

PO300 & PO301 00 Scale Terraced Houses Kit

PLEASE READ THESE INSTRUCTIONS BEFORE YOU START TO BUILD.

It is important you familiarise yourself with all the components and building techniques.

PLEASE NOTE

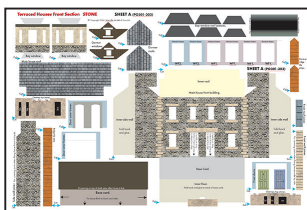
These instructions show the construction of the
Stone Style Terraced Houses PO301.
The Red Brick version PO300 builds up in
exactly the same way.

CHECKLIST.

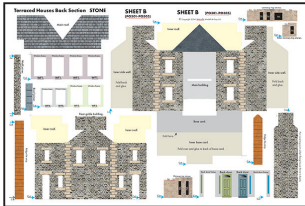
- 1 x SHEET A. Printed components for Houses Front section.
- 1 x SHEET B. Printed components for Houses Back section.
- 1 x SHEET C. Printed components for Back Yard section.
- 1 x SHEET D. Printed Extra Bits (smaller sheet on thinner card).
- 1 x GREY SHEET E. Inner strengthening components.
- 1 x GLAZING SHEET.
- 1 x Sample sheet of our MO060 Individual Paving Slabs.
- 1 x INSTRUCTION BOOKLET (this one).

Kit components at a glance.

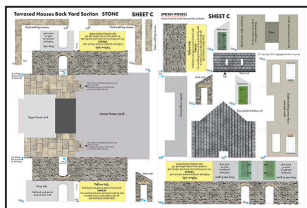
SHEET A. Fronts



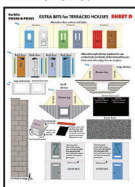
SHEET B. Backs.



SHEET C. Yards.



SHEET D. Extra bits.

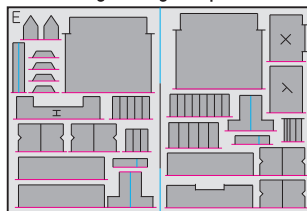


MO060. Sample Paving.



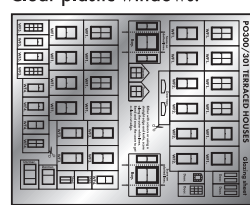
GREY SHEET E.

Inner strengthening components.



GLAZING SHEET.

Clear plastic windows.



1 Tools to build this kit.

To build this kit you will need a few basic tools:

1. A modellers knife.
2. A cutting surface - A cutting mat or thick card will do.
3. A sharp pair of scissors
4. A steel ruler.
5. Fine point tweezers.
6. Something to clamp surfaces together, Bulldog clips are good for this job.
6. METCALFE Ultra Fine Tip Glue Bottles (see 3)

INSTRUCTIONS

2 Glue.

We recommend using a combination of glue:
Speed Bond is slightly slow drying, ideal for where a little positioning is required as you build.

Rocket Card Glue is an instant and fast drying glue, great for where you need stuff to stay just where you place it. Supplied with its own fine tip applicator.

Also UHU All Purpose solvent free.

This is the **best** glue for fixing the plastic glazing to the window frames.



3 Ultra Fine Tip Glue Applicators.

An absolute 'must' when building this kit. When used with **Speed Bond** or **UHU** perfect amounts of glue can be applied to very precise areas without any mess.

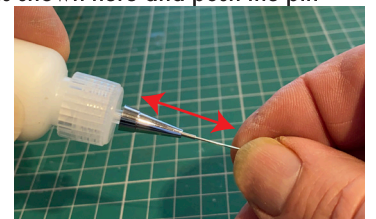
Speed Bond in an applicator was used to build most of this kit.
UHU for fixing the glazing.



A METCALFE product supplied in packs of 3
Product code MT907 Glue not included

Care & Use of glue applicators

Always replace the pin if not using for more than a couple of minutes. The nozzle will block up from time to time, so simply tip the bottle up as shown here and push the pin inside, then vigorously push and pull the pin whilst squeezing the bottle at the same time. This allows the glue to moisten the dry glue in the nozzle.



If this doesn't help, then take the metal nozzle off and rod it out with the pin from the other end.

Speed Bond is a water based glue so running warm water over it as you go helps soften any hard glue in the nozzle.

ALWAYS store the bottles upside down when not in use.

This keeps the glue moist around the nozzle end of the bottle.

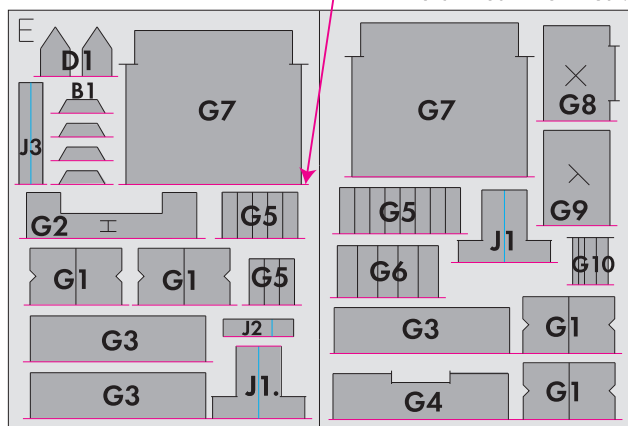
All tools & Glues available at:
www.metcalfe-models.com

4 Extracting components from base sheets.

To stop the components falling off the base sheets, 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 score lines and they will come seamlessly away. **WARNING**, Cut with care to reduce the risk of the blade running out of the score and cutting the component.

5 GREY SHEET E Components.

RED lines indicate score rules you need to cut to release components from base sheet. **BLUE** lines indicate fold lines - Don't cut.



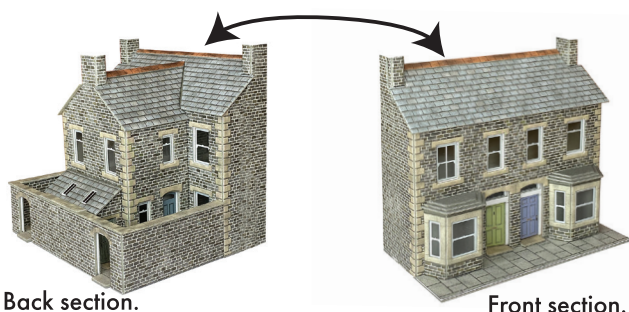
Key.

- G1. Inner side wall supports x 8.
- G2. Inner base card for house fronts (Marked 'H').
- G3. Upper inner floors. 2 x for house fronts. 1 x for Backs.
- G4. Inner 1st floor card for house backs
- G5. Inner chimney spacers for house front and back sections
There are 16 in total - 8 x for the fronts 8 x for the backs.
- G6. Inner chimney spacers for the rear gabled building.
There are 5 of these - slightly bigger than the G5. spacers.
- G7. Back walls x 2 - for both buildings.
- G8. Inner 1st floor for rear building (Marked 'X').
- G9. Inner top floor for rear building (Marked 'Y').
- G10. Inner wall thickeners for rear building.
- D1. Dormer window bases x 2.
- B1. Bay window inner braces x 4.

- J1. & J2. Jig components to make perfect chimney spacers.
- J3. Roof spacer jig for positioning Dormer windows.

6 OVERVIEW

This kit is made up of two halves.
The House Front section and the House Back section.
Each section is a low relief building in its own right, but can easily be attached back to back to create a whole building.



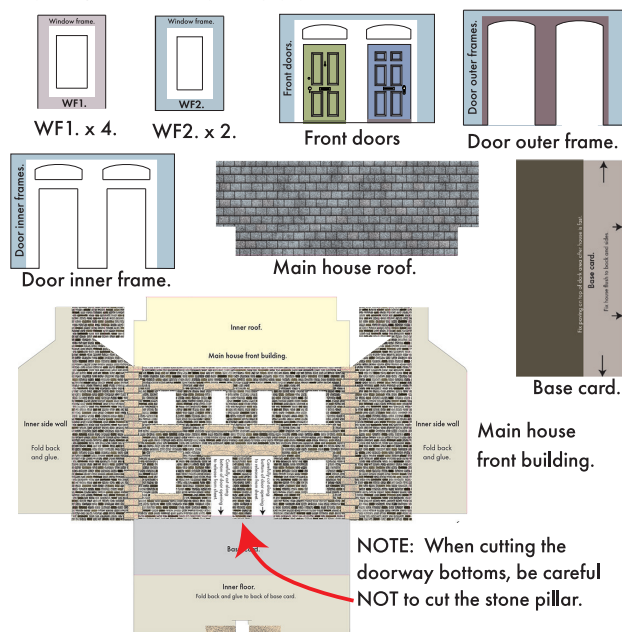
The building can also be attached side by side if more kits are added, making long rows of terraced housing.

There are extra components such as chimney top stones and connection strips designed to aid connections either back to back or side by side.

START BUILDING

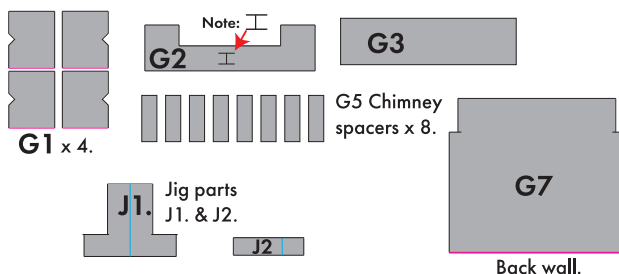
1 The Front Section.

From SHEET A extract:



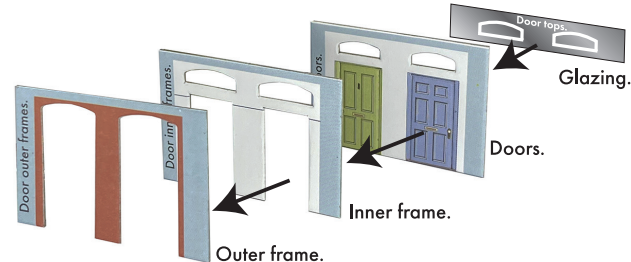
NOTE: When cutting the doorway bottoms, be careful NOT to cut the stone pillar.

From the left hand side of GREY SHEET E extract:



2 The Doors.

Fit the glazing to the back of the door tops.
Then fix the doors to the back of the INNER frame.
Then fix to the back of the OUTER frame.



Turn outer frame around and glue face to face with inner frame.
Like this.

This is an afterthought that makes the whole door unit look better when fitted into the building.

Put to one side until needed.

NOTE: There are Alternative doors on **SHEET D**.
Use these if you want something different, especially if you are building multiple kits and need a bit of variety.

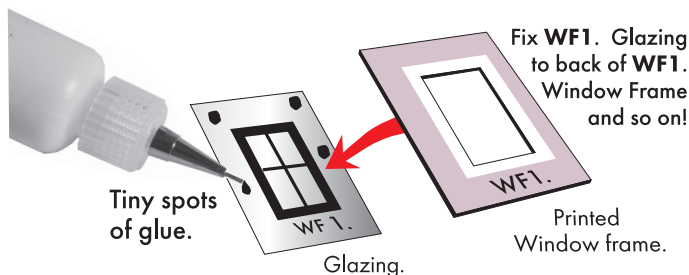
3 Windows

Before any serious building work can start, we need to get the windows in place.

Start by cutting out 4 x WF1. and 2 x WF2. pieces of clear glazing from the glazing sheet.

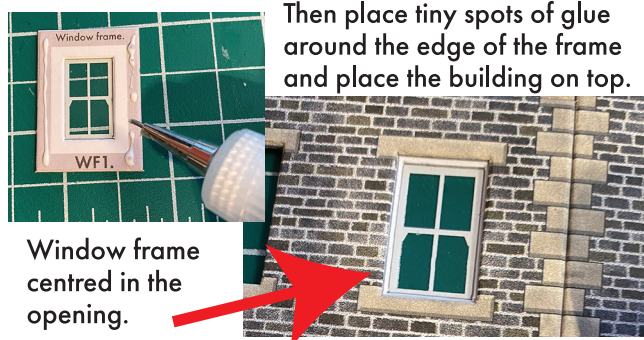
There are a few different styles for you to choose from.

Each glazing has a corresponding window frame:

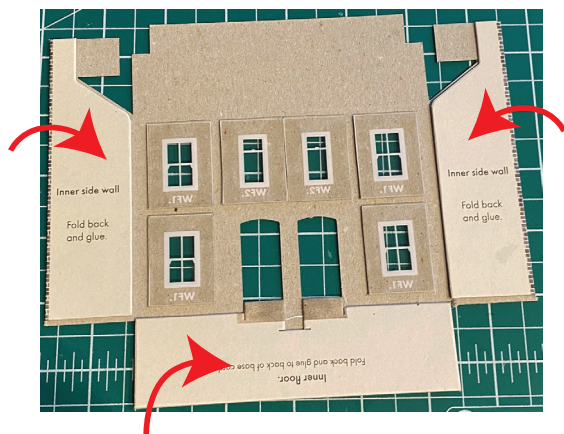


Using a fine tip applicator, place tiny spots of **UHU** glue on the edges of the glazing and then fix the window frame on top.

WARNING: Using other glues to fix glazings risks them popping out later. Test once fixed to frames to make sure they are fast.



Once all the windows are in place now is a good time to fit curtains and blinds (see BACK PAGE). Next fold over the two inner side walls and glue down.



Also fold over the inner floor and glue down. Make sure the door steps fit through the door openings when the front wall is folded up.

Like this.

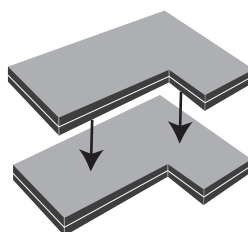


4 The Chimneys.

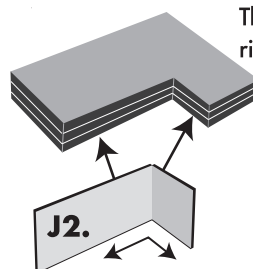
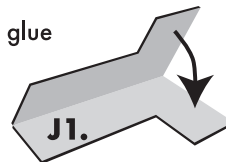
THE JIG and chimney spacers.

Especially designed for forming the layers of card that are glued together to form a solid block with all sides held at perfect right angles. These blocks are then used inside the chimney stacks to hold them squarely in place.

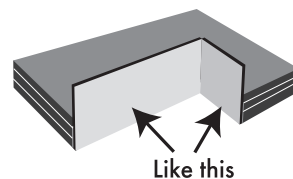
Fold the two grey J1. in half and glue to make double thick.



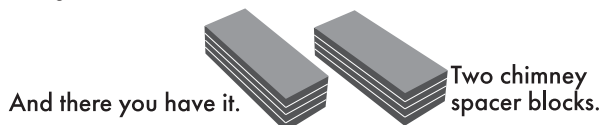
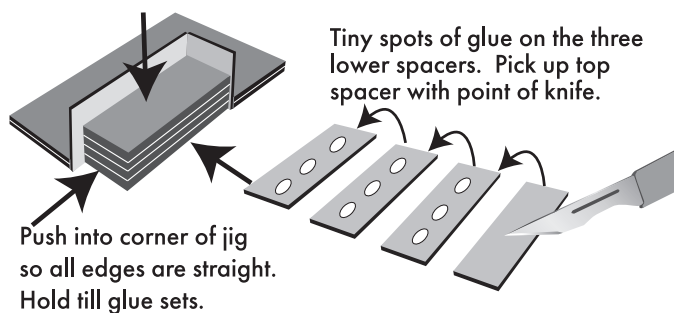
Glue them together all edges flush.



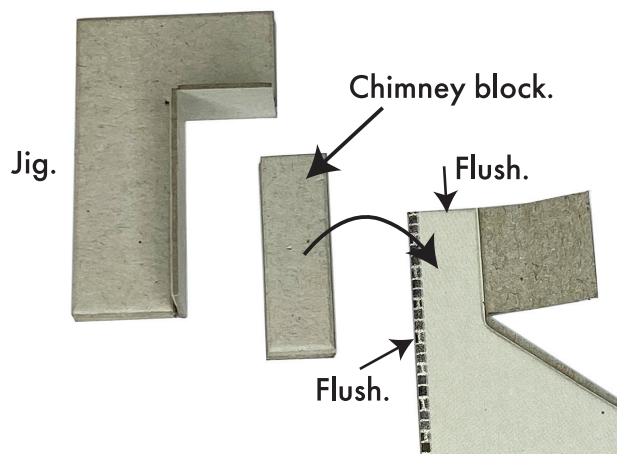
Then fit J2. folded at a right angle into the corner.

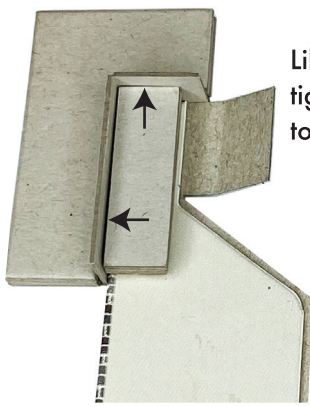


Each block is made using 4 x G4. spacers.



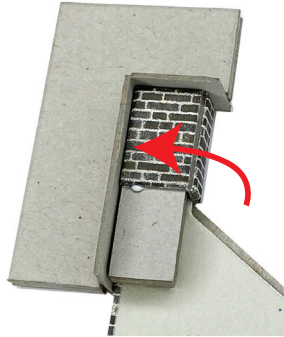
Now fix the chimney block to the inside wall flush to the top and back edge.



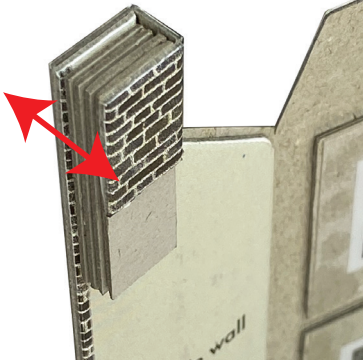


Like this. Use the jig held tight against top and back to keep flush.

Then fold the outer wall around against the jig.



Like this. Back and top edges perfectly square.



Thank goodness for the jig!

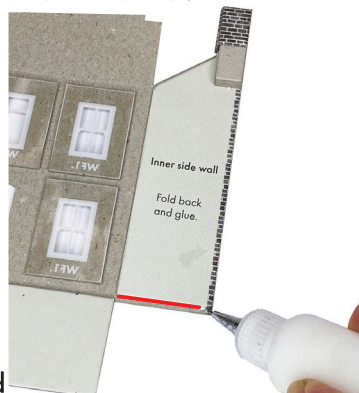


Now do the opposite chimney, the jig will be a little elongated on the top edge, but it works.

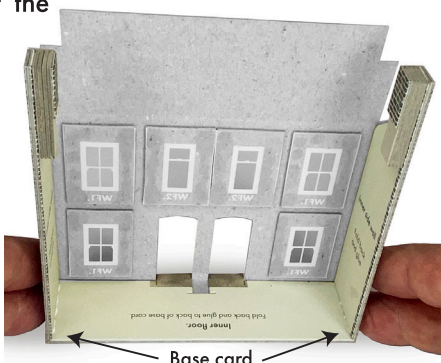
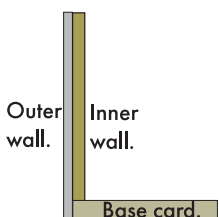
It's important that the chimneys are all squared up the same. They need to line up when the buildings are fastened together.

5 Assemble the walls.

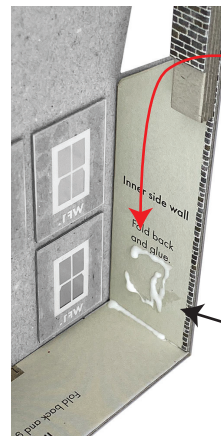
Place a thin strip of glue along the flange at the base of the side walls (shown here in red).



Fold the front wall up and the side walls around so that the ends of the base card fit into the flanged part of the side walls

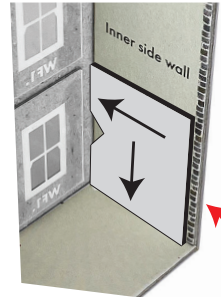


Stand on a flat surface as you do this hold until the glue sets.



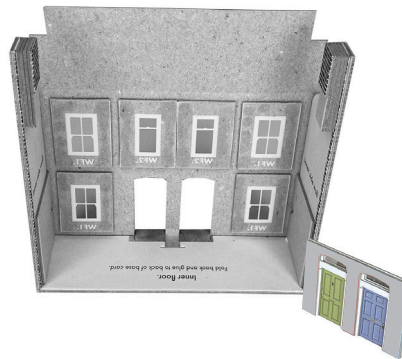
Place glue along the bottom joint and on the wall, then fix **G1**. grey side support to the wall. Push tight against front wall and down to base card.

Side support.
G1.

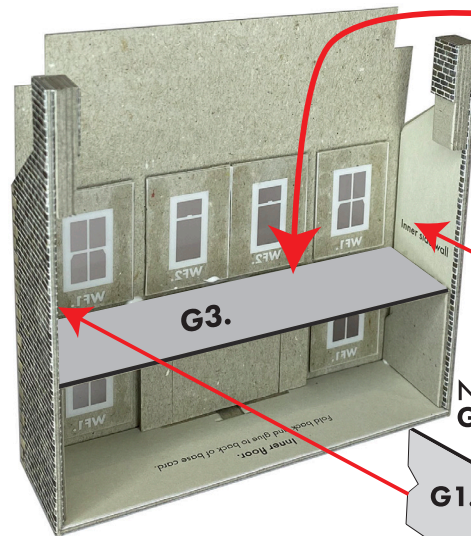


Fix a second **G1**. support to the opposite wall in exactly the same way.

Note the recess on the back edge this is to allow space for the wall to fit in.



it the front doors.

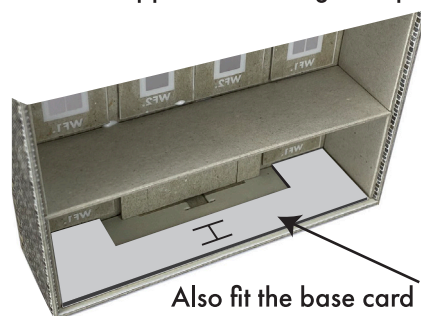


Fit inner floor **G3**. sitting on top of the side supports and the doors. Pushed tight to front wall.

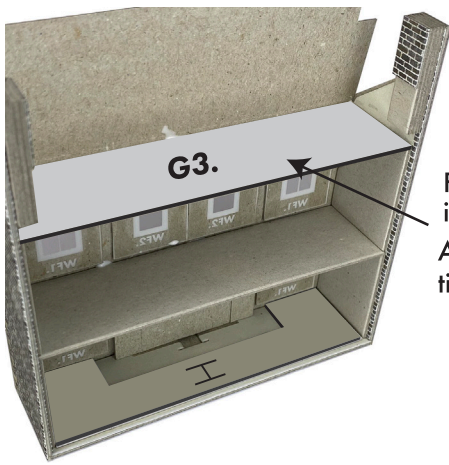
Now fit two more **G1**. side supports.

G1.

Fit in exactly the same way as the lower supports but sitting on top of the **G3**. floor.

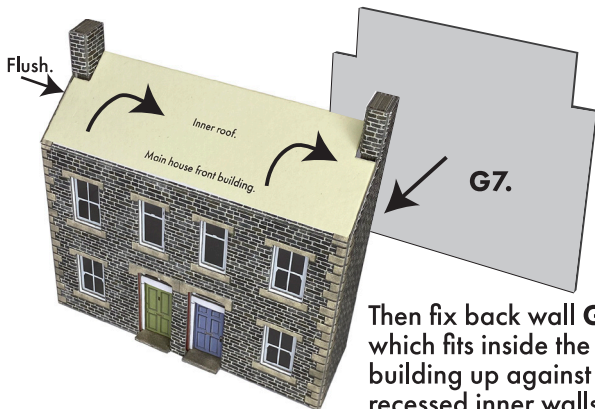


Also fit the base card **G2**. (marked 'H'). Again, push in tight to front wall.



Fit the second inner G3. floor
Again, push in tight to front wall.

Fold inner roof down inside building and fix sitting on top of the inner side walls & flush with outer wall tops.



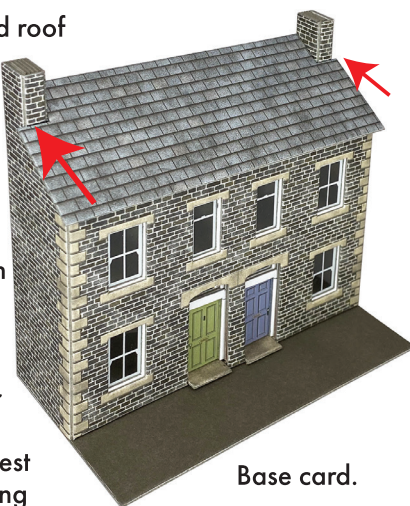
Then fix back wall G7. which fits inside the building up against the recessed inner walls and floors.

Warning

If you are joining buildings together side by side, don't fit the roof just yet.
Wait until you have them joined together
The roofs need trimming to fit butt edge together.
There is a small joining strip to cover any gaps.

When fitting the tiled roof push up tight under the chimney stacks.

Then fit the base card with the back and side edges flush to the base of the building.
This is important when fixing to other buildings.
To get it exact it is best fitted with the building laid on its back.



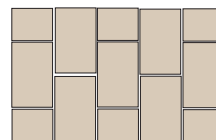
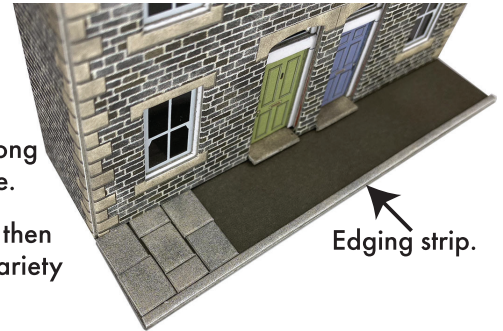
The main building is now complete and awaiting fitting of other components like paving, bay windows and the dormer windows on the roof.

6 Paving.

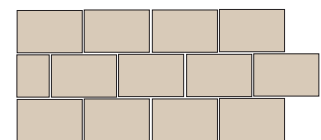
You have a choice of paving slabs. You can either cut out the solid strip of paving from sheet D. and stick it down all in one go. Or you can use our sample sheet of **MO060 Individual Paving Slabs**. Simply slice the edge that holds them to the base card and carefully stick them down onto the base card.

It is best to start with the edging strips fixed flush along the front edge.

The flags can then be laid in a variety of ways.



Like this.



Or like this.

Warning: The flags can vary a little in size so grade them as you go to avoid large gaps as you lay them. But it all adds to the rustic feel and appearance.
If you are joining buildings together side by side it is best to leave paving work till you have finished.

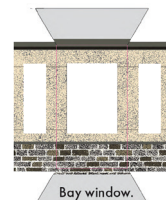
7 Bay Windows.

FOR EACH WINDOW YOU WILL NEED:
From **SHEET A**.

Roof sections 3 sizes.



Bay window backdrop.



Bay window.

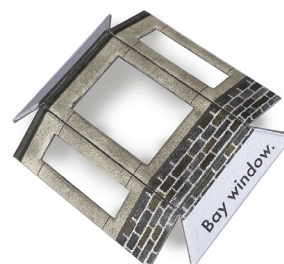


Bay Glazing.

Bay.

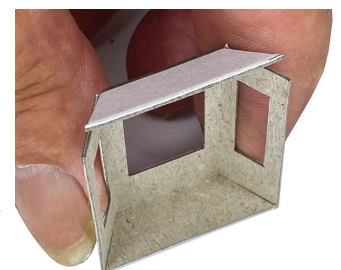
From **GREY SHEET C**.

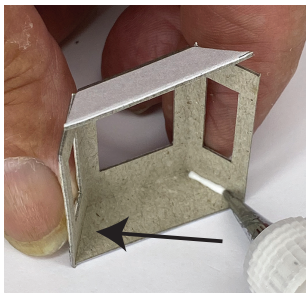
2 x Bay window inner braces B1.



Stand on a flat surface.

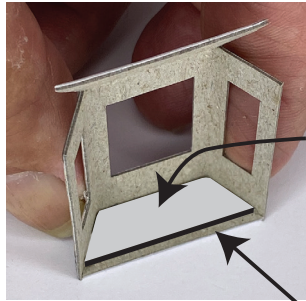
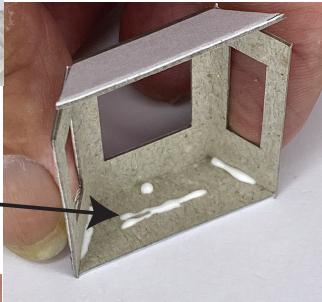
Bend the four score lines on the bay window unit to loosen them up.





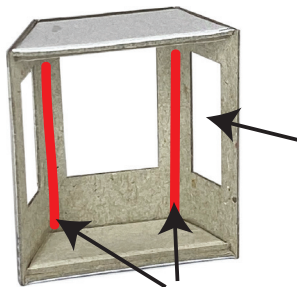
Hold the side walls against the base and then place tiny strips of glue along the joints at the bottom.

Keep hold of the unit as you place more glue as shown.

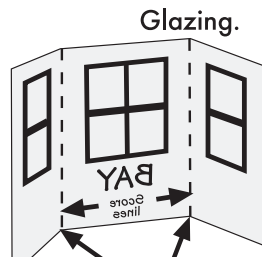


Then place a grey brace B1. Into the base like this and pushed up against the front and side walls. This leaves a recessed flange along the back edge for the backdrop card to sit on.

Hold gently until the glue has set then turn over and fix the top in exactly the same way.



Tiny strips of glue (shown in red) is all you need to fix the glazing inside.



Lightly score along the dotted lines and bend the sides to same angle as bay window.



Fix the backdrop. Sit inside the bay on the recessed flanges.

Fit the roof sections one on top of the other after fixing to building.

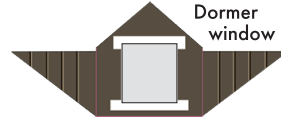


DON'T fit the bay windows to the building until after laying the paving.

8 Dormer Windows.

FOR EACH WINDOW YOU WILL NEED:

From **SHEET A.**



Dormer window

Dormer ridge tile strip.



Dormer roof.

From **GREY SHEET C.**

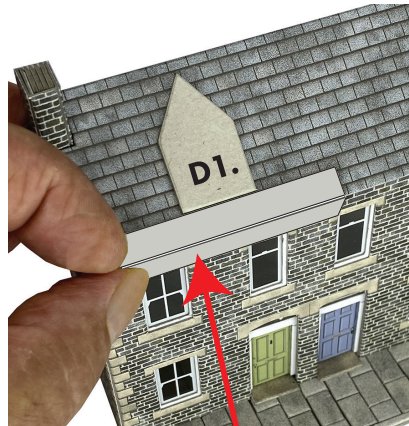


Dormer roof spacer Jig. J3.



D1.

Dormer window base.

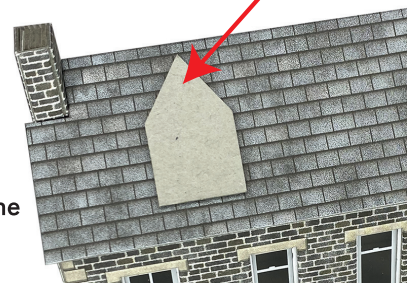


Spacer Jig. J3.

Fold the spacer jig along the score line over the roof end.

Place the dormer window base against it as shown and fix to roof.

Position between the two windows below, like this.



Fix the glazing to the dormer window.

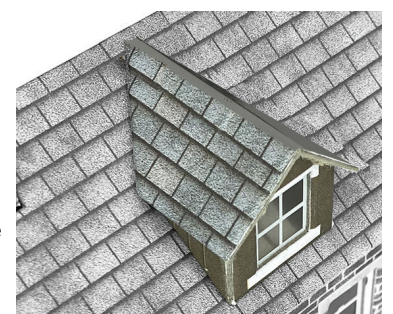


Then fold the sides around the base.

Fix to sides of the base with tiny spots of glue.

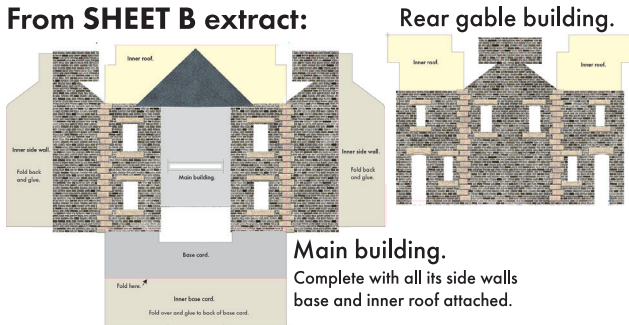
Finally fit the roof

NOTE: There are a couple of alternative dormer windows on **SHEET D.**



8 House Backs.

From **SHEET B** extract:



Main building.

Complete with all its side walls base and inner roof attached.

Window frames



WF1. x 4.



WF3. x 2.



WF4. x 2.

Gable floor & walls with WF5. windows.



NOTE: There are no WF2 windows in the house backs.

Back doors x 2 with their matching door frames.



From **SHEET C** extract:

Ground floor spacer.

Not to be confused with similar spacers.



From **GREY SHEET E**. Extract everything that is left.

G1
x 4.

G3 Inner floor.

G4 Inner floor.



G5. Chimney spacers x 8.



G6. Chimney spacers x 5.



G7
Back wall.



Inner floors for gable building.



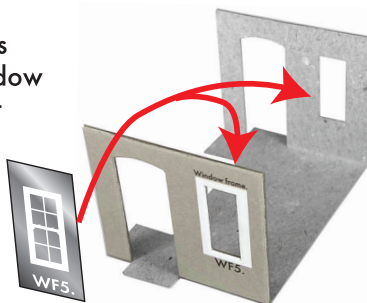
Small wall thickeners.
G10

Start with the windows as you did with the house fronts.

Once all glazings are fixed to the window frames, fix the four **WF1**. windows to the openings in the main building

Then fit the **WF3. & WF4**. windows to the **UPPER WINDOW** openings in the gable building.

Fix the **WF5**. Glazings to the back of the window openings that are part of the gable building inner floor and walls. Put this to one side until later.



Chimney Stacks.

The two chimney stacks on the main building need making up next.

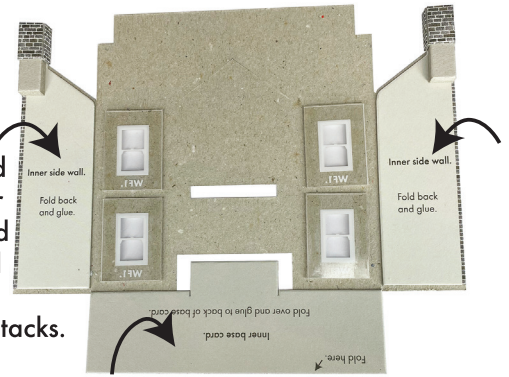
These are assembled in exactly the same way as the front building in section 2

Gable building chimney is dealt with later. But you could always make up the 5 x larger **G6**. spacers into a block whilst you are at it - less chance of losing it.

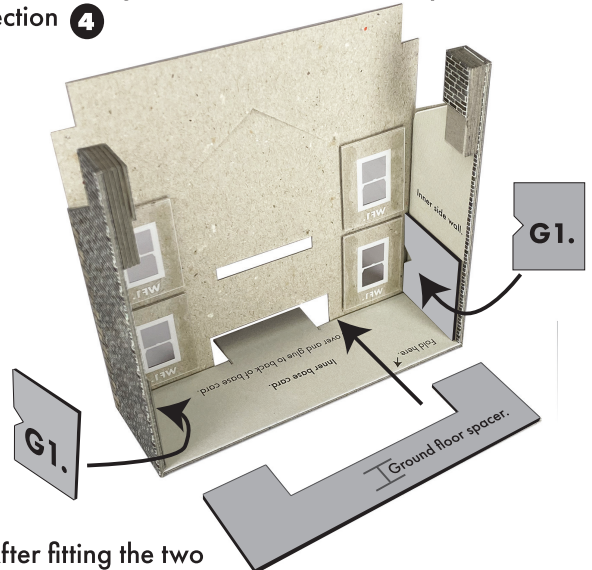
9 Assemble the walls.

Starting with the Main Building.

As you did with the front building. Fold over and glue the inner side walls and the base card before fitting the chimney stacks.

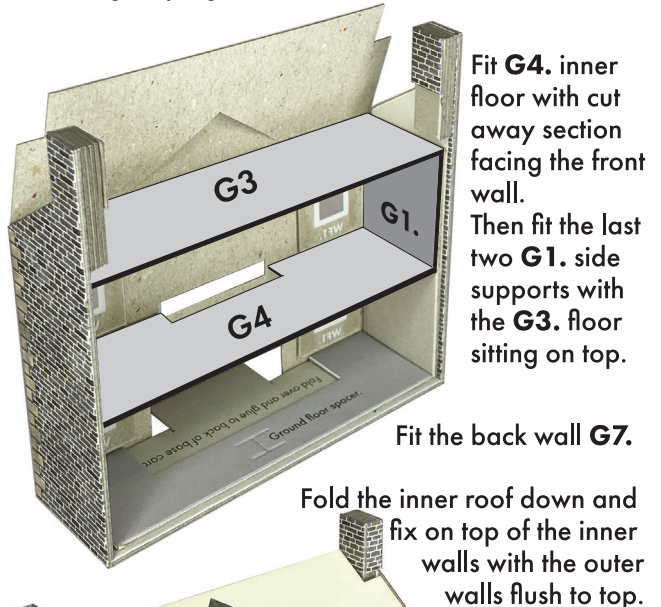


Stand the front wall upright and fold the side walls around fitting them to the base card as you did in section 4



After fitting the two

G1. side supports, fit the ground floor spacer. Push it tight up against the front wall.



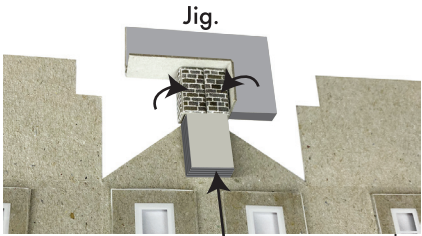
Fold the inner roof down and fix on top of the inner walls with the outer walls flush to top.



Put the building to one side. **DON'T** fit the roof tiles yet.

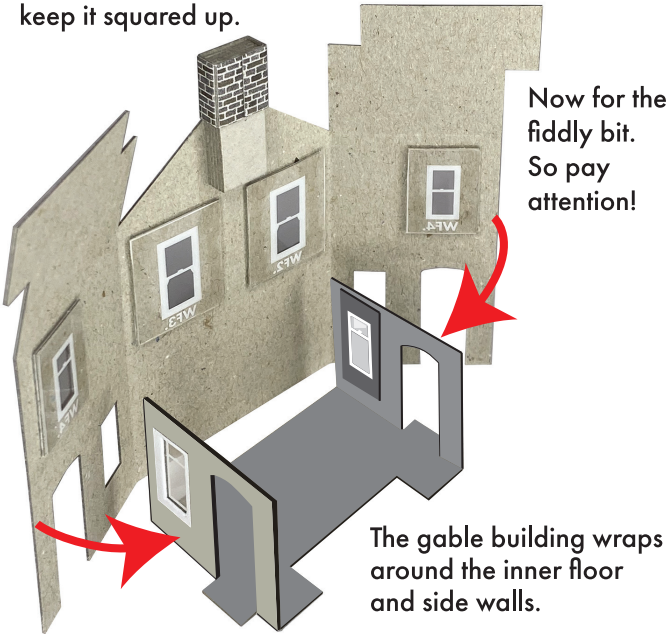
The Rear Gable Building

With the windows now in place fix the chimney block so that the two sides of the chimney stack can fold evenly around it with all top edges flush. You can use the Jig to help keep it squared up.



Inner chimney block.

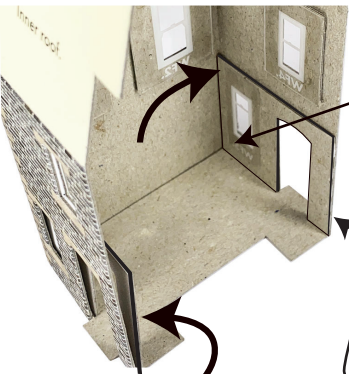
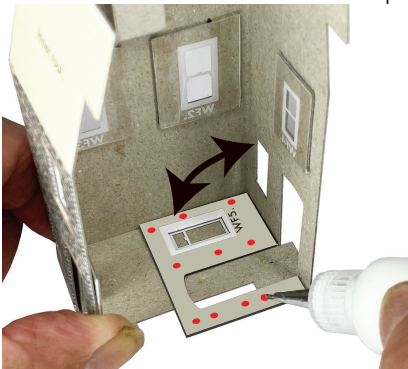
Now for the fiddly bit. So pay attention!



The gable building wraps around the inner floor and side walls.

Fit the inner floor and walls inside the building without any glue.

Fold back one of the walls and place tiny spots of glue as shown (in red) then fold the wall back up.



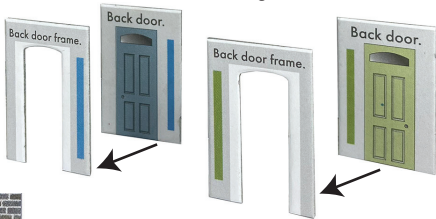
When you fold the wall back up, push tight into the corner and up against the end wall. The door opening should line up exactly with the edges of the door opening in the outside wall.

Also these back edges should line up flush.

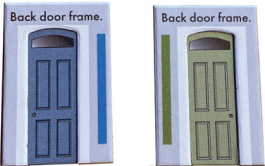
Now repeat with the opposite wall

The Doors.

Match up the doors with their matching frames.

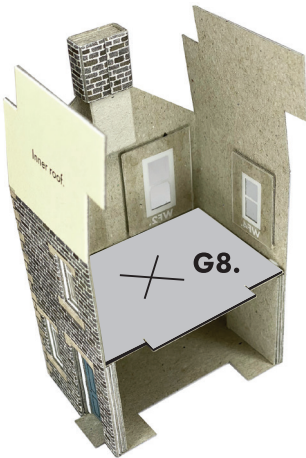


Fit so that the edges with the blue and green strips are towards the open end of the building flush to wall ends.



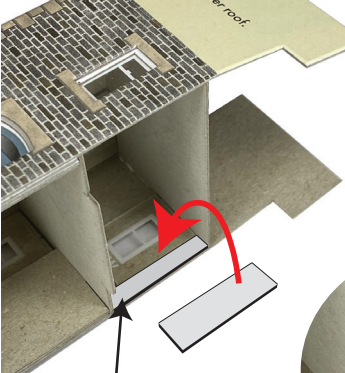
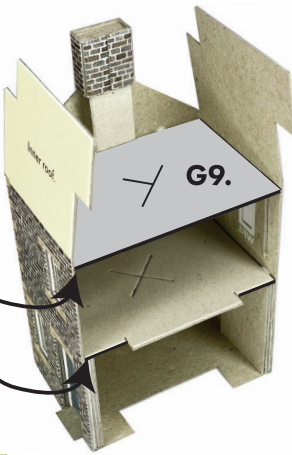
Fit the inner floors

Fit G8. first (marked X) sitting on top of the doors and pushed tight up to back wall underneath the window frames.



Then fit G9. (marked y) sitting on top of windows.

Push both floors in tight these back edges need to be flush to wall edges.

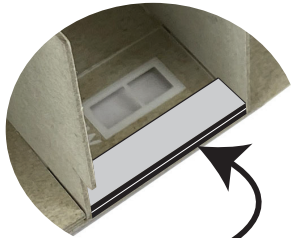


Wall Thickeners G10.

These tiny strips of card thicken the upper wall edges making it easier to apply glue when fixing buildings together.

Thin strip first next to window frame.

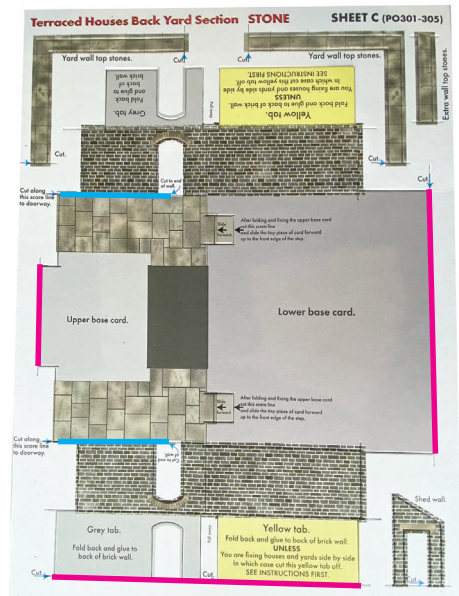
Thicker strip on top with edges flush to edge of building.



Put the building to one side until needed.

10 The back yards.

Extracting the large all in one base card needs care. Located on the left hand side of SHEET C



1. Cut along the two score lines marked here in **BLUE** See below.

2. Cut along the three score lines marked in **RED** to release the large base with the walls attached

Slice these two score lines as far as the doorways before you extract the base.



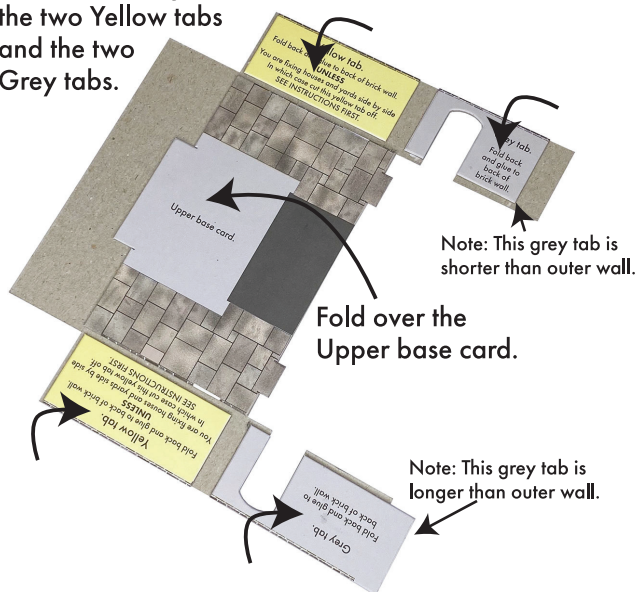
JOINING NOTES

Before you go on to the next step, if you are fixing kits together side by side you will need to make the adjoining yard walls a bit thinner.

So cut the **YELLOW** tabs off inner and outer adjoining walls so they are only four layers thick in total when the buildings are fixed together and not eight layers. That way the top stone strips will fit correctly.

Turn base card over

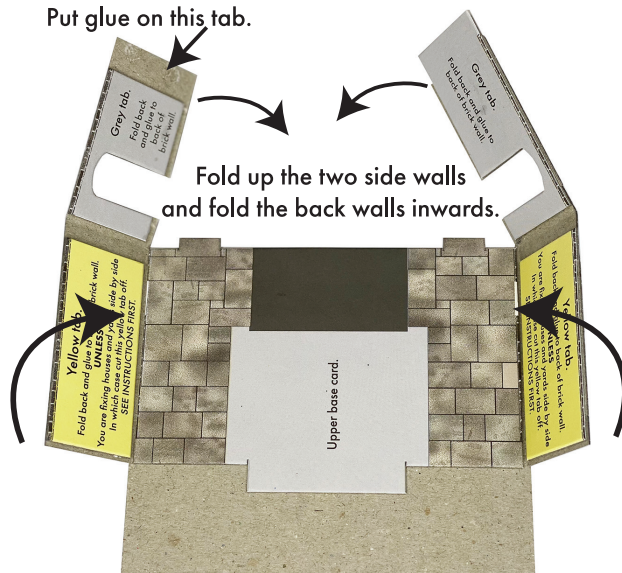
Fold over and glue down the two Yellow tabs and the two Grey tabs.



Just a little thing: If you turn the base back over you will notice the two steps have small tabs that need cutting and sliding across to line up flush with the end of the steps.

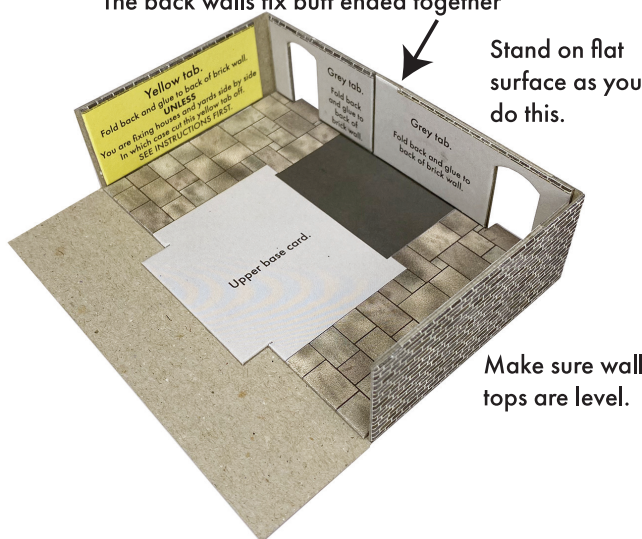


Put glue on this tab.



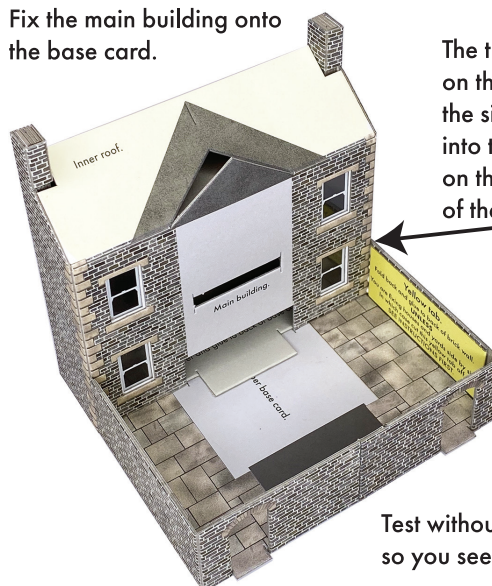
The back walls fix butt ended together

Stand on flat surface as you do this.



Fix the main building onto the base card.

The tiny flanges on the ends of the side walls fit into the creases on the corners of the building.



Test without glue first so you see how it fits.

INNER WALLS

The side and rear walls all fold in half and glue to make double thickness. See 'Joining Notes' before gluing down the yellow tabs on adjoining side walls.

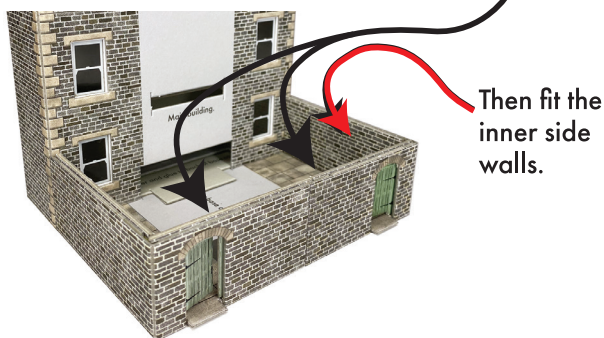


NOTE: The backs of the gates are plain card. Cut out the gates on page 12. and stick to the backs of gates.

There are alternative gates on SHEET D. If you are using these, cut the gates along with the surrounding grey card around and fix the alternative gates in their place.



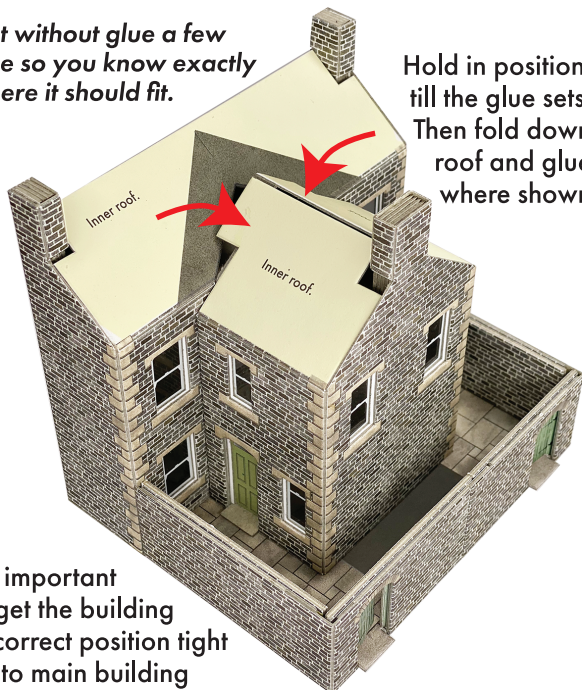
Fix back walls with gates **first**.



Fix the gabled building to the main building. There is a slot in the base to guide it into the correct position.

Test without glue a few time so you know exactly where it should fit.

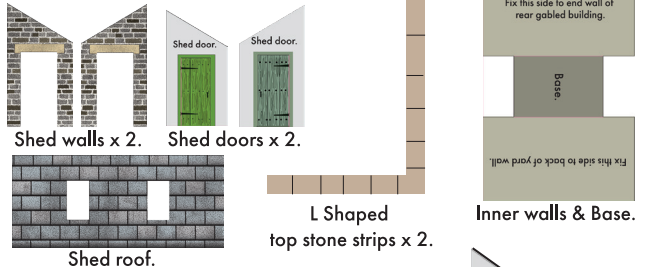
Hold in position till the glue sets. Then fold down roof and glue where shown



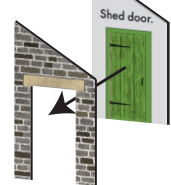
It's important to get the building in correct position tight up to main building otherwise the roofs won't fit correctly.

11 The Shed & Wall Tops.

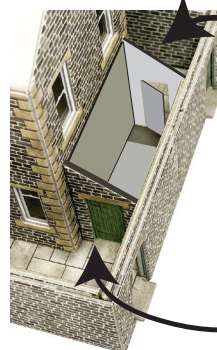
From SHEET C extract:



Fix the two doors to the backs of the shed walls.



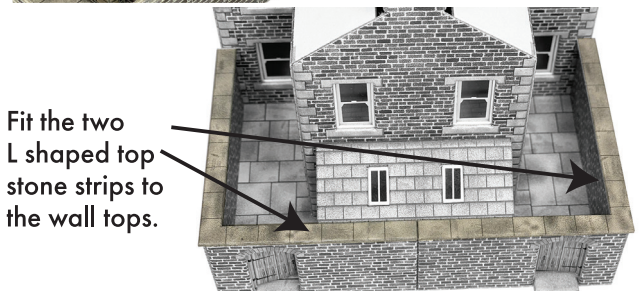
Fold up the inner walls and fit down into the space between gable wall and yard wall.



Then fit the doors onto each end.



Top off with the roof with glazing fitted.



Fit the two L shaped top stone strips to the wall tops.

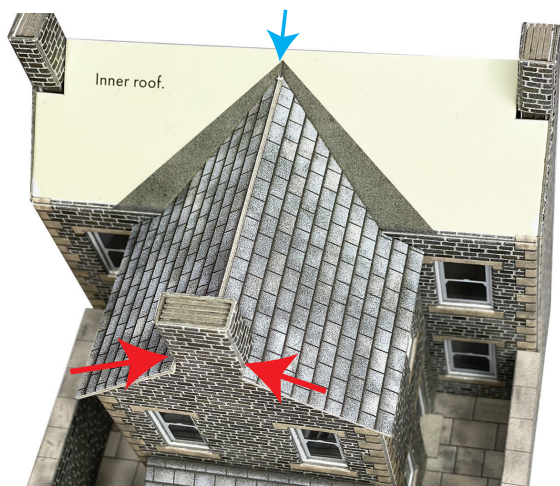
Note: If you are joining kits together side by side, there will be a small gap in the centre where they meet. There is a small piece of top stone on Sheet C to cover over the gap.

12 The Roofs.

Fit the gabled building roof first.

Fit over the chimney stack and then after pushing the whole roof down onto the wall tops, push the gable end of the roof back up under the small recess under the chimney stack (see red arrows).

Where the Blue arrow is shown indicates that the point of the roof should be in alignment with a small score line in the main inner roof.



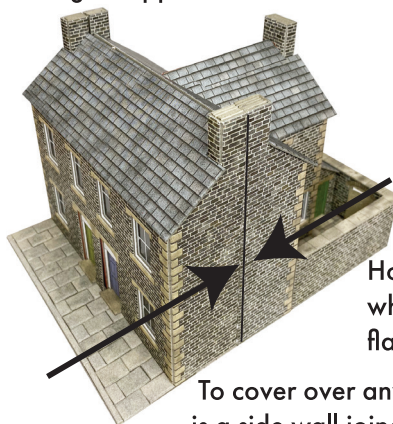
Fit the main roof and push back up under the chimney stacks (see red arrows).

You will notice there is a gap between the two roof sections. Don't panic, this is intentional as it represents the leaded valley guttering as seen on real building



13 Fixing Buildings together.

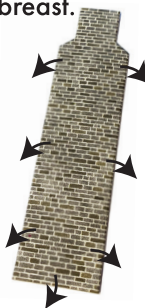
Fix the front and rear buildings together back to back with glue applied to the wall ends.



Hold tight until glue sets whilst standing on a flat surface

To cover over any gaps there is a side wall joiner in the shape of a chimney breast.

Before fitting, bend over all edges a little to curve the card slightly. This helps to stop the edges of the card curling outwards after fitting

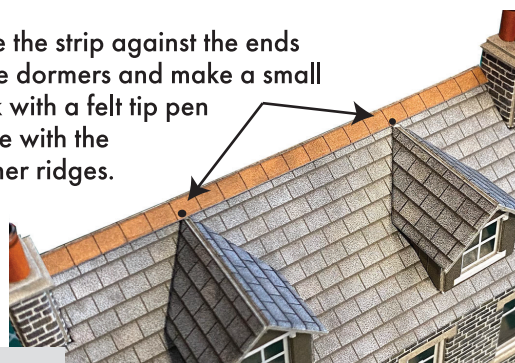


14 Ridge Tiles.

The long ridge tile strip is designed for use on whole buildings where roofs run front and back. With this low relief kit only half of the strip is visible. Fold the other half over the back of the building.

But first you have to make a small modification if you have installed dormers.

Place the strip against the ends of the dormers and make a small mark with a felt tip pen in line with the dormer ridges.



Ridge Tiles continued.

Now cut two small notches out of the ridge tile strip.

Cut just over half way into the strip a notch at 45° angles.



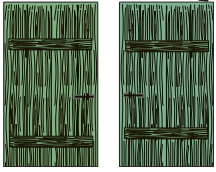
The dormer ridge tile strips now sit over the top as shown here.



Also on the rear gable Building.



Gates



15 Chimney Pots.

This job can seem a little tedious but well worth the effort. It's a job best done whilst watching TV, listening to the radio or even a podcast!

Cut out the terracotta coloured strips (below) roll each one tightly around a metal rod to form a cylindrical shape.

Drill bits, nails or even small screw drivers (like this one right) which is 3.6 mm diameter are just right for the job.

They need to be between 3 to 4mm. diameter for OO scale.

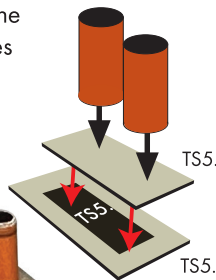
Roll up tight and keep rolling until the paper is fully curled around.

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.



TS5. for gable stack.

TS3. for single stacks.

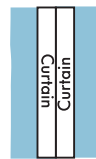
Capping stones TS1. are for single low relief buildings TS2. for low relief joined side by side and TS4. for whole buildings joined side by side.



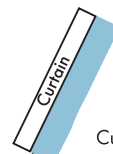
Curtains.

After you have fitted the glazings, if you require curtains now is the time to fit them.

To fit curtains fix a small strip of waste card down each side of the window and attach the curtains either side so that a little strip shows through the window, the waste card will space the curtain back from the glazing.



Cut each curtain to shape.



Curtain with coloured portion facing through the window opening.

Waste card cut to thin strip.

