

PO313 00 Scale

Double Track Engine Shed

CHECK LIST

This kit should contain the following:

- 1 x SHEET A Gable walls.
- 2 x SHEET B Side wall components.
- 1 x SHEET C Shed Roof.
- 1 x SHEET D Small components.
- 1 x SHEET L1. Laser cut trusses.
- 2 x GLAZING sheets A & B.
- 2 x GREY SHEET 1.
- 1 x GREY SHEET 2. See description page 2.
- 1 x INSTRUCTION BOOKLET.

READ THROUGH ALL THE INSTRUCTIONS BEFORE YOU START.

This is a complex kit that requires particular attention to detail, so proceed with care!

To construct this kit you will need the following:

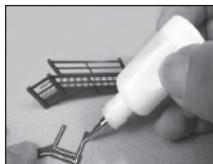
- 1. A modellers knife.
- 2. A pair of sharp scissors.
- 3. A steel ruler.
- 4. Glue - See glues.
- 5. Ultra Fine Tip Glue Applicator, see below.
- 6. A cutting surface - a sheet of card or cutting mat will do.
- 7. Fine point tweezers.
- 8. Water colour paints and a fine brush.

METCALFE Ultra Fine Glue Tip Bottles.

These bottles are essential for gluing the smaller components in this kit.



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



INSTRUCTIONS

GLUES

UHU Solvent Free All Purpose Adhesive.
BOSTIK All Purpose Clear Adhesive.
Also SPEEDBOND by Deluxe Materials.
see www.deluxematerials.com
All work in our Ultra Fine Tip Applicators.

GETTING STARTED

1 EXTRACTING COMPONENTS FROM THE BASE SHEETS.

To stop the components from falling off the printed sheet, they are held secure with score lines (marked with blue arrows) that cut about 75% of the way through the card. To release them run the point of your knife along these scores and they will come seamlessly away.

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

Laser cut components have tiny 'pips' holding them on the base sheet.

Carefully push at those points and they will snap out easily.

2 MAKE YOUR 'BUILDERS YARD'.

As you extract the components from the base sheets they need to be kept away from your working area on a thick piece of card or a tray until needed.

Example of builders yard.



Start by extracting all the components from printed sheets **A, B & C.** and the three thick grey strengthener sheets. Cut out the glazing **BUT LEAVE THE FOUR ROOF WINDOWS.** Leave sheet **D.** and laser sheet **L1** as well.

3 Painting Corners and Edges.

The white card that shows on the corners and edges is best painted before you build the kit. It is well worth the small amount of work needed to do this, and makes a world of difference to the finished look of your model.

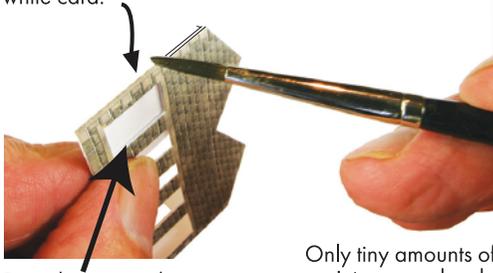
All you need is a simple set of water colour paints and a fine brush. We use these Rowney paints and the lid is used for mixing the colours.

Mix your colour with lots and lots of water, approx. 1 part paint to 5 parts water or more.

TEST ON WASTE CARD FIRST UNTIL YOU HAVE THE CORRECT SHADE & COLOUR.



Fold the edges of the card back fully and gently run the end of your brush along the exposed white card.



Paint the outer edges too, and the inner edges of window openings.

Only tiny amounts of paint on your brush. It's better to have to go over it a few times than to flood it with paint.

To match brick, mix a tiny bit of warm red with smaller amount of brown and then lots and lots of water. For the edges of the roof sections and the shed roof chimneys just mix black paint with lots of water.

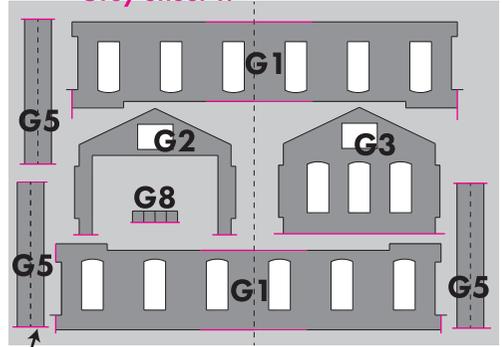
Wipe away any paint that has run onto the printed surface before it dries.

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.

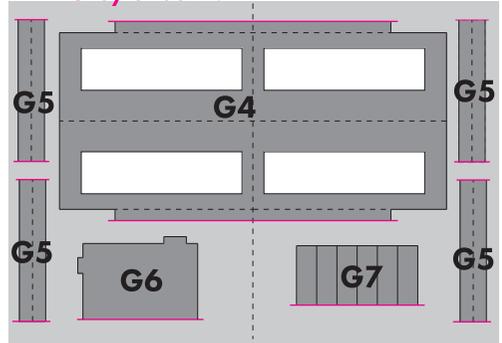
4 Grey Card Strengtheners.

Grey Sheet 1.



Red lines indicate score rules you need to cut to release components from base sheet. Dotted lines are fold lines - Don't cut.

Grey Sheet 2.

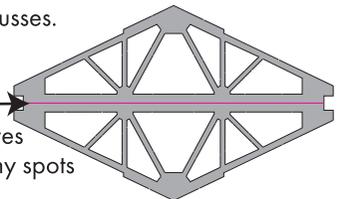


- Key:
- G1. Side wall spacer x 4.
 - G2. Door gable inner spacer x 2.
 - G3. Rear gable inner spacer x 2.
 - G4. Inner roof strengtheners.
 - G5. Centre roof vent spacers x 10.
 - G6. Workshop base.
 - G7. Chimney stack spacers x 6.
 - G8. Roof chimney bases x 8.

5 Laser cut sheet L1.

There are five trusses. Each one folds in half on this scoreline.

Fix the two halves together with tiny spots of glue.

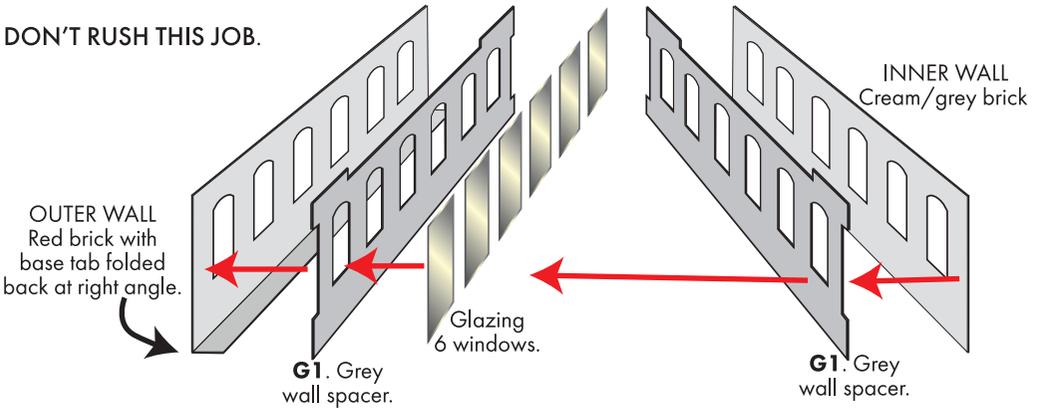


There are also 28  small roof brackets for the overhead gantries, and 4 strips of card for spacing the barge boards on the workshop .

6 Side Walls for the Shed

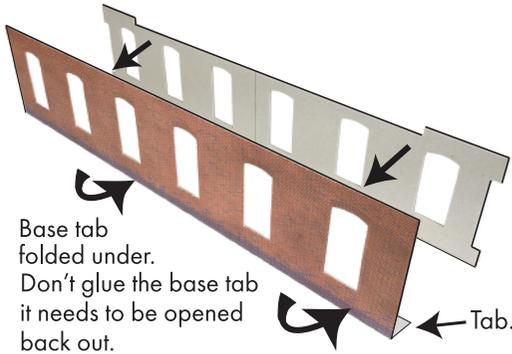
Each wall section is made up with four layers of card laminated together with the glazing sandwiched in the centre to form a thick and rigid wall.

DON'T RUSH THIS JOB.

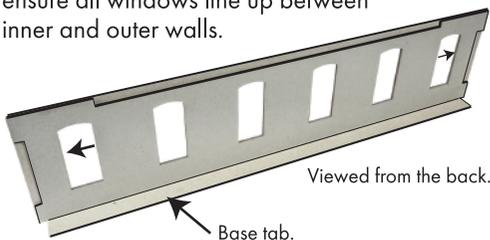


Outer Wall.

Stand the outer wall vertical with the long base tab folded under at right angle. Then fix the pre-glued grey card G1. to the back.



Hold vertical as you align the sheets together. Make sure all the outer edges and windows are aligned flush. This is best done holding the wall vertical with your thumbs through the end windows pulling outwards and downwards to ensure all windows line up between inner and outer walls.

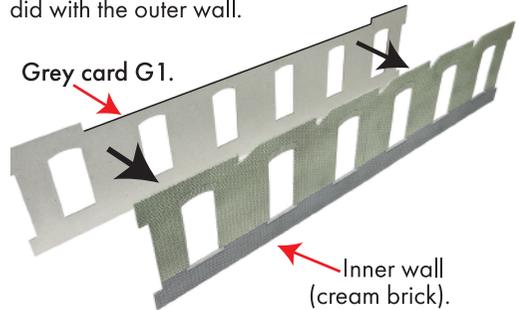


Hold for a while until the glue has started to set, then place under weights for a few minutes to hold flat (a couple of large books do the job). The longer they are left for the glue to dry the better, and the less likely the card will warp.

TAKE GREAT CARE when placing weights on top of the card. Any movement may cause the layers of card to slip out of alignment.

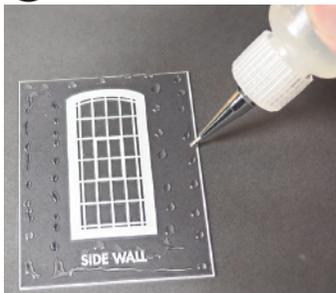
Inner Wall.

Now fix a grey side wall spacer G1. to the back of an inner wall. Keep all edges flush as you did with the outer wall.



Place under weights until fast.

7 Fit The Glazing.

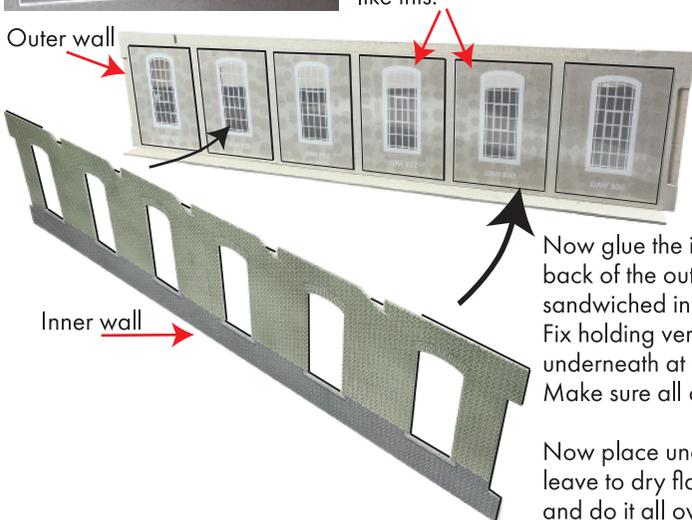


When attaching the glazing pieces to the back of the window openings, it is easier if you apply the glue to the glazing. Place on work surface with the matt printed side facing upwards, then place tiny spots of glue all over the plastic around the printed part as shown. The glazings are bigger than usual as they form the centre layer of the wall, like this.



Fit the glazing to the back of the window openings.

As you fit them, carefully line them up within the openings so they are centred.



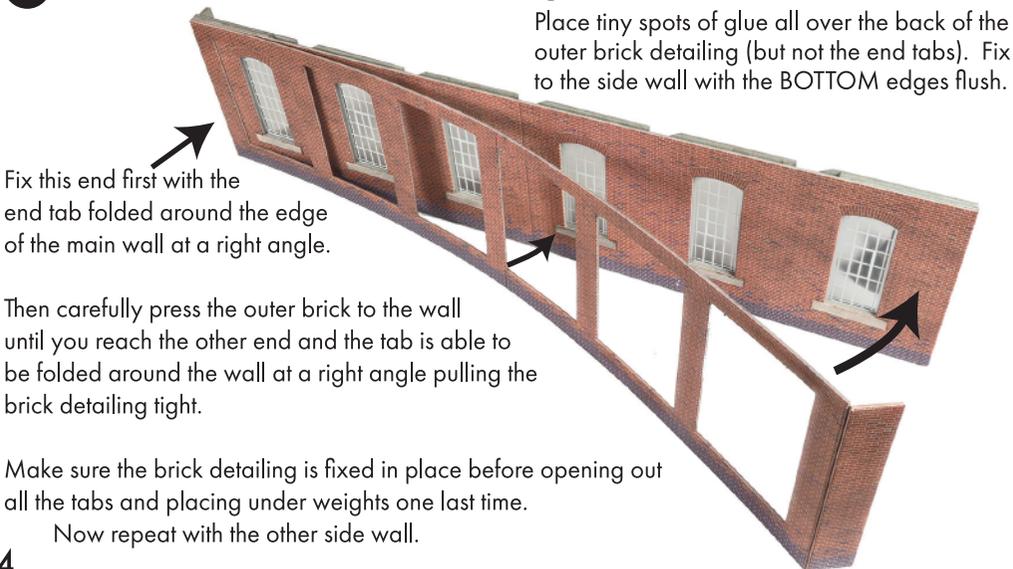
Now glue the inner wall to the back of the outer wall with glazing sandwiched in the centre.

Fix holding vertically with the base tab folded underneath at right angle.

Make sure all outer edges line up.

Now place under weights CAREFULLY and leave to dry flat, whilst you GO BACK TO 6 and do it all over again with the other side wall.

8 Side Wall Outer Brick Detailing.



Place tiny spots of glue all over the back of the outer brick detailing (but not the end tabs). Fix to the side wall with the BOTTOM edges flush.

Fix this end first with the end tab folded around the edge of the main wall at a right angle.

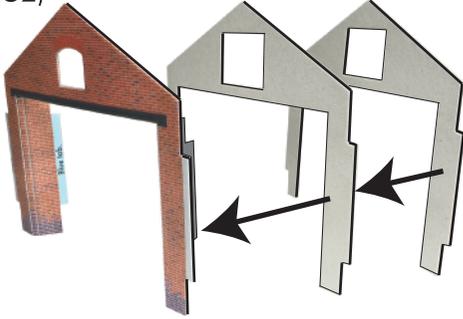
Then carefully press the outer brick to the wall until you reach the other end and the tab is able to be folded around the wall at a right angle pulling the brick detailing tight.

Make sure the brick detailing is fixed in place before opening out all the tabs and placing under weights one last time.

Now repeat with the other side wall.

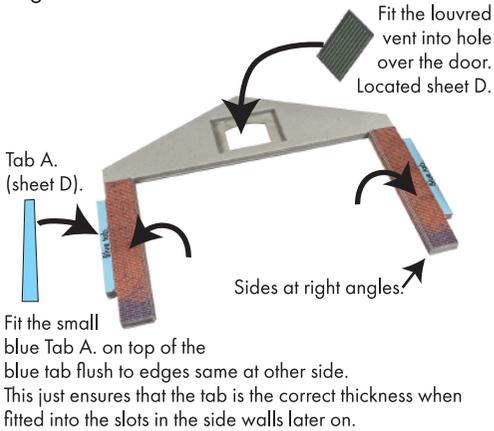
9 Door Gable Wall.

Glue the two inner grey strengtheners together (G2)



Then fix them to the back of the gable GW4
Keep all outer edges flush.

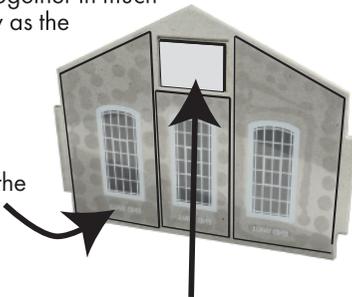
Fold the door side tabs around until the inner door side are at right angles and the outer edges are flush with the rest.



10 Rear Gable Wall.

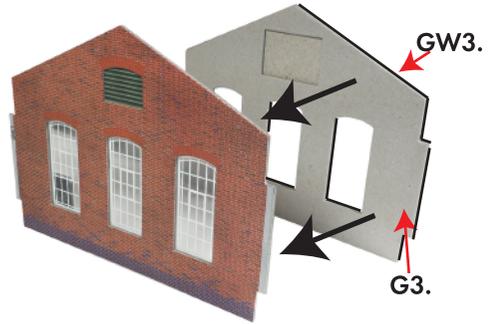
This wall fits together in much the same way as the side walls.

Fix an inner spacer G3 to the back of outer wall GW1 then fit the glazing as shown here.



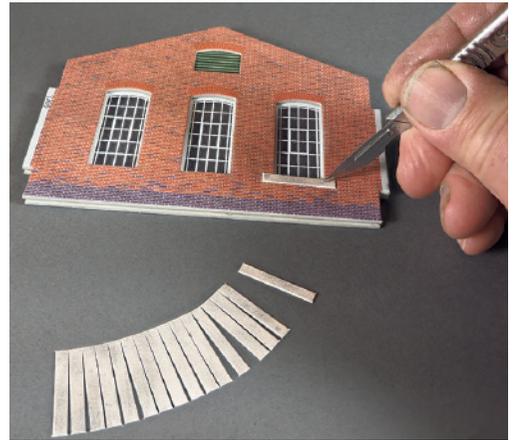
DON'T FORGET TO FIT THE LOUVRED VENT IN THE HOLE OVER THE WINDOWS before you fix the inner wall to the outer wall.

Now glue the remaining grey inner spacer G3 to the back of the inner gable wall GW3. all edges flush. Then fix it to the back of the outer wall with the glazing sandwiched in the centre.



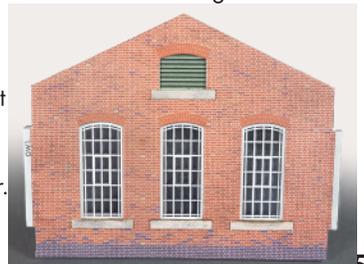
Keep all outer edges lined up flush and place under your weights till glue has set.

11 Window sills.



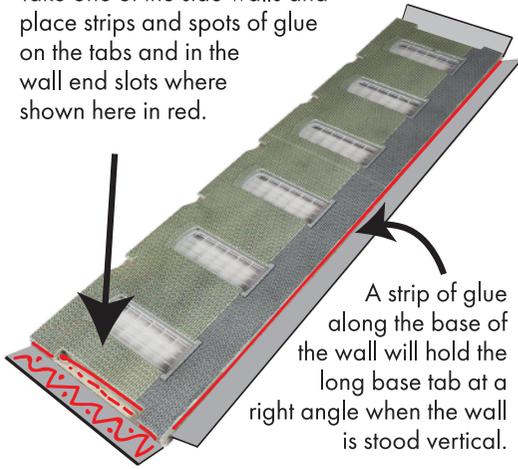
There are 17 small window sills on sheet D. These fit along the bottom edge of each window and vent. As you fit each one, carefully paint the edges, then the tiniest couple of spots of glue placed on the back whilst held with the point of your knife or tweezers before fixing.

This job is best done before you join the walls together.

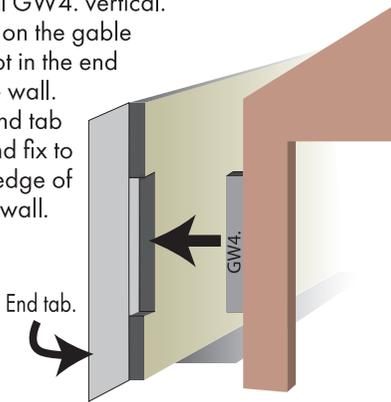


12 Joining the walls together.

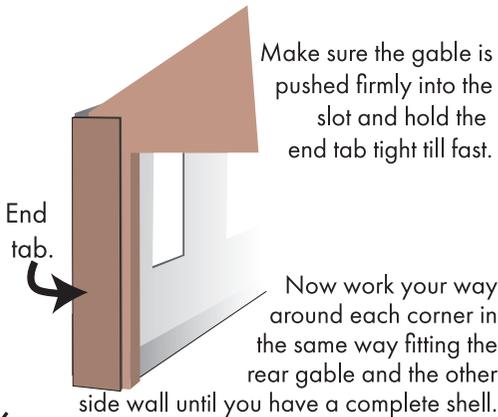
Take one of the side walls and place strips and spots of glue on the tabs and in the wall end slots where shown here in red.



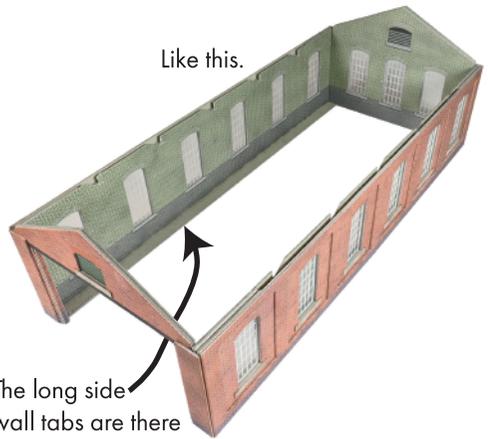
Stand the side wall and the gable wall GW4. vertical. Fit the tab on the gable into the slot in the end of the side wall. Fold the end tab around and fix to the outer edge of the gable wall.



Make sure the gable is pushed firmly into the slot and hold the end tab tight till fast.

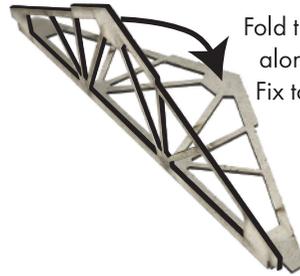


Like this.

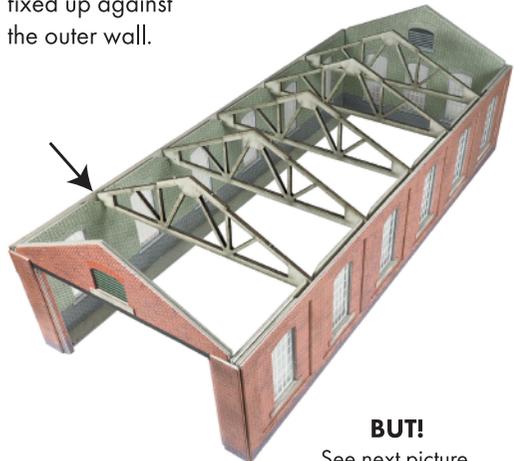


The long side wall tabs are there to hold the wall rigid and stop it bowing.

13 Roof trusses.



The trusses sit in the slots on top of the inner side walls like this. The ends of each truss fixed up against the outer wall.

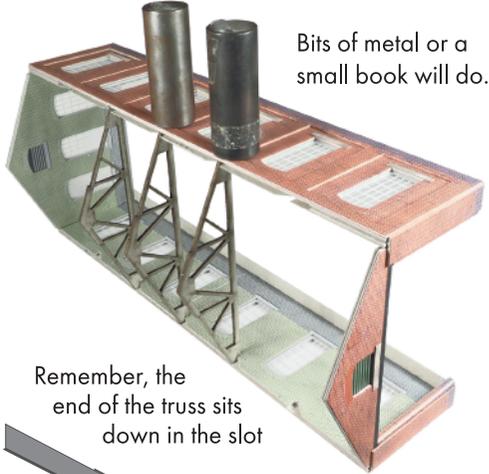


BUT!

See next picture.

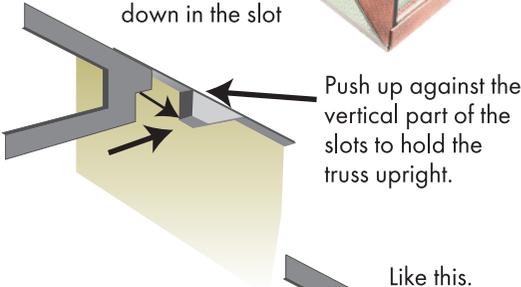
The top edges of the side walls tend to bow out a little bit, so when you start to fit the trusses you will need to hold the walls up against them until fast.

The easiest way is to fit the three centre trusses first and then turn the building on its side and place weights on top, like this.



Bits of metal or a small book will do.

Remember, the end of the truss sits down in the slot

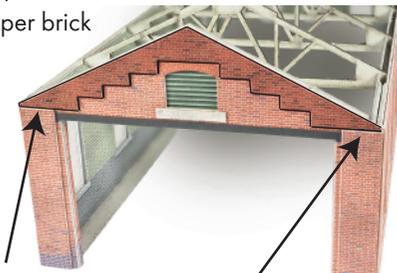


Push up against the vertical part of the slots to hold the truss upright.

Like this.

When the trusses are set and holding the walls straight, fit the last two trusses and go on to the roof fitting section.

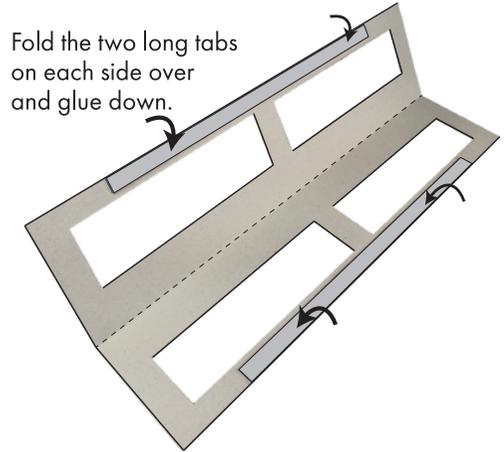
BUT FIRST
Fit the upper brick detailing to each gable



Sit on top of the side wall tabs

14 The Roof.

The inner roof strengthener (Grey card G4.) sit directly on top of the building with the printed roof sheet fixed directly on top of it.



Fold the two long tabs on each side over and glue down.

Turn over and fit the roof to the building



The long tabs are designed to slot into the grooves along the top edges of the side walls. If you test without glue first you will feel them drop into these slots allowing the roof tabs to sit directly on top of the trusses. The purpose of these tabs is to help position the roof so that it overhangs the gable walls equally at each end.

15 The Roof Glazing.

Before fitting the printed roof you need to decide how you are going to fit the roof glazing

The **'easy way'** is to fit them to the underside of the roof facing through the openings.

The **'hard way'** is to cut them slightly smaller and surface mount them after the roof is fitted.

The Easy Way.

Cut the glazing out to the larger size along the outer white lines.



Then fix the glazing to the underside of each opening, matt printed side facing upwards.

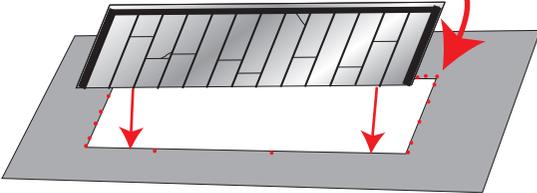
The Hard Way.

Cut the glazing out to the smaller size indicated with white lines further inside the glazing



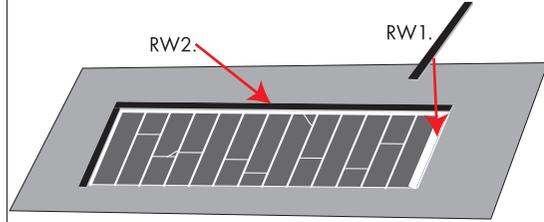
Trim the bottom edge of the glazing flush with the edge of the glass panels.

Then place tiny tiny spots of glue around the edge of the window opening.



Fix the glazing over the opening.

Finish off by hiding the edges of the glazing using the roof window strips on sheet D RW1. for down each side and RW2. along the tops. (RW2 will need to be trimmed to size).



The roof windows now have a much nicer relief look to them.

16 Fit the Roof.

With all four roof windows in place, you can now fix the printed roof on top of the grey roof strengthener. Make sure it is glued right to the edges to avoid the edges curling up. Fix so that each end overhangs past the grey inner roof equally.

The reason the roof overhangs the inner roof is that the inner roof acts as the spacer when fixing the barge boards.

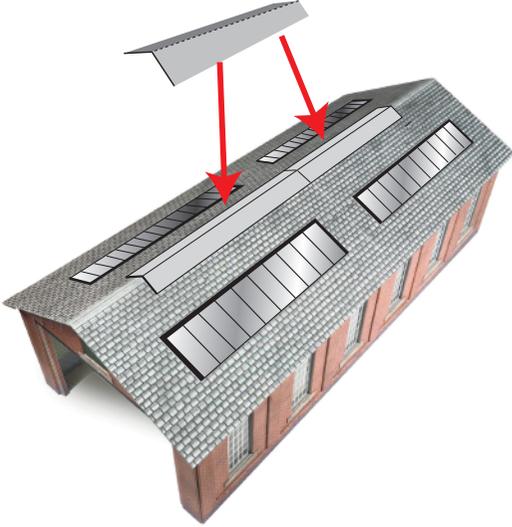


Fit the barge board up under the roof and fixed onto the edge of the inner roof.

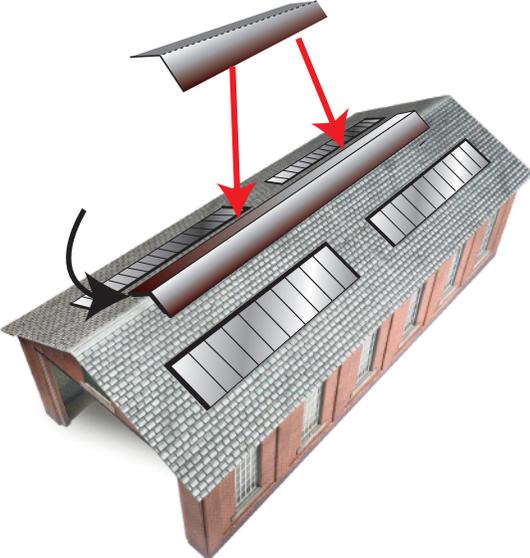


17 Central Roof Vents.

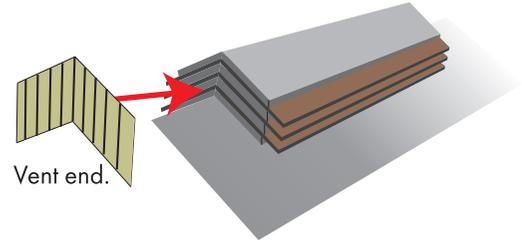
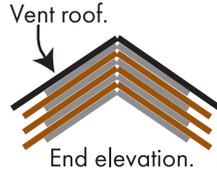
This louvred effect vent builds up along the central ridge. Made with layers of card. Start with the grey strips (G5.). Fold them along centre score line, then fix two of them end to end along the ridge.



Next place two brown louvre strips LVR1. directly on top with the ends lined up flush with grey card.



Repeat with more layers of grey cards and LVR1. cards until the roof vent is the height shown in next diagram.

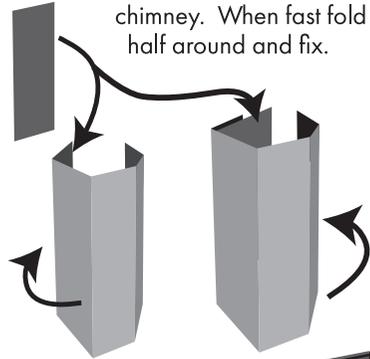


Fit the roof vent ends followed with the long vent roof. See photo overleaf.

18 Small Roof Chimneys.

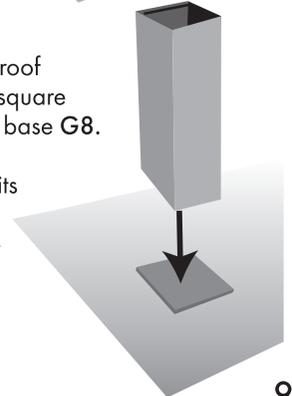
There are eight of these that fit along the roof between the windows and the louvred vent. Before assembly, paint the creases edges.

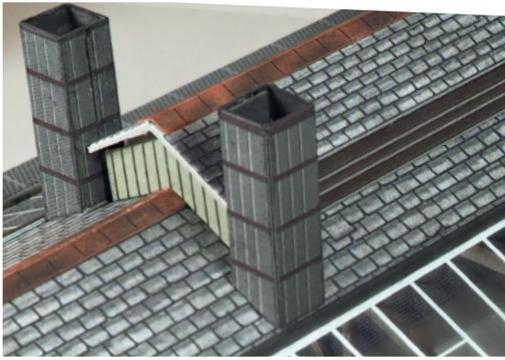
Fit the joiner card strip (sheet D) to the inside of one of the halves of the back of the chimney. When fast fold the other half around and fix.



When fitting to the roof first attach a small square grey card chimney base G8. to the roof.

The chimney then sits over the top and is held firmly in place as shown here.

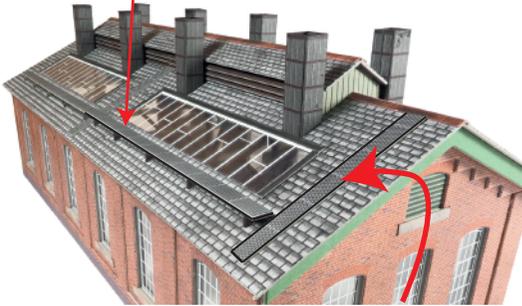
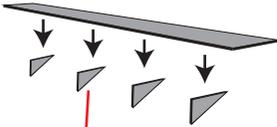




See how chimneys, roof vents and ridge tiles fit.

19 Roof Walkways.

Fix the tiny angled roof brackets underneath the long walkways and fit to the roof just below the roof windows



There are also extra strips of walkway for you to attach to the roof as shown.

RIDGE TILE STRIPS.

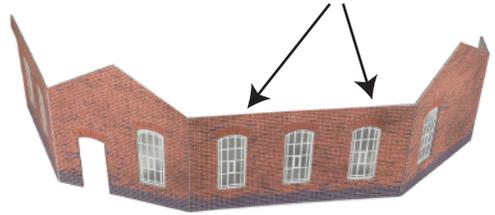
Fold the ridge tile strips in half longways and paint the white card edges before fitting.



See photo at top of page.

20 The Workshop.

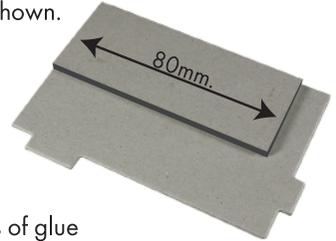
Start with the walls. Fix the seven window glazings and fit them into the openings.



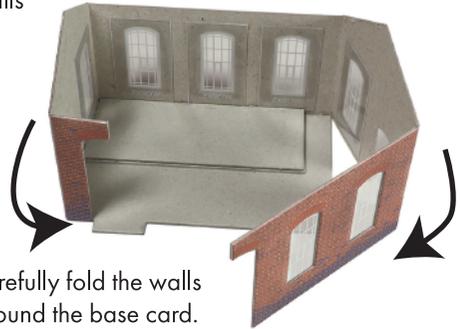
Fit the small window sills as you did with the shed.

The walls then wrap around the base card. But first, to make things easier, take a couple of pieces of the waste grey card pushed out from the roof windows and cut to 80mm long, then stick down on the base card, flush with back and side edges as shown.

This makes the job of fixing the walls on much easier



Now with spots of glue placed along the bottom edges of the walls

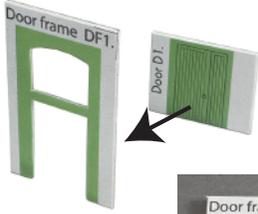


carefully fold the walls around the base card.

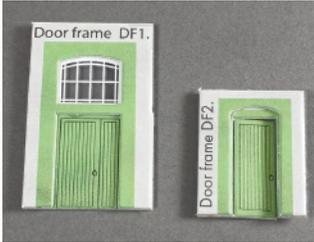
Like this.



Fit door D1. to the back of the door frame DF1.



Then fit the small window glazing in the opening over the door



Fit door D2. to DF2. frame as well.

Fit the doors inside the building. Door DF1. acts as a brace to join the wall together as well.



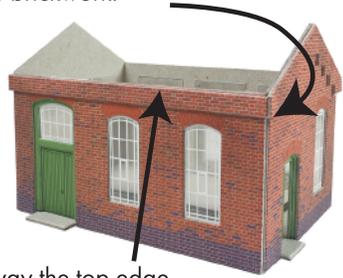
Next fix the brick detailing to the gable walls. Fit flush with wall tops and with each side overhanging equally.



The overhang is to accommodate the brick strips that fit along the top of the side walls.



Fit them to line up with bottom edges of the gable brickwork.

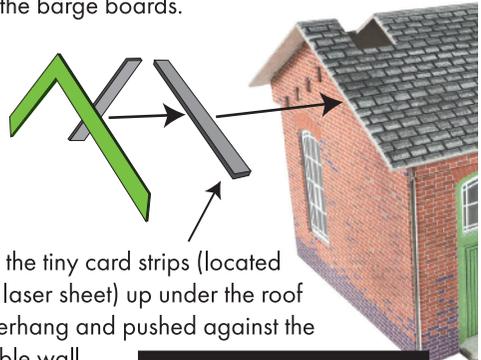


That way the top edge of the strip is slightly lower than the side wall to allow for the roof overhang.

Now fit the roof so that the ends overhang the gable walls equally at each end.



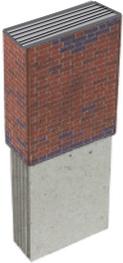
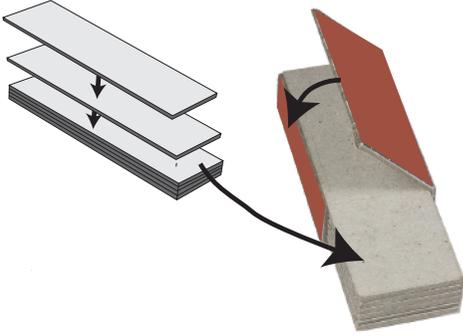
Fit the barge boards.



Fix the tiny card strips (located on laser sheet) up under the roof overhang and pushed against the gable wall. Then fix the barge boards up under the roof and pressed against the card strips.

21 The Chimney Stack.

Take the 6 x G7. chimney stack inner spacers and glue them together in a block with all edges squared up.

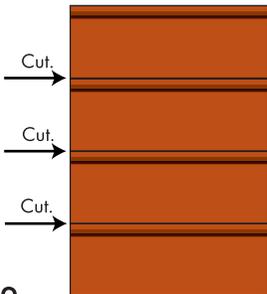


Wrap the chimney stack around the block. Top edge flush with the inner block.

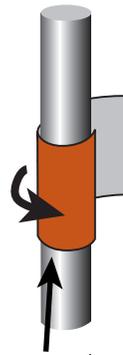
CHIMNEY POTS

Cut out the terracotta coloured strips bellow and roll each one tightly around a metal rod to form a cylindrical shape.

Drill bits, nails or even knitting needles can be used for this job. It needs to be 3 or 4mm. in diameter for 00 scale.



There are a couple of spares here. But if you need more they can be downloaded from our web site www.metcalfeamodels.com



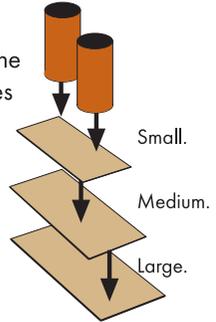
Then roll the strip of pre curled paper around the metal rod.

Roll up tight and keep rolling until the paper is fully curled around.

Then unroll the end back out just enough to smear with a little glue, then roll back up and hold tight until the glue has set.

Keep edges straight.

Mount the pots on to the chimney capping stones before fixing to the main chimney stacks.



The completed chimney stacks now simply push down inside the holes in the main roof.

Don't glue them in place, they may need to be lifted back out when you are fitting the roof tiles.

