

## **Modelling in Card**

### **1. Safety**

- Scalpels are very sharp. Always cut away from any body part, such as fingers.
- Young people should only use scalpels under adult supervision.
- Keep scalpels covered when not in use.
- Do not treat any sharp instrument as a toy.
- Work slowly and plan each cut.
- Replace blunt blades.

### **UNSAFE ACT PREVENTION**

#### **Ask yourself:**

- 1. What am I about to do?**
- 2. What could go wrong?**
- 3. What should I do to avoid this?**

#### **Remember:**

**No job is so urgent it cannot be done safely.**

**THINK before you act!**

### **2. Materials and Tools Needed:**

- Scalpel or craft knife and spare blades Always start a new model with a fresh blade.
- 150mm steel rule
- A pair of scissors – for rough work only.
- Scoring tool, such as a non-working ball-point pen.
- Cutting mat. Do not cut against a hard surface, such as MDF or Formica, as this will quickly dull the scalpel blade.
- Glue of your choice. (Aquadhere is best)
- Felt tip pens to touch up bare edges and corners
- Clear acetate sheet to glaze windows. This can be obtained from clear plastic packaging, as used in some shirt boxes.
- Ice-cream sticks to reinforce sides
- 210 gsm white card

### **3. General tips**

#### **Cutting out.**

Care should be taken when cutting out parts. Use a straight edge and a sharp knife to achieve best results. Once cut out, trial fit all parts before final assembly and gluing. Small alterations may be necessary to get a good fit. When cutting out window openings, cut the corners first, freehand, then join the corners by cutting against a straight edge.

Tint any cut edges using a felt tip pen of appropriate colour before gluing.

### Scoring and Folding.

Scoring is used to make folding easier. Before you cut out the parts, prepare the folds by scoring them with a scoring tool and a straight edge. Anything sharp is OK as long as it doesn't cut or damage the paper. An empty (non-working) ball-point pen is ideal. It is essential that your score marks be straight and parallel. Take your time in this very important step, otherwise the assembly will suffer and the model will not look square.

### Gluing.

Use glue sparingly. More glue will only make the paper wrinkle and the drying time will get longer. Glue only one thing at a time, and let the assembly dry a few minutes before moving on to the next step. You can use a PVA based glue, such as Aquadhere. Contact adhesive can also give good results. Do not use super glue.

### Adding detail.

If desired, it is possible to add extra internal and external detailing items such as gutters, downpipes, curtains, and lighting. These should be added at the relevant stage of assembly. If adding lighting, please ensure that you use a low wattage bulb that does not give off too much heat. You can use grain of wheat bulbs running a slightly lower voltage to extend bulb life. LEDs are also available that also run cool.

### Stiffening

It is often advisable to reinforce card buildings. Suitable methods include:

- Gluing wooden ice-cream sticks inside, located where they cannot be seen through window or doors openings.
- Using triangular card or balsa pieces to strengthen corners
- Laminating building sides with extra layers of plain card or balsa.
- Gluing clear acetate sheet behind walls that have windows, before adding the window details
- Gluing the assembled building to a strong card base – but only after any interior details and lights have been added.

## **4. Preparation**

Study your kit. If it has not been pre-cut, work out where the cuts will need to be.

Allow for glue flaps where edges of separate parts come together. It is better to provide flaps that may be too big and trim them just before final assembly.

Ensure that you allow for a reinforcing flap along the base of each wall. When glued together where they overlap at the corners, they stiffen the model. Some kits don't provide for these, but it's easy to cut below the baseline of walls, as most kits have plenty of blank space around each printed part.

Work out where each part will fit in the model. Test each assembly before applying any glue, so you can easily trim any poorly fitting parts.

## **5. Construction**

Carefully cut out each part as you need it. Ensure that your steel rule is over the printed pattern so that any inaccurate cut will only affect the scrap card around the printed area.

Work out where the folds will need to be.

Take a fine needle and pierce each fold line towards the end of each fold. Turn the part over and score it along the fold line, using the tiny holes as guides. Turn it over again and line up the fold line along the edge of your cutting board. Place the steel rule over it, so you can just see the fold line. Hold the steel rule firmly and then fold the flap down for its full length. Repeat this process for every fold. Check that the folds are precisely where they should be and adjust if necessary. (Precision here is essential!)

If you choose to glaze the windows, do so before final assembly. Flatten each part that needs to be glazed. Using a sharp scalpel, pierce each corner of every window so it has an "L" cut. Using scalpel and steel rule, carefully cut each window edge between the L cuts. Set aside the window cutouts. Take some clear acetate sheet and cut it to go behind the wall. (This provides very good stiffening to the model and is recommended.) Glue it in place with PVA glue, such as Aquadhere. After it has dried, glue the window cutouts behind the glazing and adjust their positions. Allow these assemblies to dry before using them.

Check that all walls fit together well. Adjust if necessary. Apply glue to the bottom flaps where they overlap and press them together, ensuring that the walls are at right angles. Fit separate wall parts together and glue. Allow the open box to dry.

Cut out the roof parts and test fit them to the open box. Glue them together when you are satisfied that they fit well.

Use ice-cream sticks to stiffen the structure, if desired.

Add other details to suit, such as downpipes, steps, chimneys, awnings, etc.

Use alternate business names to make your model that little bit different from the next one.

## 6. On-Line Sources of Card Kits

There are quite a few useful websites, from which many designs have been downloaded and printed for use by members of St Lukes Model Railway Club. These include:

[http://www.illinoishistory.gov/ps/construct\\_mainstreet.htm](http://www.illinoishistory.gov/ps/construct_mainstreet.htm)

This has a mix of simple and complex H0 scale kits. They are all supplied free of charge. I would suggest that the best kit to start with from this site is "Shastid House". All of the kits from this site include as part of their design a reinforcing flap at the base which greatly improves their strength. We have used this feature on kits from other sources by including a similar base flap, even though their instructions don't ask for it. The shop kits on this site make quite large models which look like Aussie shops in older shopping centres, once we add suitable front awnings. However, the shop kits are a bit challenging! Don't start with those!

<http://australian-card-kits.com/>

This site has some free H0 scale kits, as well as some you can buy. We have downloaded a couple of the kits that used to be free, but now are only available for sale. We have been using them in card building classes at the Club. (These do need the extra base flap mentioned above.)

<http://www.mike.martin.dsl.pipex.com/wordsworth/word.html>

These free 00 scale kits of English buildings are very simple to make and can be adapted to look like Aussie buildings with just a little effort. We have localized the Newsagent kit by adding a front awning, as we see in most Sydney shopping centres (eg Turramurra). The appended image shows it with 2 shops modified from the General Store from Australian Card Kits.



I have been printing my kits at home on an HP F2480 inkjet printer, which easily prints onto the cardstock. Many laserjet printers do so also.

Take your time with all kits. Don't expect to finish the more complex ones in an hour. They can sometimes take two days to finish! Once you get some practice making the kits as designed, you may wish to add some variety by modifying them, especially with different windows or window displays, as well as awnings, verandahs, different business names, etc. Modellers' matches are useful as verandah posts and are more durable than the card tubes suggested in some kits.

Once you have worked through the kits listed above, you may wish to move on to more complex ones.

## **7. Commercial Card Kits and Potential Retail Sources**

Metcalfe model building kits

<http://www.woodpeckermode railways.com.au/>

These 00 scale British kits can provide superb models, adaptable to a wide range of locations. Industrial buildings can be joined together and modified, as shown by this model tram depot:



Superquick model building kits

<http://www.woodpeckermode railways.com.au/>

<http://www.hobbyco.com.au/>

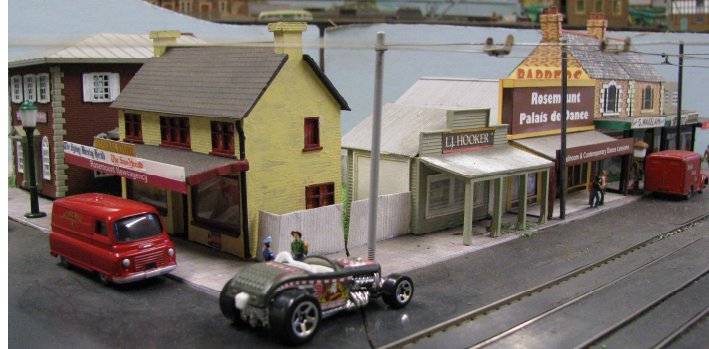
These 00 scale British kits have been available for many years and can still be used alongside more recent plastic kits to provide a believable streetscape:



Alphagraphics kits

Forest Miniatures, 17 Hurdis Avenue, Frenchs Forest NSW 2086, Australia. Tel: (02) 9451 1551

These delightful and inexpensive 00 scale British kits require a lot of care to be cut out from their flat printed card sheets. They can provide very realistic streetscapes, both British and Australian, especially when fitted with detailed interiors and lights and mixed with other models:



LJ Models

[http://www.casulahobbies.com.au/catalog/index.php?cPath=115\\_42&osCsid=db156e94c343a63b8ab5450f8fb3ac6f](http://www.casulahobbies.com.au/catalog/index.php?cPath=115_42&osCsid=db156e94c343a63b8ab5450f8fb3ac6f)

These kits of Australian buildings are complex, but produce a wide range of iconic Aussie structures, such as this pub and the adjoining shop:

