out.

This sheet contains the wall top and plinth* strips.

The squares numbered 1, 2 & 3. are the capping stones for the five columns.

The smallest 1. fits centred on to no. 2. which then sits onto the largest size 3. These are perhaps best left in the sheet until needed.

*Plinths & wall tops are identical its just an architectural term used to differentiate their uses.

PAINTING CORNERS & EDGES.

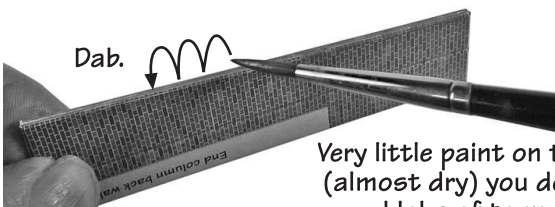
Before you start any construction, you may want to paint over the exposed corners where the plain card shows through. This is not a hard job and only takes a few moments, and is much easier than trying to paint the edges after the kit has been built.

NOTE: the stone structures PO245, 247 and 249 should not need edges painting as the base card is of a very similar colour. Painting will make it look worse.

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 5 parts water, maybe more. TEST ON WASTE CARD FIRST UNTIL YOU HAVE THE CORRECT SHADE AND COLOUR, AND HAVE PERFECTED THE TECHNIQUE FOR APPLYING TO BEST EFFECT.

Fold the edges of the card back fully and gently dab your brush along the exposed card to give a dappled effect.



Very little paint on the brush (almost dry) you don't want blobs of too much paint.

Remember, you only need to just slightly tint the card with a little colour, DON'T paint a thick solid line down the edges, you will only make it look worse.

Fig.1. LOWER FRONT WALL SECTION.

This is the base section of the wall. There are four of them in this kit. Each builds up in the same way.

Place face down on work surface. Fold over the top yellow tab and fix to the back of the wall.

Fold the four recessed side walls back at right angles.

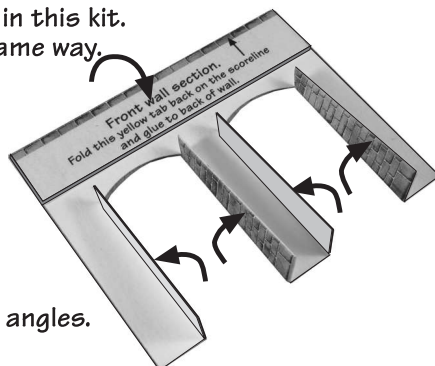
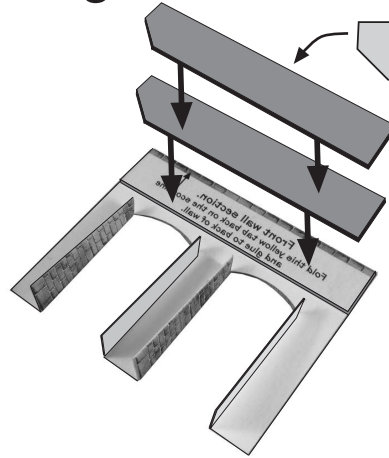


Fig.1. Continued.



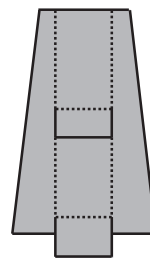
Use the spacers with the cut away corners.

Next stick two of the plain grey 'Front Lower Wall Spacers' directly on top of the yellow tab.

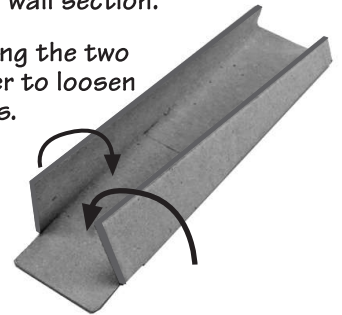
Make sure the top and side edges are flush with yellow tab, this is very important.

Fig.2. INNER FRAMES for front wall.

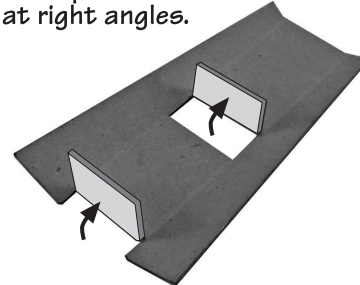
There are 12 inner grey frames shaped like this in the kit, 3 for each wall section.



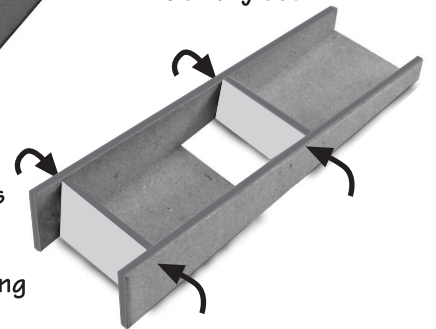
Start by folding the two sides fully over to loosen the score lines.



Then open out flat and fold up the two small tabs at right angles.



Finally, fold back up the two sides and fix them to the tabs. Hold tight until glue has fully set.

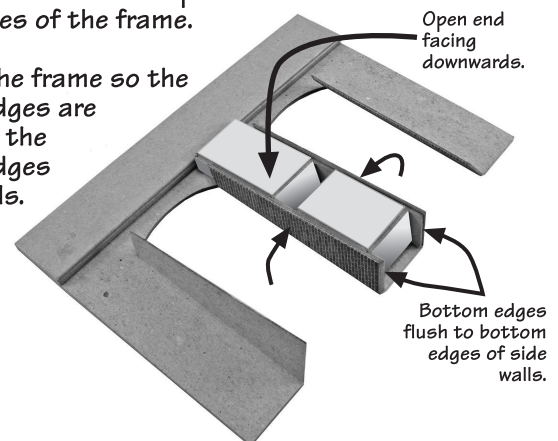


Repeat with the other eleven frames now whilst you are in the mood, it will save a lot of messing about later.

Fig.3. FIX FRAMES TO WALLS.

Fit the first frame, open end down, in between the two centre walls. Fold them up and fix them to the sides of the frame.

Position the frame so the bottom edges are flush with the bottom edges of the walls.



Open end facing downwards.

Bottom edges flush to bottom edges of side walls.

Fig.3. Continued.

Fit the other two frames to either side, making sure they are pushed up against the inner side walls so the outer edges are flush with the edges of the front wall.

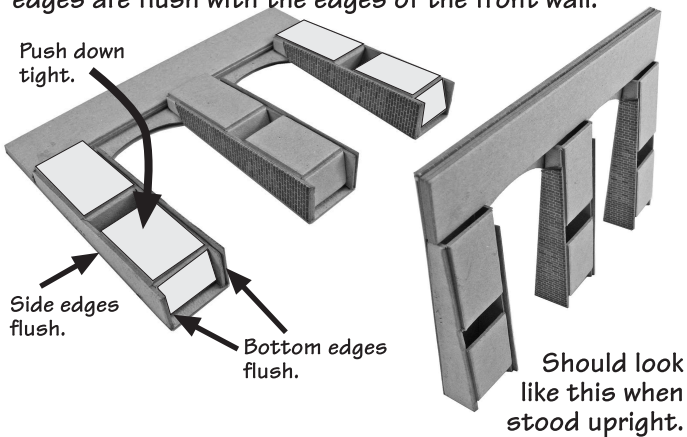
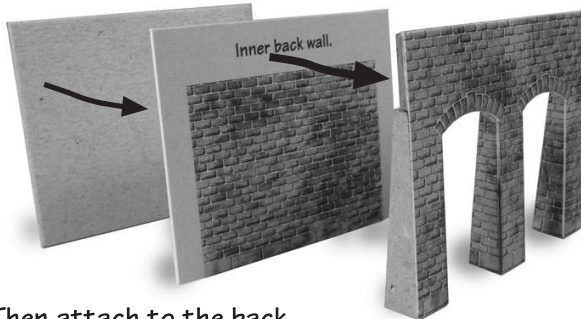


Fig.4. FIX BACK WALL TO FRONT WALL.

Fix one plain grey back wall behind the printed inner back wall, keeping all four edges absolutely flush.



Then attach to the back of the recessed front wall section.

Keep outer side edges flush

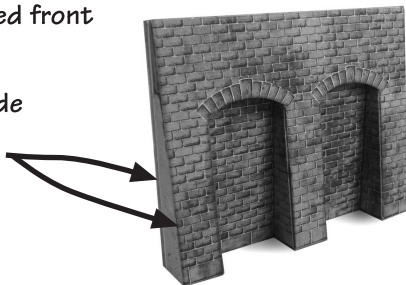
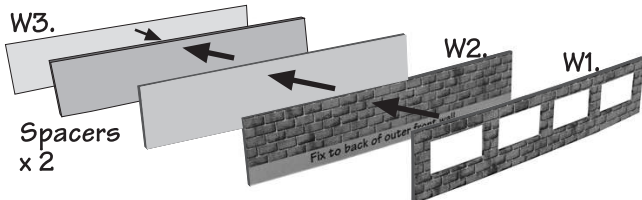


Fig.5. TOP WALL SECTIONS.

The top wall is made up by laminating 5 layers of card as shown here, with W1. at the front and W3. at the back.



Make sure all edges line up flush. Stand on flat surface whilst glue is still wet and push down from the top and inwards from both sides to align all layers of card.

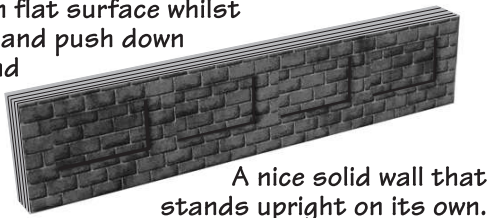
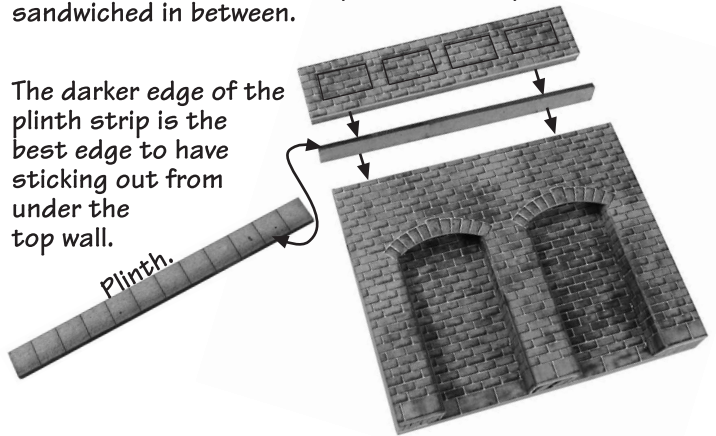
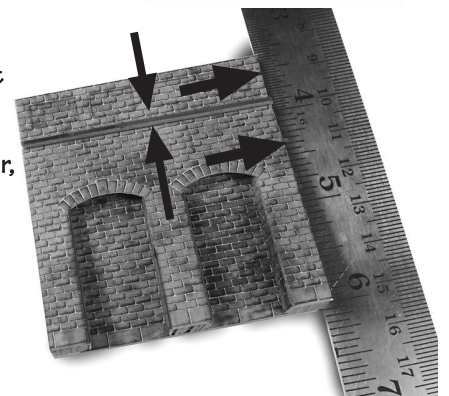


Fig.6. ATTACH TOP WALL TO BASE.

Lay flat on work surface and glue the top wall down on to the base wall with a strip of laser cut plinth stones sandwiched in between.



Keep laid down on flat surface and as you press the top and bottom walls together, also butt one side up against a straight edge so that all side edges stay lined up.

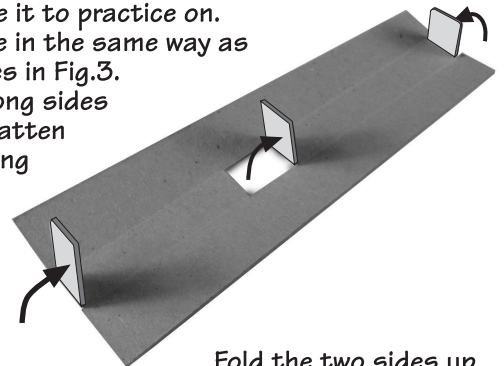


Hold firmly for a while to let the glue set, and then leave untouched for a good few minutes to allow the glue to harden fully.

You now have a wall that should look like this.

Fig.7. THE END COLUMNS.

Lets start with the inner frames. You will note that there are six grey frames. You only need five, so throw one away or use it to practice on. These assemble in the same way as the smaller ones in Fig.3. Bend the two long sides over and then fatten out before folding up the three tiny tabs as shown here.



Fold the two sides up and fix to the tabs to form a box structure.

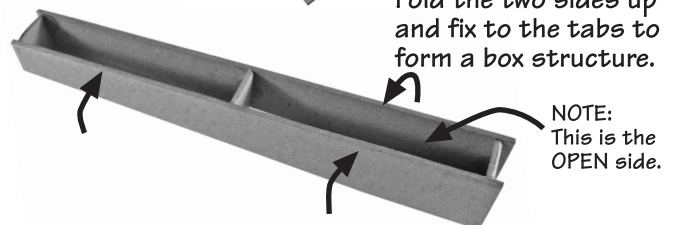


Fig.8. FIX INNER FRAME INTO COLUMN.

Fit the frame to the column with its open side facing down against the front wall of the column. So when you fold the walls around, the back wall is fixed to the 'back side' of the frame

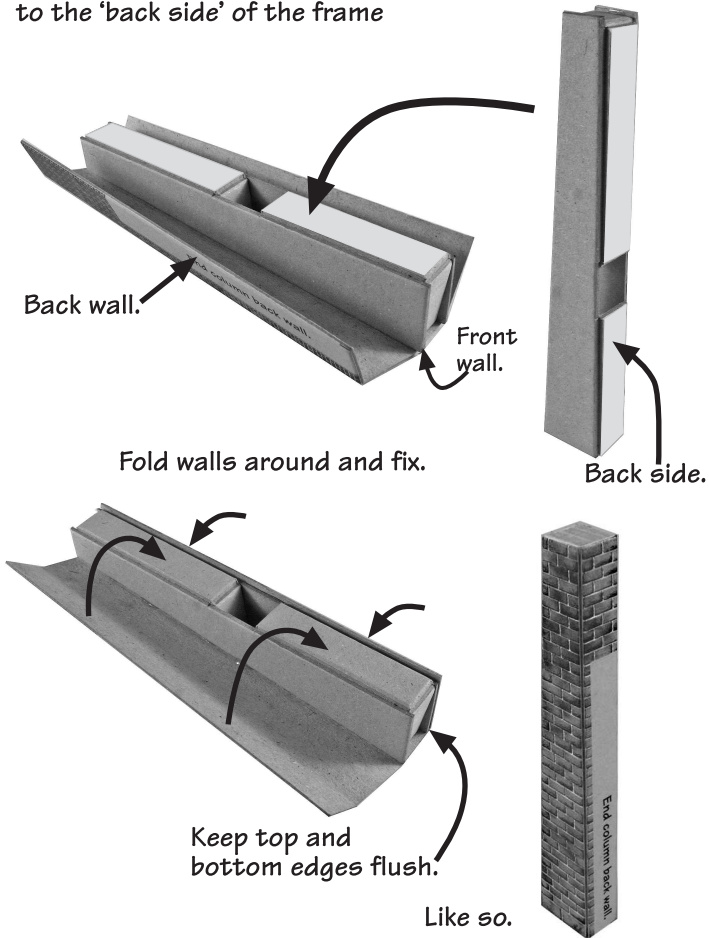


Fig.9. FIX END COLUMN TO WALL.

With the wall laid flat on its back, fit the column, also laid flat on its back, up against the side of the wall. As you press it against the side of the wall, also push down against a flat edge so that the bottom edges align properly.

Leave to dry before moving it, and you should end up with this.

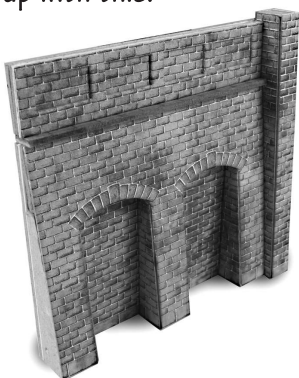


Fig.10. LASER CUT WALL TOPS.

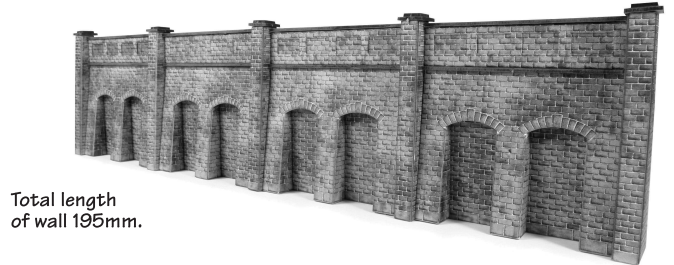
Attach the small laser cut top stone (1.) centred on top of the medium stone (2.) then on top of the large stone (3.).

When dry fix to the top of the column overhanging equally on all edges.

To finish off, attach another laser cut strip of capping stones to the wall top. Overhanging equally front and back edges.

You have now completed one wall section. There are three more like this to make plus one extra column.

Once the walls are all built, they can be stood together to form a long wall like this.



Designed to stand with our Bridge kit PO246 Brick or PO247 Stone.



Tapered Retaining Walls
PO248 Brick - PO249 Stone
(2 per kit + tarmac for ramp)

