

## The Old Custom House by M. H. Bradley

Photographs and illustration  
The author

IT WAS THE Emperor Kai Lung, may Allah burnish his memory, who remarked that while there did not appear to be much resemblance between the Lillies of the field and the Imperial Customs Collectors, nonetheless they were similarly arrayed and magnificently housed.

And in the eighteenth and early nineteenth centuries none more so than in the South West. The Old Custom House at Exeter lends distinction to the Quay amongst a colourful composition of riverside inns and warehouses. Afficionados of the 'Onedin Line' will no doubt recall the distressing tendency of James Onedin to confuse the Exe with the Mersey and the Exeter Custom House with the Shipping Exchange at Liverpool. No doubt his skill with the sextant had been adversely affected by the fever caught among the mangrove swamps of the River Dart!

The virility of the design of the Custom House is probably due to Dutch influence; the dentilled cornice and pediment are most attractive features particularly in model form and the block stone capitals to the pilasters of the arcade at ground floor level are a very rustic interpretation of Vitruvius but none the worse for that. It will also be noted that three of the first floor sash windows are divided into 16 panes while the remainder of the fenestration exhibits the more usual 12 lights. It seems probable that the sashes concerned were replaced at some time since the original construction due to an accident of some sort. The open flue to one of the stacks is also of interest and is brought out more particularly

on the South East elevation — it is marked by a few free standing courses of  $4\frac{1}{2}$ " brickwork on the cap — unusual to say the least. The pediment is also rather intriguing. With its low pitch (26 degrees) I had assumed that the roof behind would be covered in lead or zinc but not a bit of it, it is slated like the remainder of the roof, no doubt with a hefty amount of torching to the underside.

One final comment on the prototype; the drawing shows only the main section of the elevation facing the river. The rear of the building, as was often the case, is a hotch potch of additions and modifications, of interest only to the architectural historian. In my model I have constructed the rear elevation as a mirror image of the front but without the architraves and the ground floor arcade, substituting flat brick arches with a stone keystone and with a simplified cornice but including the dentils. I think it good advice to pay some attention to the seamliness of the rear of a model, as in the life of the average layout the location of any scenic feature is liable to be changed and it is a pity if one's freedom of action in this respect should be hindered by unfinished or sub-standard work.

Before commencing work on the model, it is as well to mention one item of equipment which is essential to the successful execution of the design. I refer of course to a pair of spring bow dividers. A cheap scholastic pair are quite adequate but without them it is not possible to make a clean and adequate job of the semi-circular arches to the arcade. These are cut from 30 thou, styrene sheet by setting

the spring bows to the outer radius of the arch and spinning the point around until it has scored quite deeply into the plastic which is then snapped away in the usual manner. The intrados of the arch is then formed in a similar way, the resultant washer being halved through its centre line to form two arches. If reasonable care is taken, no further cleaning up will then be required. You will find the bows most useful in many other operations, particularly in setting out. All that is necessary is to set the instrument to the width of the strip you require, place one point against the edge of the sheet and draw the bows along for the length required. An accurate strip with parallel edges will be the result.

Incidentally, if two or three of the ground floor arches were opened out to give access to a booking hall, the design would lend itself particularly well to a station house, especially in association with one of Brunel's timber train sheds, the string course being at a suitable height for the springers of a canopy roof on the platform side. The corbels at Ashburton for example, are as nearly as I can judge 12'6" above platform level which means that a platform cover of this style could be fitted without adversely affecting the first floor windows or making the design appear in any way forced.

But now to work. 10 thou. Plastiglaze is required for the fenestration, the frames and glazing bars being traced from the drawing in 'Humbrol' flat white as usual. Incidentally as we are going to separate the upper and lower sashes and model some of the windows in



*The Old Custom House, on the Quay at Exeter, has provided Maurice Bradley with the inspiration to build this excellent model. A full-colour elevation of the building appears on page 415. The model is constructed largely from Plastikard and balsa, and the builder's techniques are fully described in the text. The rear of the model is not illustrated — the prototype displays the usual mixture of additions and alterations.*

open position, take care to emphasize the meeting rails as the windows will later be cut at this point to allow the lower sash to be mounted behind the upper. In constructing the external walls of these models I departed slightly from my usual practice and made them in two leaves, the inner of 30 thou. styrene sheet with the window openings cut to the outer line of the frames, the outer leaf of 20 thou. material on which the brick paper was mounted (Superquick D.1 — red brick). In whatever scale this structure is made, it results in a fairly hefty model and it behoves us to get as much strength into the work as possible as we go along. In addition you will find that this layered construction is a good insurance against subsequent warping, no unresolved stresses being contained in the facades which remain flat to work on.

The pilasters and string course were cut from 30 thou. sheet but the architraves to the first floor are of slightly thinner material. The stone quoins were cut from 30 thou. sheet, the bed joints being emphasized by slightly chamfering the arises with an emery board as the work proceeded. Make sure that the quoins fit neatly between the base mould of the entablature and the string course, and between the string and the ground by having a dry run before finally cementing them in position with Mekpak. You will notice also that the capitals of the arcade fit neatly and to course with the adjacent quoins.

The wing on the right of the elevation to the Quay is of slightly simpler construction; the cornice, while lining in with the main work,

lacks the base moulding and the string course is formed in projecting brickwork rather than stone. The main element of the facade also projects 4½" in front of this wing, although the slated roof and the cornice show no break.

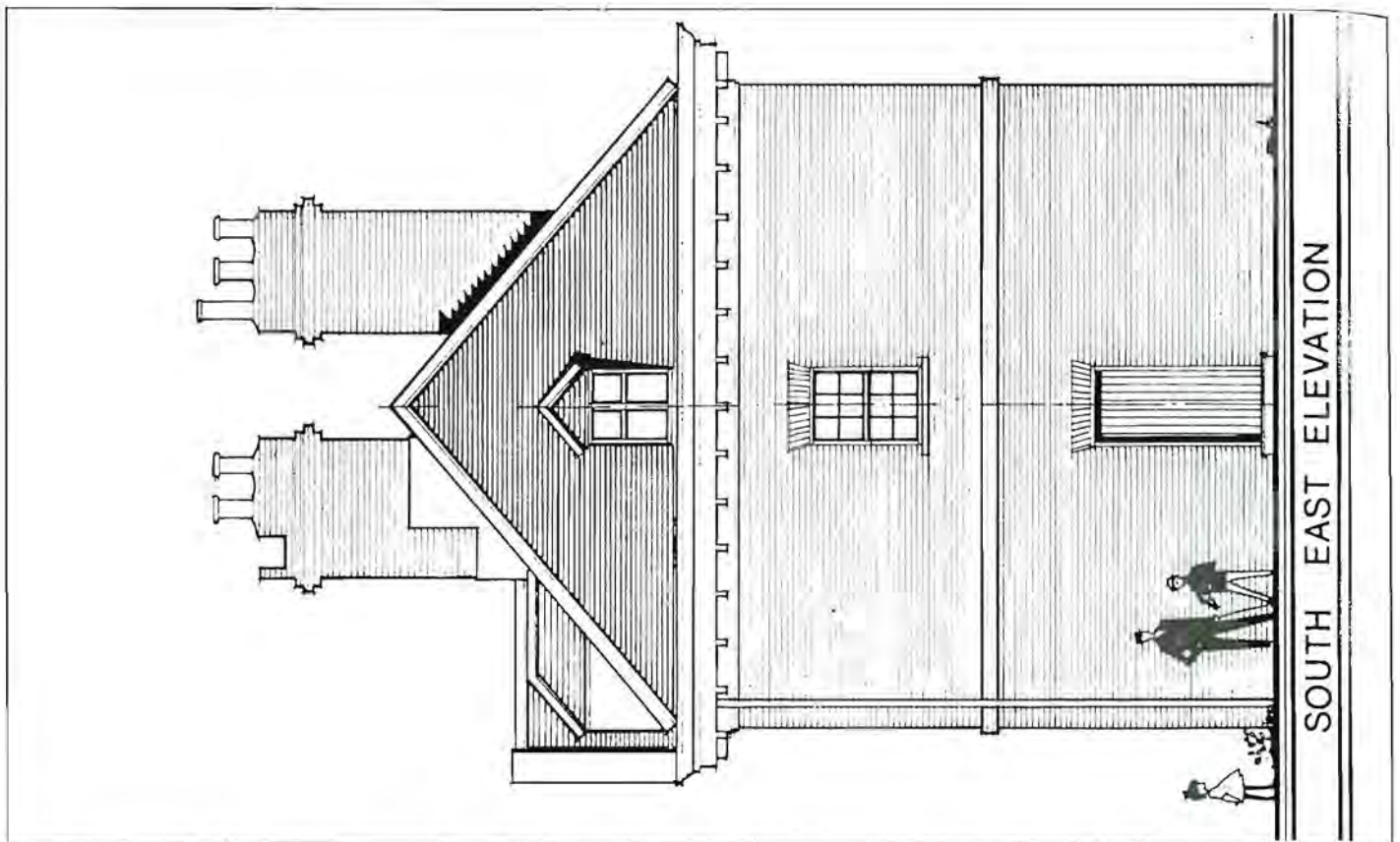
When all the facades had been fully modelled and completed on the flat, the glazing sheets were fixed with 'Uhu' behind their appropriate apertures and the separate elevations were then attached one to the other to form the body of the building. Curtains were fitted to taste to the upper floors although the ground floor, being used as offices, is somewhat more spartanly equipped with green draw curtains to the level of the meeting rails only, rather in the style of Solicitors' offices. I find it advantageous, although somewhat time consuming, to frame the windows around in 40 thou. strip at the rear of the glazing before fitting the curtains. This ensures that the shadows of the glazing bars and frames fall in prototypical fashion and emphasises the transparency of the glazing, bringing the model to life in a thoroughly convincing manner.

Sheet balsa ground and first floors were then fitted to give strength to the building and hold it to shape but before sealing the work in, a central mid-feather was glued in position on the centre line of the building to ensure that it was not possible to look right through from front to rear windows. A final check to make sure that all glazing, curtains, etc., were firmly attached and that no small tools or other impedimenta were likely to disappear for ever and a sheet of 40 thou. styrene was then

carefully fitted at first floor ceiling level to hold the upper part of the walls in position, suitably perforated to ensure that any solvent fumes had a means of escape.

The roof, complete with stacks, dentilled cornice, pediment and dormers was made as an entirely separate unit fitting over the structure like a lid. A start was made by cutting a sheet of 60 thou. styrene sheet to the line of the cornice immediately above the dentils and, as the outer edges formed the fascia, these were carefully sanded smooth with the ever useful emery board. The first floor of the building was then offered up to the underside of the cornice and the line of the brickwork carefully drawn in pencil. The positions of the dentils were marked, the spacing being checked with the bow dividers. A few lengths of 20 × 10 thou. Microstrip were then taken and a slip of strip attached with Mekpak at the position of every dentil and before the adhesive finally evaporated, the front and rear faces of the dentil bases (for want of a better word) were quickly trimmed to line with a steel straight edge. Do this work carefully and keep any adhesive away from the edge of the 60 thou. sheet, otherwise the line of the fascia would be spoiled and you would have to start the whole procedure again. Re-check that the cornice fits neatly over the first floor of the Custom House before trimming any 'rogue' slips of Microstrip as necessary.

The dentils proper are now cut from 40 thou. sheet and cemented securely over the Microstrip markers already in situ. The benefit of the previous preliminary work will



now be appreciated. When all the dentils are in position and the cement has hardened, the front and rear faces can be trimmed accurately and at leisure to a true line with a steel rule without any risk of the fascia line being disturbed.

The remainder of the crowning moulds to the cornice are formed in Microstrip. In the small scales you will find that if the profile is followed in reasonable block form, the character of the building can be captured without necessarily following the curves of the cyma recta for example with great exactitude.

On the principle that one drawing is worth a thousand words of explanation, I have included a small sketch of the angle of the building looking down on the cornice. I hope that this shows fairly clearly the way in which the dentils turn the corner, one dentil being set precisely on the angle at forty five degrees. The rainwater from the roof is collected in a secret gutter at the base of the slates and discharges into fall pipes which travel straight



through the soffit board between the dentils without the necessity of forming a swan neck. The sketch also shows one of the dormer windows. These do not appear to be part of the original design as the layout of the glazing bars is quite at variance with the remainder of the windows. The dormers have hipped, slated roofs with lead to the hips and ridge and lead sheet to the cheeks. Rainwater gutters are not fitted to these small details and the valley where the dormer roof merges with the main roof slope is finished by neatly mitring the slates on the angle.

The chimney stacks are formed in balsa in the usual way, the oversailing courses of brickwork being worked up in Microstrip and later covered with brick paper cut precisely to course and attached with a wash of Mekpak. For this model I used commercially available chimney pots which, incidentally, I can thoroughly recommend. They save one quite a bit of work and, when bedded in modelling clay, are entirely convincing.

The roof slates were applied separately and are attached to the previously prepared roof slopes on a surfacing of graph paper to ensure that the slates are regular and true to course. The stepped lead flashings at the junction of stacks and roof are drawn on the brick paper in Indian ink. It will be noted however, that one of the stacks has a render coating of sand and cement and this I indicated with a thin layer of Pecosene trowelled in position with a palette knife and trimmed off against a small steel rule.

And that just about completes the saga. The fallpipes I made from Slater's plastic rod as, on this building, no curves have to be formed in the pipework. The external doors were formed of scraps of Teak veneer, eggshell varnished and with the panels drawn on in Indian ink. All that remains is the general painting of the roof and odd details — the cornice, chimney pots and general touching up. The roof slopes I painted in Humbrol No. 87 let down with approximately 25 per cent flat white and, when dry, individual slates were picked out in various shades of grey, yellow ochre and so on.

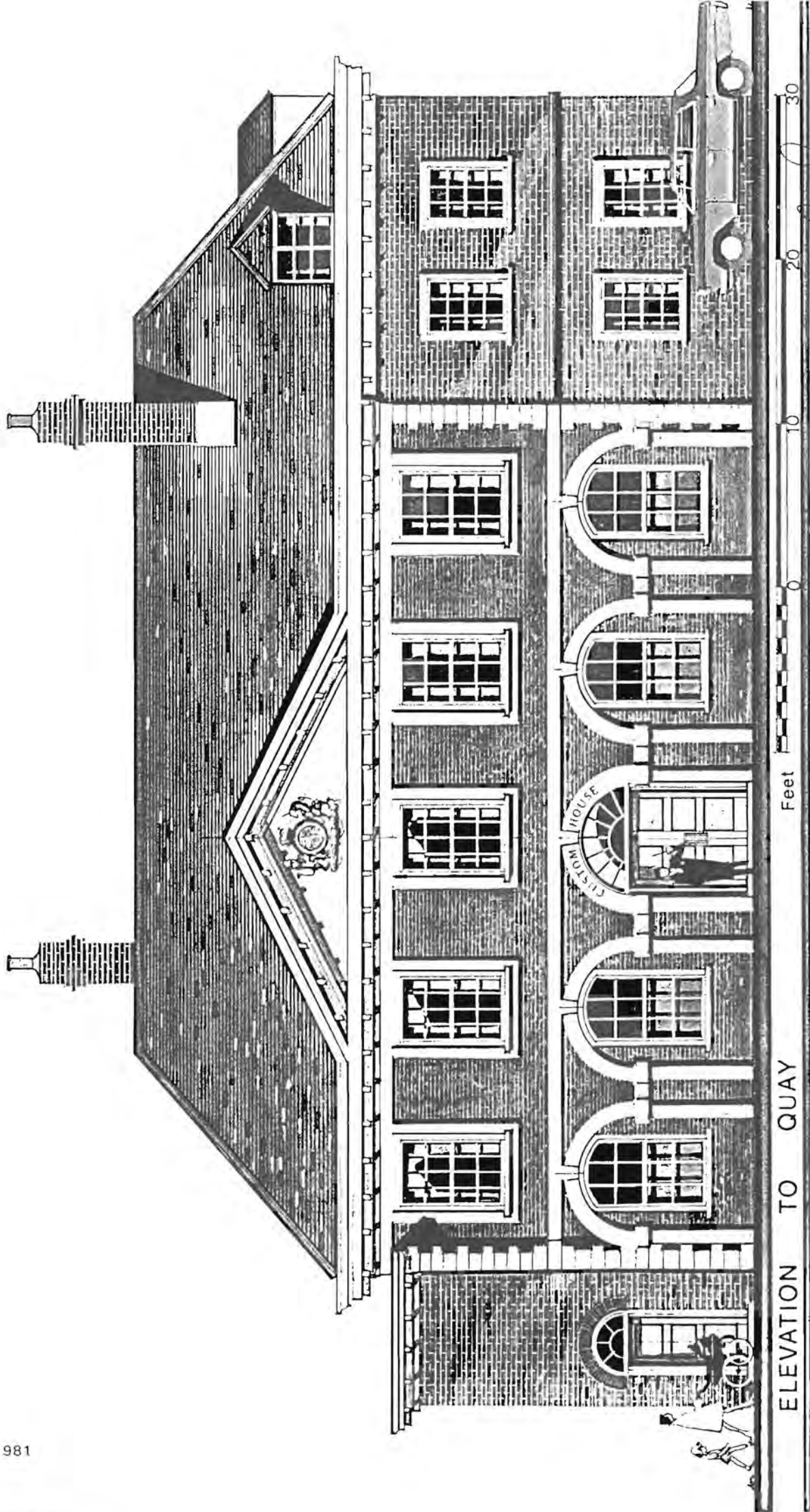
It gives quite a convincing Delabole slate finish and looks even more authentic when the spots of lichen are applied in orange wash colour. The dressed stone finishes were painted in very pale cream to give an impression of Beer stone, a local limestone from which much of this work was fabricated.

Any projecting edges of string courses, chimney caps and general reveals were touched in with Humbrol No. 70, a matt brick colour which is most useful for adding a bit of life to the brickpaper by picking out random stretchers and particularly any rubbed bricks in arches to doors and windows.

The finishing touch is provided by a Royal Coat of Arms set in the centre of the pediment. This was copied from a Royal appointment panel on a box of biscuits and finished off in gold ink to the shield and crown. You may be able to find a ready printed heraldic device of the correct size by keeping an eye on the packaging of the weekly groceries.

5700 Class pannier tank shunting on the Quay. Note the reflections in the 'water'.





ELEVATION TO QUAY

Feet



*W. D. S.*