

**ARCHAEOLOGICAL RECORDING  
DURING REPAIR WORKS TO  
46 HIGH STREET, EXETER**

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## INTRODUCTION

In June 2009 scaffolding was erected at the front of No. 46 High Street, Exeter (SX 9203392655) in preparation for remedial work to be carried out on the building's façade. The building is a Grade II\* Listed Building, possibly dating from the late 15<sup>th</sup> century. Exeter Archaeology was commissioned by St Blaise Ltd, on behalf of the owners Thorntons Ltd., to carry out a detailed archaeological record of the areas affected by the repairs in order to fulfil condition No. 5 on the listed building consent (Exeter City Council, No.06/1774/07).

The aims of the archaeological recording work were to furnish those carrying out repairs with essential information about the age and relative importance of the existing fabric while at the same time compiling a record that would supplement the considerable body of work on Nos. 45-47, High Street previously undertaken by Exeter Museums Archaeological Field Unit (now Exeter Archaeology) and Exeter Archaeology.<sup>1</sup> The resulting record will provide a sound basis of knowledge of this part of the building in order to inform any future repair work, and will be added to the existing archive to be deposited with the relevant bodies including the RAM Museum in Exeter.

A detailed drawing of the elevation, produced prior to works commencing, was augmented after removal of modern facings in some areas. Diagrams showing details of construction were also produced where appropriate, as well as other drawings of newly exposed fabric. A copy of the main elevation drawing, with annotations indicating the areas of visible historic fabric, was supplied to the contractors to aid them in their decisions about the work to be carried out. In addition to the drawn record, a full photographic record was made using black and white film and colour digital media.

A paint analysis was conducted on the front elevation by McNeillage Conservation. Extensive areas of this elevation were coated in multiple layers of paintwork including very early layers thought to represent the original paint schemes. A further program of work was carried out by St Blaise Ltd where specific areas of the façade paintwork were analysed in order to assist in the dating sequence. The results of this latter report are pending.

The opportunity, afforded by the exposure of original structural timbers, was taken to carry out dendrochronological analyses. Nottingham Tree-Ring Dating Laboratory was commissioned by English Heritage to take core samples from suitable timbers, and the results are pending.

## THE SITE (Fig. 1)

No. 46 High Street was constructed in the late 15<sup>th</sup> or early 16<sup>th</sup> centuries and considerably remodelled in later times, particularly in the 19<sup>th</sup> and 20<sup>th</sup> centuries. This former merchant's house is believed to have been built with No. 47 as a pair of identical houses, though there is little to indicate this today as the latter has been much

<sup>1</sup> Exeter Archaeology 1983, 1985-6, 1988, 1993, 1997, 2004.

altered and now has an additional storey (Pl. 1A). Both houses are entirely timber-framed and constructed of massive closely-spaced oak studs tenoned into horizontal rails, and supported on low stone walls. No. 46 has also seen considerable alteration to its façade, but remnants of its original form with jettied eaves and carved decoration can still be seen (Pl.1B). The jettied timber-frame frontage would therefore have once been continuous across both buildings and in fact still survives at the rear of the building.

Each house consisted of a front block, containing a shop on the street frontage, and domestic accommodation behind on each of three storeys. The houses sit on finely dressed Heavitree stone walls extending from the cellars to a little way above ground. Large closely-spaced oak studs tenoned into horizontal rails are well preserved and visible on all the upper floors. Also preserved are remnants of the original fenestration of the front façade and that of the north-east elevation which originally overlooked an alley that ran between Nos. 44 and 46 High Street. ‘Lamb Alley’, as it was called, was blocked by the construction of No. 45 in c.1600 but some first and second-floor windows on this elevation still survive within the wall.<sup>2</sup> Both houses had a small rear courtyard, beyond which stood a rear block probably containing kitchens. The rear block of No. 46 has been demolished, but that at No. 47 survives.

#### ARCHAEOLOGICAL RECORDING

Following a rapid assessment of the building’s façade, some areas of modern fabric were removed. These included cement facings to panels on the first and second floors and a 19<sup>th</sup>-century plaster and lath panel-facing on the first floor. Cement render was removed from the south-west face of the frontage while a small area of timber cladding was removed from the north-east face. Some modern timber box-cladding was lifted from the corners of the upper ground floor level. Meanwhile on the roof, investigations of a drainage problem involved lifting of slates at eaves level, and later remedial work required the removal of a timber base to the former parapet gutter. Before major works had begun, a detailed drawing of the full elevation of the front façade was made at a scale of 1:20. (Fig. 2) This drawing provided the basis for further illustrations referred to in the text.

A paint analysis of selected areas of the façade was also carried out. The thickness of paint layers in some areas was considerable, resulting in a loss of detail to the fine carvings that survive on the oldest parts of the frontage. Following a trial of stripping methods and materials, a more extensive strip was initiated. Using the results of the paint samples, a controlled and limited stripping operation was performed in order to reduce the paint shroud down to a specified level at which one of the early paint schemes was identified. Details of the findings of the paint analysis carried out by McNeilage Conservation are available as a separate report compiled by the contractors. A summary of the findings is included below (see Paint Analysis, page 12).

The survival of the earliest paint scheme was of course dependent on the survival and condition of the earliest fabric. This essentially came down to the survival of the

<sup>2</sup> 43-45 High Street, Exeter Archaeology 2004.



earliest timbers, as all of the infill plasterwork had received replacement outer facings. In some areas, despite medieval timbers surviving, the wood was so weathered or decayed that all paint was lost. The main elevation drawing was coloured to indicate the areas of survival of medieval paintwork (Fig. 3B)

### **The Timberwork of the Front**

Original timbers forming the corner posts of the façade were present at both ends of the elevation, but much of the extensive former carvings had been hacked off. Remnants of these carvings were seen on the corner posts and former jetty brackets on the first floor.

On the second floor two reproduction angels presently adorn the façade at the corners. Timber originals are documented along with other standing figures,<sup>3</sup> but the present examples are cast in gypsum plaster at the east corner and cement at the west (Pl. 2). The cement repair of the western angel also included the adjacent coved jetty bracket, where cement has been used to imitate rather crudely the original carved timbers that still survive in large part to the east.

The 16<sup>th</sup>-century coved jetty brackets give a suggestion of the fine quality of the carving that once adorned much of the frontage. Although presently coated in an extremely thick layer of paint that obscures the fine detail of the spiral ribbon and bead carving, small areas of paint removal revealed apparently sound oak, finely worked.

The jetty brackets were housed in further original timbers. The bases of the brackets were tenoned into a horizontal girding beam, embellished with a triple-roll moulding, forming the base of the second floor. The floor-joists of the second floor were tenoned into the inner face of this. On the beam's lower face was more spiral ribbon and bead moulding which overhung the front face of the coved head-beam below (Pl. 3). The coved beam forms the lintel above the present window openings of the first floor. It was clear that both the girding beam and coved head-beam had suffered from water ingress at the north-west end and, particularly in the case of the lintel, from attack from death-watch beetle.

The tops of the jetty brackets were tenoned into the underside of the second-floor windowsill-beam. The lower front edge of this beam had a hollow chamfer leading to a further spiral ribbon and bead moulding (Pl. 4). This beam was braced to the interior timber framework by means of a pair of steel straps positioned horizontally against the inner and outer faces of the timber. Nine bolts penetrating the sill-beam tie the two plates together. This sandwich of steel, bracing all the knee joints between the upper and lower halves of the second-floor frontage, has thus arrested the movement of this part of the façade outwards towards the street (Fig. 4C). The steel framework was bolted to the timber studs of the interior side walls. The sill-beam and steelwork were protected externally by lead weathering. Beneath this, the top surface of the eroded sill-beam had been made good with a timber plank ending with a moulded edge in the room within.

<sup>3</sup> William Cotton, *An Elizabethan Guild of the City of Exeter* (1873), Exeter (See Pl. 12).

Despite lying beneath the leadwork, the spiral ribbon and bead moulding was in poor condition. It is not entirely clear if further decay has occurred since the steel bracing had been added, but very little paintwork remained on this timber. There are areas of cement repair visible along its lower edge. Considerable decay of this beam had occurred at the north-west end where water damage was the primary cause (Fig. 5C).

Several of the jetty brackets had been patch-repaired in plaster. This work is probably contemporary with some of the panel infill outer facings. Plaster on plain or riven oak laths are presumed to form some of these, the offset frame of each panel built up in plaster to a depth of *c.*6mm. The remaining panels were surfaced in cement with masonry paint over. The present panel-facings obscure part of the original mouldings on the jetty brackets. The modern infill of one of the panels was removed allowing full view of the side profile of the bracket. Two grooves for oak laths were visible, a straight inner groove running parallel to, and just inside, the inner face of the bracket, and a curved outer groove running parallel to, and just behind, the spiral ribbon and bead moulding (Pl. 5).

Modern facing was also removed from another panel. In this instance part of the original fabric was found intact. Riven oak laths filled the inner grooves on the sides of the brackets and the lower part of the outer grooves. Those within the inner grooves were finished in plaster forming the inner wall surface (Pl. 4). From this one can assume that original plaster infills are likely to survive in most, if not all, of the remaining panels beneath the later external re-facings.

Much of the damage to the façade has occurred at the west end adjacent to No. 47 (Pl. 6). A longstanding problem with roof drainage leading to overflow from the building's parapet has resulted in the loss of the westernmost second-floor jetty bracket. A modern timber was found beneath the cement angel but this provided no structural support. This end of the moulded girding beam and coved head-beam may have been previously repaired, though this area was so badly decayed as to have been unrecognizable as wood.

The corner posts on the first floor have fared better. Although deliberately defaced, the wood itself appeared sound. The coved head-beam above appeared originally to be tenoned into the corner posts but these have been hacked back on their northern faces to the extent that the mortices have been opened up, revealing the tenons (Pl. 7). Close inspection of these two joints seems to indicate alterations involving the coved head-beam. The position of the joints' shoulders indicates the original depth of the coved head-beam and it would appear that the depth of the beam has been reduced to allow insertion of later windows and panels (Fig. 2). The truncation of the faces of the corner posts has removed almost all carved decoration. Only a small remnant of rounded moulding survives on the western post. Attached to the bases of these uprights were the remnants of the original first-floor windowsill-beam. This has been entirely removed between the corner posts, probably in the late 18/19<sup>th</sup> century when sash windows were inserted.

Below the remains of this truncated sill-beam, at each corner of the façade there are the remains of carved jetty brackets. Concealed behind modern timber cladding, these too have been severely hacked back. A few remnants of carving can be seen on the front face of the eastern bracket and even fewer remain visible on the western timber.

However, further carvings could be felt on the north-west face of the western bracket, hinting at the building's former pairing with No. 47. It seems quite possible that these are relatively intact.

The remnants of the two corner jetty brackets of the first floor presented similar details in the form of what appeared to be depictions of fabric folds, perhaps once adorning the feet of carved figures (Pl. 8). Below the traces of carvings, the brackets tapered by means of hollow mouldings. At the base of the eastern bracket there was a horizontal beam with mouldings that must surely be the original ground-floor jetty bressumer. Like the floor above, this would have been the bearer of brackets for this floor's jetty. These would undoubtedly have been carved with the same ribbon and bead moulding as seen on the second floor. This beam was largely concealed by the 20<sup>th</sup> century coved panel that is now in place, but the subsequent removal of the modern interior cladding at least allowed a hand-felt examination. Although hacked about quite badly it was nevertheless possible to ascertain that the outer face of the beam retained at least some of its moulding and a partial profile of it was taken (Fig. 11). Mortices for the original jetty brackets were visible in the top face of the beam.

Carvings have survived quite well on the second-floor corner post above the cast angel, formerly adjacent to Lamb Alley. Following the paint strip, these were drawn and photographed (Fig. 4A). The north-east face featured a lancet shape above a heater-shaped shield with part of another lancet below (Pl. 9). This decorative scheme is similar to that revealed within No. 45 where carved timbers survive on the first and second floors. The timbers recorded here bear quatrefoils in addition to the lancet and shield.<sup>4</sup> Two shields adorning the windowsill-beam of the east-facing windows could be seen beneath the front façade of No. 45 (Fig.4B).

The front face of this corner post had a pronounced vertical moulding of which the upper half was intact and in good condition (this timber was recorded fully following restoration and paint stripping. See Fig. 11A). The lower half had undergone some cement repairs in the 20<sup>th</sup> century.

Adjacent to No. 47, the western corner post at this level also survives though its condition is poorer. It has been badly damaged by water and beetle and the outer face has been partially rebuilt in later timber. However, enough of the timber's features survive to indicate the post's function as a former jamb for the last window in a row of eight that once spanned the façade on this floor (the carved tops of the windows remain visible on the interior face of the head-beam.) Sockets for iron bars were present on its inner face. Removal of modern render to the west allowed access to the post's southern face which displayed a groove for plaster and lath infilling. The base of the post was encircled by a steel strap fixed to the studs of the interior party wall.

The jetty corner post below this, bearing the cast angel, had been replaced entirely with new timber. This also was strapped to the internal studwork. Neither the post nor the bracket at this end of the first floor was providing any structural support to this side of the façade. The front elevation drawing clearly shows how the damage to the structural integrity of the west end has resulted in a downward slant (Fig. 2). Unfortunately the slump has run counter to the incline of the parapet gutter to the

<sup>4</sup> 43-45 High Street, Exeter Archaeology 2004.

downpipe at the east end, further exacerbating the drainage problem.

### **The Cast Angels, Fire Insurance Plaque, Windows and Panels**

The angel adorning the eastern end of the façade is a cast replacement in white gypsum plaster (Pl. 2a). It has been replaced since it was drawn in the 18<sup>th</sup> century (Pl. 12; Fig. 12). The plaster and wood cladding of the adjacent areas of the north-east face may be associated with this phase of work. The original timber base to the angel remains.

Possibly contemporaneous with the eastern angel is the insurance plaque fixed to the coved head-beam beneath the moulded girding beam (Pl. 10). Signifying the owner to be a signed-up member of a fire insurance scheme, these plates along with their associated policy number would ensure that, in the event of a fire, the relevant company's own fire fighters would attend the fire. This particular emblem bearing the image of a sun is, not surprisingly, the mark of the Sun Fire Office which was established in 1710. This particular plaque appears to be a later variety pressed from a tinned iron plate. Scraping of the paint layers on the plaque revealed a thinner coating overall compared to the underlying timbers and some signs of gold paint or leaf were visible.

The two panels flanking the first-floor windows are apparently filled with haired plaster. They may date from the time the windows on this floor were first altered and the sill-beam truncated. This is likely to have been in the late 18<sup>th</sup> or early 19<sup>th</sup> century. Gendall's drawing shows that sash windows were in place before c.1830 (Pl. 11). The drawing also shows advertising hoardings flanking the window. These have been replaced by the beginning of the 20<sup>th</sup> century with panels like those present today (Pl. 13).

The present windows on both the first and second floors are 20<sup>th</sup>-century metal, fixed and casement types with leaded lights and set in timber frames. Other 20<sup>th</sup>-century fabric includes the cornice, the coving panel above the shop-front, all the panel outer facings flanking the second-floor windows and several of the panel outer facings between the spiral ribbon and bead-moulded jetty brackets.

### **Remedial Works and Details of Construction**

Following examination of the structural timbers of the main façade, it was deemed necessary to remove some of the timbers to be replaced by new. Both the second-floor girding beam and the coved head-beam were so badly affected that they needed to be removed in order to fully assess their condition. Ultimately it was decided that all of the second-floor façade should be carefully dismantled as this would allow a full assessment of and selective repair to individual timbers.

Prior to the full removal of timbers, close inspection of the structural joints of the second-floor façade was made as and when these details were exposed. The full dismantling of this part of the frontage allowed close study of each of its constituent timbers and a fuller understanding of the details of its construction. This was backed up with drawings and photographs of the main timbers and diagrams showing the details of carpentry employed.

It was only at this point that it was revealed how integrated the carvings were with the main structure. The spiral ribbon and bead moulding of the second-floor girthing beam is fully part and parcel of the structural timber. This also applies to the roll mouldings on its northern face. Likewise the coving of the beam below is continuous through to a smaller coving on its inner face forming part of the first-floor room's cornice moulding (Fig. 4C). This beam appears to have been the window head-beam for this floor. The evidence strongly suggests that this beam was truncated to allow for the sash windows to be inserted and the likelihood is that this beam originally had integral window head mouldings like those that remain above the second-floor windows. The moulded girthing beam proved to be largely intact and in reasonable condition apart from a degree of erosion and decay at the west end caused by water ingress and fungal decay, and an area midway within the beam's top surface affected by water and/or death-watch beetle. All sockets and peg holes in this timber were original and the beam as a whole appears not to have been affected by any secondary alterations (Fig. 6).

This beam serves as a main joist bearer for the second floor. The joists are tenoned centrally into the inner face of the beam with pegs penetrating vertically the full depth of the timber. The beam also supports the brackets of this floor's jettied frontage. These are attached with single tenons set centrally into the top surface of the beam. Some of these mortices intersect the mortices for the joists. The lower face of the beam is clear apart from the peg holes for the floor-joists and therefore sat directly upon the coved head-beam below with no further attachment to it (Fig. 7).

At the Lamb Alley end is a rather unusual joint that fixes the moulded girthing beam to the stud rail of the second-floor room's former outer wall. This is a mitred joint incorporating three interwoven tenons. A single central tenon from the girthing beam is housed between two tenons from the stud rail, the joint secured by two pegs (Fig 5A). The full detail of the joint's structure was only made clear after the dismantling of the joint (Pl. 14).

The coved head-beam was found to be in a very poor state with large parts entirely degraded by the action of death-watch beetle, in addition to serious erosion at the west end due to water ingress and decay. Although the north-west end of the beam in No. 46 has been lost, the timber could be seen continuing into the other half of the paired building (into the present No. 47). This section of the beam is also decayed but has apparently survived despite the extensive remodelling of the façade in this half of the building.

Lying at the junction between the two halves of the building pair is an extra-wide joist. This is shared by the two halves of the building, with a visible tenon into the girthing beam at the north-east end of the timber and, one can assume, another tenon formerly at its western end. However, this tenon has since been removed to accommodate a later stud forming the basis of the front wall of No. 47 on this floor (Fig.8B).

At the Lamb Alley end, the coved head-beam connected to the carved window head above the first-floor north-east side windows. Unfortunately, much of the joint has been lost but the remains suggest a tenon from the window head. A vertical edge at the end of the coved beam represents the remains of the mortice. Below this is a small



tongue of timber in which a vertical tenon was once housed from the corner post below. Evidence for a similar mortice for a tenon from the upper corner post was seen on the top side of the head-beam (Pl. 15). At the north-west end of the coved beam there is a dovetail joint from the first-floor head rail of the north-east wall.

As mentioned earlier, the evidence for the truncation of the lower section of the coved head-beam lay at both ends of the beam. At the north-east end the remains of the coved head-beam lie short of the top of the corner post by approximately 100mm (Pl. 15). At the north-west end there is a small stretch of intact wood of the coved beam extending down to meet the top of the corner post (Pl. 16). This extra depth indicates a beam some 340mm deep. This implies removal of 140mm of timber above the present windows and panels, enough to accommodate head mouldings for the original windows. The removal of this timber was also later evidenced by the roughly hacked lower face of the coved head-beam, made visible following the removal of a timber finishing strip from the interior face.

Such head mouldings survive at least in part on the second-floor window head-beam. These were fully recorded following removal of the timber (Fig. 9). The outer face of the timber had been hacked back, presumably to accommodate the modern cornice. The inner face was largely intact, complete with all but one of the eight Tudor-arched window-heads, that of the extreme west end having largely decayed. During the repair program the outer face was planed flat in the defaced areas and new oak timbers spliced in.

Following the removal of the moulded girding beam from the ends of the second-floor-joists, it was possible to examine these timbers. They were found to have been painted in a colour scheme of orange/red and another colour now faded to grey. The joists were painted alternately in the two colours with no discernible pattern with each timber coloured the same on both sides and presumably the soffits as well though this was not verified, because the present ceiling conceals them (Pl. 17). During the works, floorboards were lifted adjacent the front on the first and second floors. The opportunity was taken to draw the positions of the joists (Figs. 8A, 10). It was also noted that considerable reinforcement had been applied to the first-floor-joists at the same time as providing attachments for timber framing beneath the modern shop jetty. The present second floor has been wedged level with packing timbers and beams over the original joists to counter the slump of the façade.

In the party wall of the first-floor front room there is a former doorway at the north-west end of the room. This is a later insertion as the studs forming the jambs have been hacked back, removing the slots for laths still present above the door head. This area was recorded by Exeter Archaeology in 1985 but, during the present works, panel infill was removed to allow installation of new bracing bolts from the refurbished frontage timbers to the existing studs. Also removed was the oak-panelled cladding affixed to the lower half of the wall. This allowed examination of the sides of the studs (Fig. 11B).

In addition to the inserted door jambs, it was now possible to see the original corner jetty bracket. The eastern face had been hacked back, along with the lower 1.00m of the studs, presumably for the oak cladding. Apart from a trace of moulding near its base, the bracket's carvings on this side had been removed. Although the timber was

enclosed within the present wall of No. 47, it was possible to feel the western face of the timber. Carvings could be felt apparently intact and extending to very near the rear edge of the bracket, indicating extensive exposure in the original frontage. The bracket was tilted forward, revealing its rear face. This was found to be slotted-surprisingly, as no lath and plaster could have existed here. There was no slot in the lower c. 1.20m of the opposing face of the neighbouring stud, but above this level there was a slot for the infill to the corner post.

The bottom rail of the close-studded wall was tenoned into the base of the jetty bracket. The jetty bracket was presumably tenoned into the jetty bressumer below, as suggested by the mortices for the other former brackets on this floor, visible in the top of the beam (Fig. 10). During the present works a new corner post was inserted and bolted to the new steel-reinforced oak lintel by means of a steel angle bracket. The truncated remnant of the windowsill beam was removed and a new oak piece set in above the original jetty bracket into which the corner post was tenoned and pegged. The jetty bracket remained tilted and attached by a pre-existing metal strap to the studwork.

### **The Basement**

In the party wall of No.47 at the front end was a blocked doorway, partly obscured by a modern brick stanchion. The south-eastern jamb was finished in a rolled edge and at the base of the jamb was an iron pintle (Pl. 18). This rolled edge is very suggestive of a newel stair that actually traversed the property boundary.

At the rear of the room was evidence for a cellar light in the south-east wall. It had been broken through and the ground beyond roughly dug out without revetments. The stub of wall on the north-east side of this breach bore a splay suggesting a probably narrow window (Pl. 19).

### **Roof details**

During the repairs to the roof drainage, slates and flashings were raised on the north-east side of the building. This exposed the remnant of a horizontal plank which, from its position, must have been the original base board of a parapet gutter (Pl. 20). The rafters of the eastern pitch of the roof support this in ending well short of the length required for eaves. This parapet probably extended around the whole frontage of the building, perhaps finished with a crenellated top. The shallow roof pitch would have rendered the roof largely invisible from the ground, giving the building a rather imposing fortress-like appearance.

John White Abbott's oil painting of the High Street<sup>5</sup> suggests the roof above the façade was hipped by 1797. A possible remnant of the roof's original gable end was the truncated mortice and peg-hole recorded in the outer face of the north-western head-beam whilst *in situ* (Fig. 5B). This would presumably have housed a stud supporting the gable end wall. This socket was the only one to survive the hacking back of the beam's outer face.

<sup>5</sup> John Abbot White, *High Street Exeter*, 1797. RAMM.

### **Ground-floor ceiling**

In the course of the works the shop was closed for a time, during which partial stripping of the modern suspended ceiling was carried out. Enough cladding was removed in the front room of the shop to enable a fairly extensive view of the original ceiling and timbers. The opportunity was taken to draw the exposed fabric (Fig. 13).

Close examination revealed some interesting clues to the original layout and appearance of the ground-floor rooms. The most notable feature was the evidence for a screens passage on the Lamb Alley side of the room. Mortices for partition studs were visible in the soffits of first-floor-joists. These were evident from the bressumer above the existing shop front up to the third main floor-beam to the south. The slots were approximately 240mm long and positioned more or less centrally in the floor-joists (Pl. 21). These features provide sound basis for a screened passage approximately 0.90m wide. From the third main ceiling-beam the evidence becomes slightly less clear. Although an early joist was present, its position was slightly out of alignment with the other morticed joists. The joist here had what appeared to be the remains of a vertical post that had been truncated just beneath its top. This 580mm long timber had hollow chamfered shoulders either side of the 120mm stump of a possible post. However, this may be a secondary structure, as nails were visible (Pl. 22). The soffit of the supporting joist was partially painted with limewash which ended in a straight edge parallel with the joist. Towards the south-east end of the joist was a possible truncated mortice, 250mm long on the north-east side of the timber. Interestingly the edge of the limewash was in line with the edge of the truncated mortice. All these features suggest a former division in this position if not an unbroken continuation of the passage indicated to the north-west.

The continuation of a passage here was confirmed by the fourth main ceiling-beam at the south-east end of the third bay. The end of the shortened beam abuts the joist with the truncated mortice as well as another beam underlying the joist (Pl. 23). The beam is now supported by a modern steel girder but presumably would originally have been supported by a timber post at the end of the main beam.

Between this joist and the north-east wall were two reused hollow-chamfered window mullions set at right angles to the joist (Fig. 13). Holes for iron window bars were visible in the sides of the timbers and the remains of plaster and laths were present on the undersides, though the modern appearance of the nails suggests this is a late phase of work. The north-east ends of the mullion joists were housed into the top of a moulded beam within the north-east wall. This moulding continued onto the south-east face of the third main ceiling-beam from the front but ended abruptly at a point midway above the joist with the truncated post (Pl. 24). This strongly suggests that this area was separate from the remainder of the ceiling bay to the south-west. Indeed no mouldings were visible on the inner faces of both ceiling-beams within the remainder of this bay east of the passage.

Above the short section of moulding on the third main ceiling-beam is a redundant joist socket (Pl. 24). This indicates that this area was originally ceiled but subsequently opened up, perhaps for stairs. There is further evidence of alterations in this area that may be associated with the installation of stairs. The moulded beam in the north-east wall is scarf-jointed to an adjacent beam without a moulding, that is set back slightly and flush with the wall. There is some plaster attached to the inner face



of this beam (Pl. 25). This suggests that the space has been widened slightly, perhaps by hacking back the face of the existing moulded beam and making good with plaster. Another possibility is that there was a window here that lit the stairs. The offset in the wall face might have accommodated shutters for the window.

## DISCUSSION

The absence of mouldings on the inner faces of the main beams to the south-west of the passage in the third ceiling bay suggests that either this bay was open to the roof or that this was the location of the original stairs. In fact both of these cases may apply. Further evidence for an open space up to the roof is supported by the fact that there is no evidence of primary floor-beams in this bay on any of the floors. There is also no sign of a ceiling on the top floor. At the same time it is likely that there were stairs in this area, but perhaps not of the usual form. Indeed, there are stairs in this position on the higher floors, although these are of standard timber-framed construction and thought to be of late 17<sup>th</sup>-century type. The original stairs may have been of geometric or spiral type.

There is also the problem of the fireplace. The present stack in the third bay is secondary and likely to be late 17<sup>th</sup>/early 18<sup>th</sup> century, so the position of the original fireplace is in question. Indeed no original fireplace has so far been seen in No. 46. The building was thought to be one of the region's earliest examples of a fully-storeyed house following on from the tradition of an open hall house with a hearth set in the middle of the room and a vent in the roof for the smoke. However, the evidence for a bay open to the roof is suggestive of a hall. Yet this evidence is not that of surviving remains of a hall but of primary construction.<sup>6</sup>

The stairs seen in the party wall of the basement are located nearer the front of the building than the formerly open bay. Notwithstanding the possibility of the cellar walls being fabric of an earlier building on this plot, this could be evidence that the two buildings were originally a single property united in ownership and use, as well as in design. This proposition is supported by evidence gleaned from the room above. Here the main ceiling-beams could be seen extending into No. 47, in certain instances with uninterrupted mouldings. A large ground floor room spanning the full width of the building is implicated, with pillars instead of walling supporting the framing of the upper floors. Connection between Nos. 46 and 47 is also evident on the first floor with the inserted doorway referred to earlier.

<sup>6</sup> There are similarities here to a form of house, characteristic of Brittany, known as 'maisons à pondalez'. These houses, built from about 1450 to 1630 took their name from the distinctive type of staircase with long landings known as 'ponts d'aller'. The staircases were constructed in the form of a spiral, rising to the full height of the building and serving the upper rooms via adjacent landing walkways. Situated midway within the building, the stairs would be opposite a monumental fireplace serving the ground floor 'hall' but heating the upper floors through the open stairwell to the roof. Such a staircase is known to have existed in another Exeter house, that of the King John Tavern in South Street. There are other features of No. 46 High Street that are redolent of these early Breton designs. The spiral ribbon and bead moulding is also very similar to decorations present on early timber framed houses in this area of France. There is however no evidence for a monumental fireplace. Investigations in the cellar revealed no trace of foundations for such a chimney but there remains the possibility that smoke was channelled to the roof vent via a large hood of relatively lightweight timber and plaster, needing no hefty stonework to support it. Although the limited space provided within the single bay of No. 46 would be insufficient to accommodate the very grand stair and fireplace structures typical of one of these Breton houses, it nevertheless hints at an interesting possible influence.

## SUMMARY

The remedial works that were ultimately carried out on No. 46 were more extensive than was at first envisaged. The complete dismantling of the building's second-floor façade provided a valuable opportunity to correct longstanding defects in the structure and to consolidate the decayed timbers. This also allowed a full understanding of the structural details of this part of the building which may be of use in the event of future repairs. Valuable information about the original form of the façade was also gleaned from previously unseen details of carvings and mouldings. Evidence of the original unity of Nos. 46 and 47 was observed in the central carved jetty bracket and the coved window head-beam extending the full width of the two buildings.

Partial removal of internal cladding and suspended ground-floor ceilings exposed original fabric with further clues to the original form of the building. Evidence for a ground floor passage was detected on the south-east side of the shop along with associated beam mouldings indicating an original feature of the house. Also revealed were the complete absence of beam mouldings in the third bay of the ground floor ceiling and the accompanying lack of evidence for any original floors in the storeys above in this area.

Observations in the cellar revealed the remains of a window jamb indicating a secondary cellar light formed by means of a roughly formed dugout at the rear of the house. Also observed was a possible newel staircase within the party wall of No. 47 indicating a firm link between the two halves of the building. An inserted door on the first floor in the same wall showed evidence for a continuing connection between the buildings.

The survival of the medieval fabric in the building façade is illustrated in an elevation drawing which shows the extensive loss of original timbers on the first floor and the upper section of the second floor (Fig. 3A). The removal of the first-floor windowsill beam may have contributed to the slumping of the façade and the consequential failure of the roof drainage that led to the extensive damage to the remaining medieval fabric.

A drawing showing the general phasing of the existing surface fabric prior to works can be seen in Fig. 14. It is clear that much of the work is from the 19<sup>th</sup> or 20<sup>th</sup> century with only small areas of possibly 18<sup>th</sup>-century provenance. Despite the many alterations, it is evident how the importance of the structural timbers of the frontage has resulted in the survival of so much medieval fabric.

The original external paint schemes were revealed by specialist examination. In addition, previously unseen internal paintwork was exposed adorning the sides of the second-floor joists.

### **Paint Analysis**

The paint analysis, carried out by McNeilage Conservation, used paint samples from original timbers of the frontage including the second-floor carved jetty brackets, the moulded girding beam and from the coved window head above the first-floor windows. The timberwork was coated in a very thick layer of modern paints, up to 4mm thick, over the earlier lead-based paints. Nine samples were taken in total.

The results indicate a uniform monochromatic paint scheme over all the timber elements of the façade. Two earlier phases of decoration were identified, the earliest consisting of a pale yellow colour coated with a resinous tinted varnish. This may represent a graining scheme to protect, as well as enhance, the appearance of the wood. The second scheme, extending into the 18<sup>th</sup> century, consisted of an off-white colour possibly imitating stone. Above these earlier layers are many thick paint layers in a variety of colours, probably dating from the 19<sup>th</sup> century to the present day. These, being considered modern, were not analysed.

Although the many thick layers of modern paints have contributed to the damage of timbers in some areas, they have also nevertheless preserved extensive areas of original paint. The areas considered likely to retain medieval paintwork on the frontage are depicted in Fig. 3B.

### **Tree-Ring Dating**

During the works, the opportunity was taken to carry out dendrochronological analysis on exposed beams. Nottingham Tree-Ring Dating Laboratory was commissioned to take core samples from suitable timbers. These included the joists of both first and second floors and some sections of timber removed from the frontage. The results were not available in time for this report.

### **Repairs**

The ultimate removal of the second-floor façade allowed individual timbers to be assessed and repaired as necessary. Sound timber was preserved where possible and new pieces of 'like for like' timber were set into areas of decay. Although the original coved head-beam extended across both halves of the building, the replacement beam was cut to fit the façade of No. 46 only. This was given supplementary support by a steel flitch plate bolted to similar plates on the corner posts. The full extent of new material added is depicted in Fig. 15.

## **ACKNOWLEDGEMENTS**

The building survey and report were commissioned by St Blaise Ltd (Historic Buildings Conservation contractors). Thanks are due St Blaise project manager Kim Richards and his staff for their assistance on site. Site work was carried out by G.M. Young with invaluable assistance from R.W. Parker and P. Jones. The brief for the recording work was provided by A.R. Pye (ECC Archaeology and Planning Officer). The report was compiled by G.M. Young, again with much assistance from R.W. Parker. The illustrations were produced by Jane Read and G.M. Young. Thanks are also due to J. Allan of Exeter Archaeology for supervising the project and for the assistance of staff at the West Country Studies Library.

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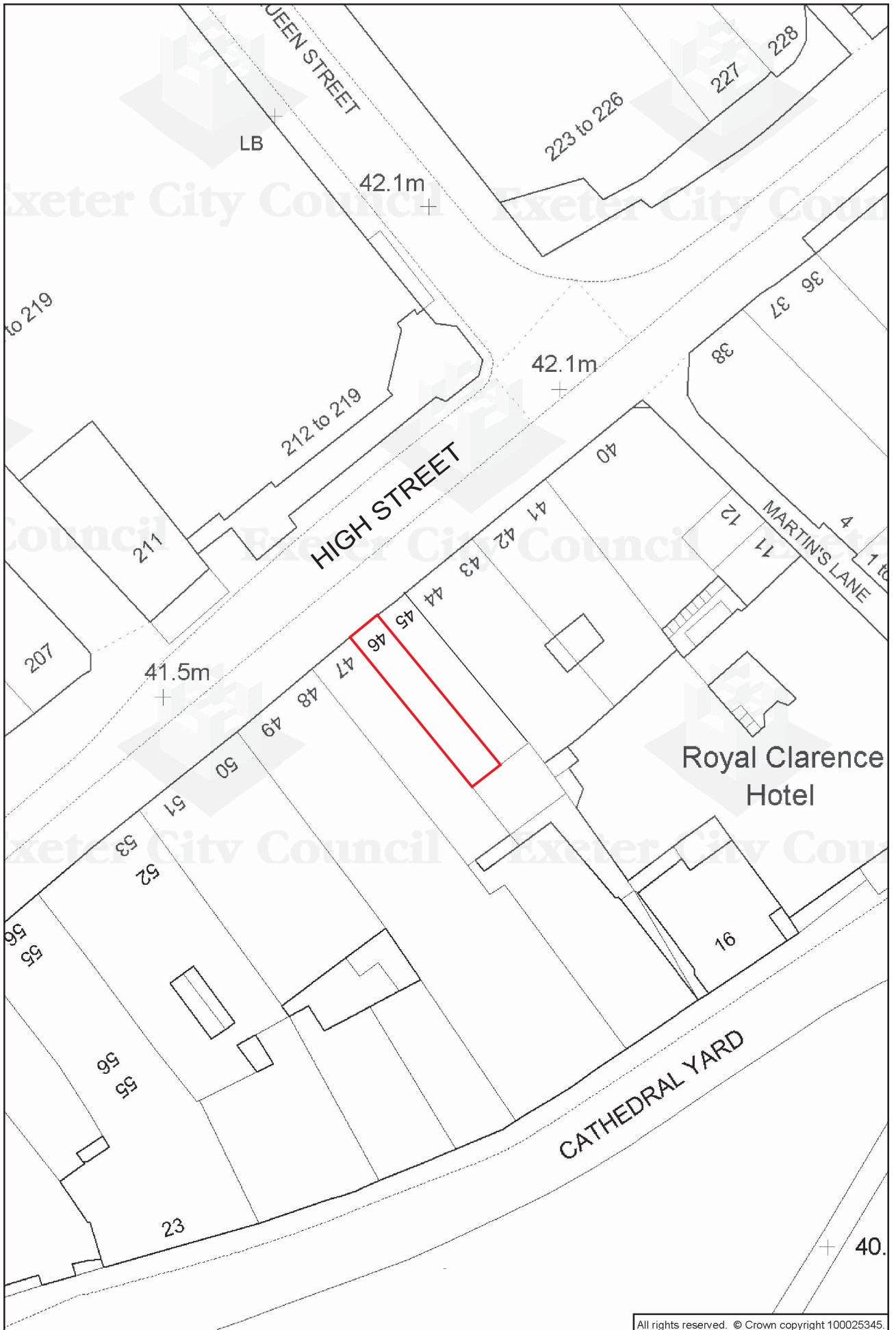
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*Survey and analysis of the painted surfaces on the exterior first floor*



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Fig. 1 Location of site. Scale 1:500.



Exeter, 46, High Street  
North-west elevation

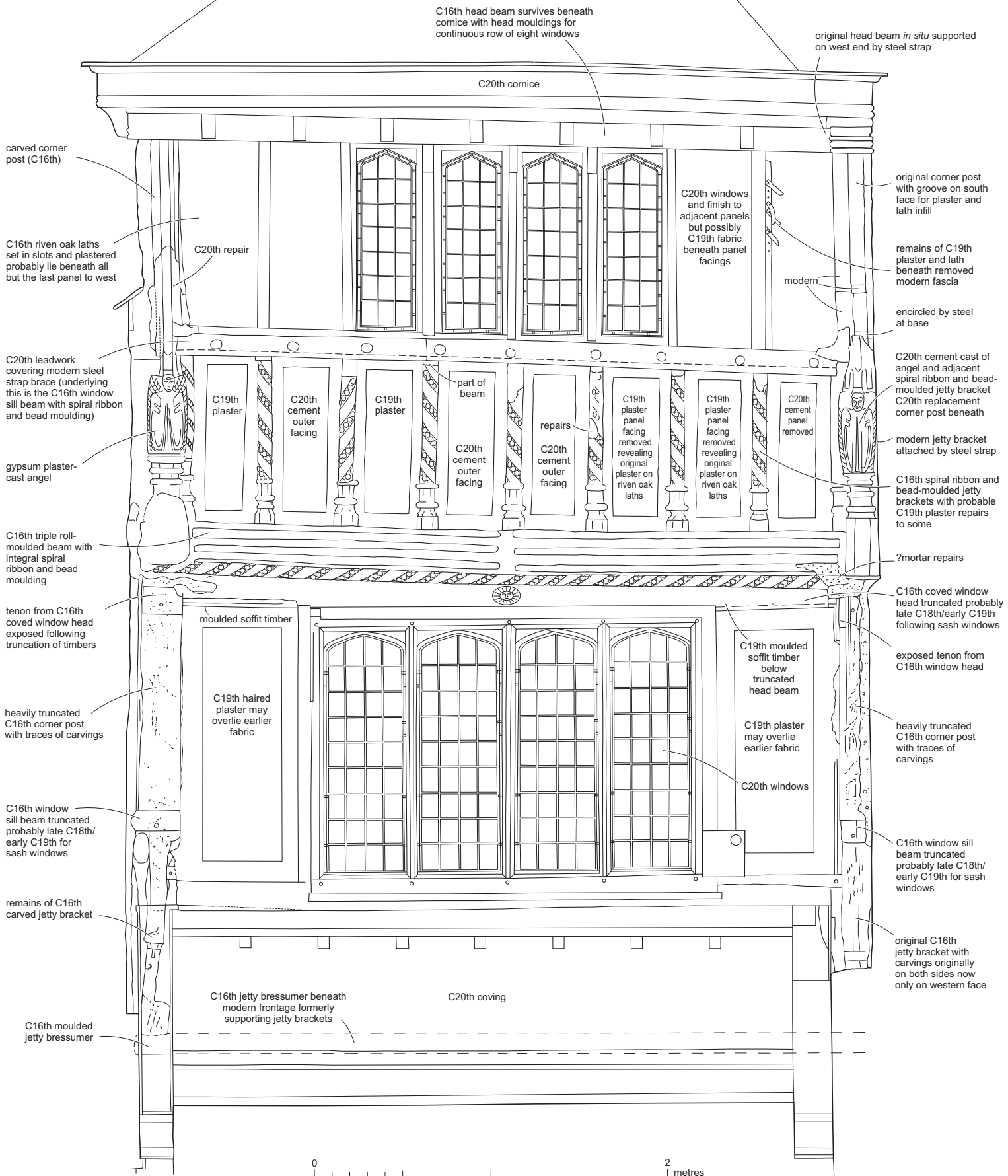


Fig. 2 Front elevation of No. 46 showing existing exterior features. Scale 1:20.

Exeter, 46 High Street  
North-east elevation

Medieval fabric and paint

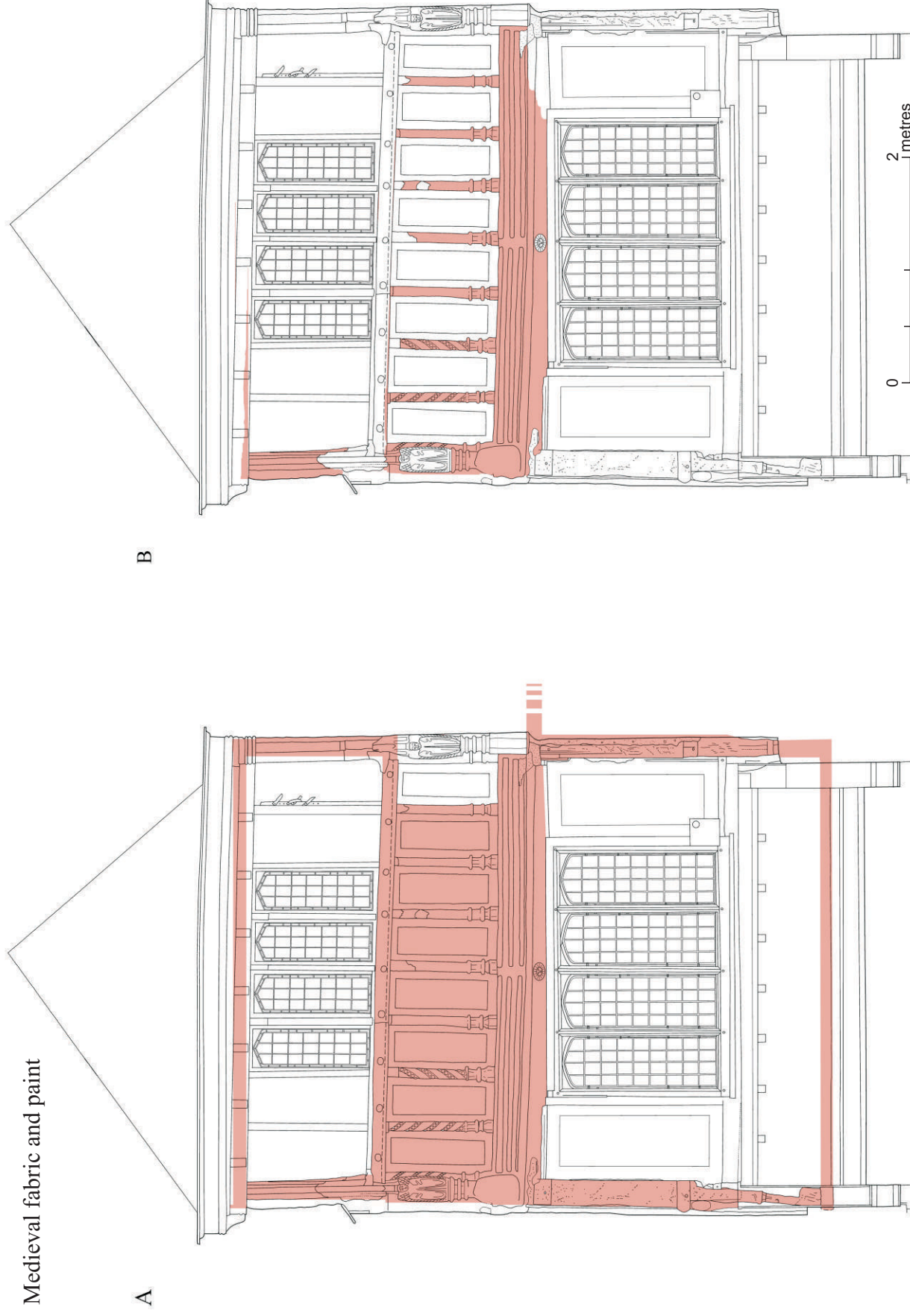


Fig. 3 Drawings of the front elevation showing (A), areas of surviving medieval fabric within the facade and (B), areas of surviving medieval fabric within the facade. Scale 1 : 50.

# Exeter, 46, High Street

## Second Floor

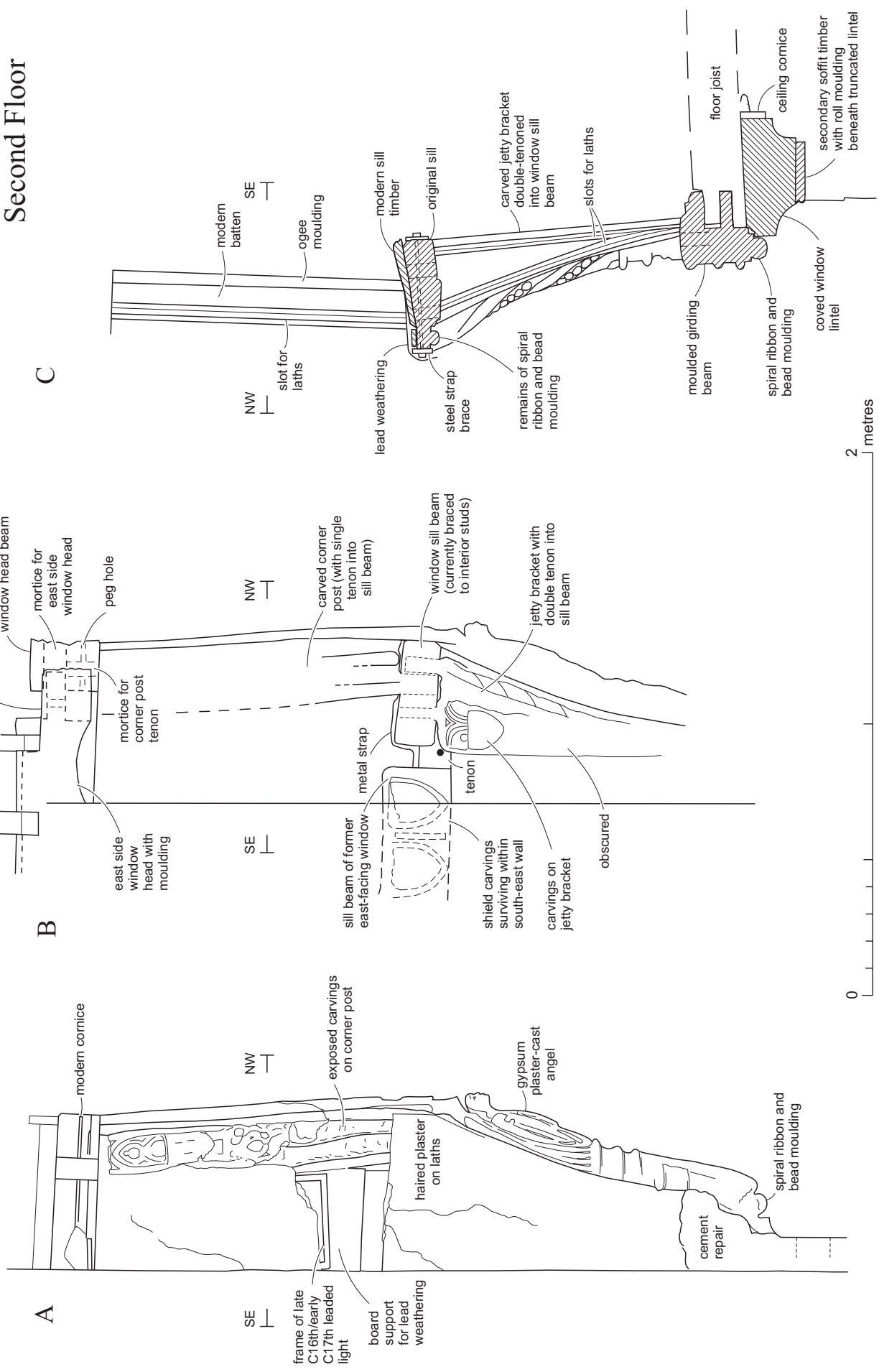


Fig. 4 Architectural details of the second floor façade. (A) East elevation, (B) structure underlying east elevation and (C) section through the façade. Scale 1:20.



# Exeter, 46, High Street Details

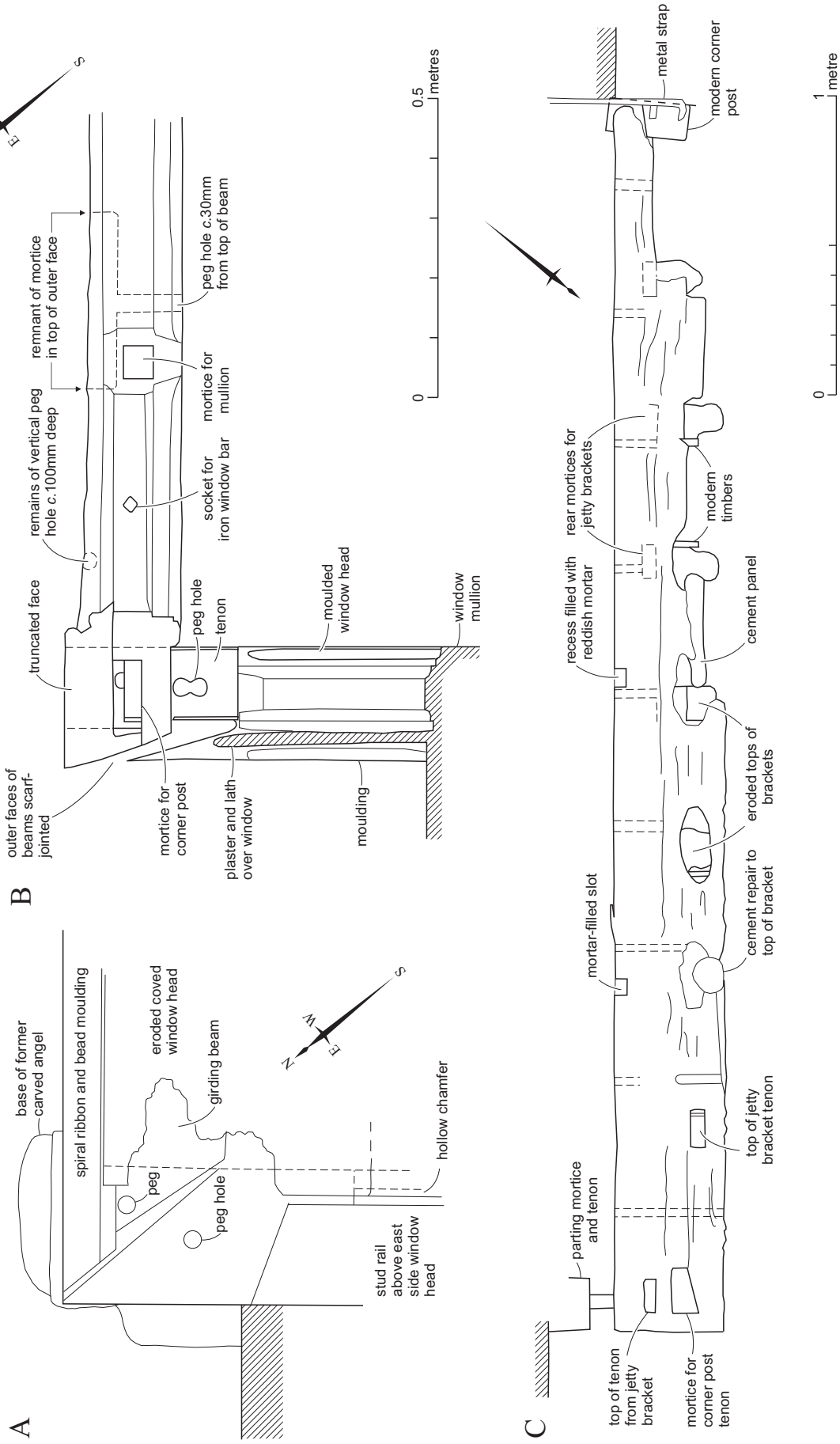


Fig. 5 Worm's eye plan views of (A), joint between first-floor girding beams at east end and (B), joint between second-floor window heads at east end. (C), Plan of second-floor window sill beam *in situ*. Scales 1:10 and 1:20.

# Exeter, 46, High Street Second Floor

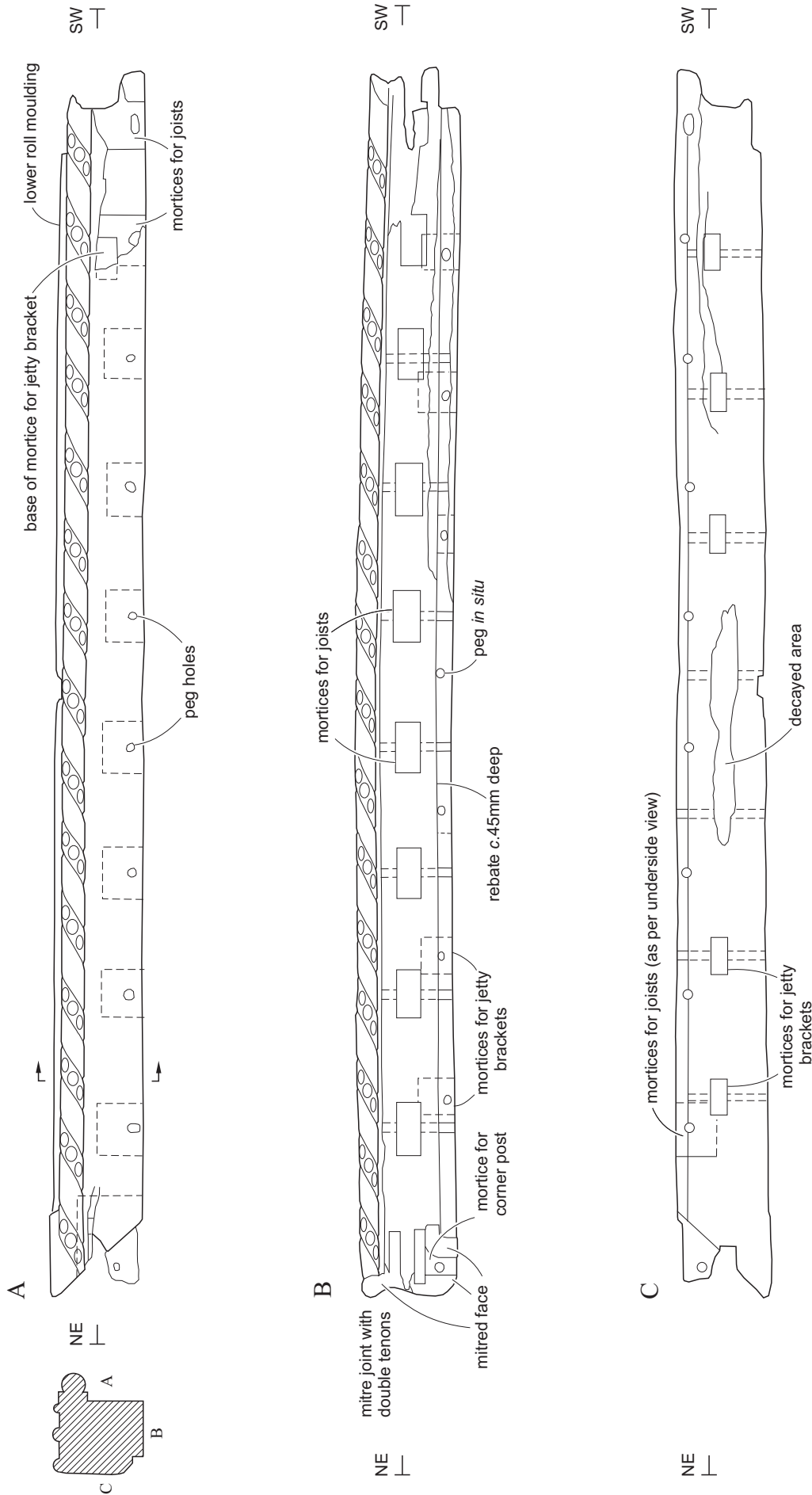


Fig. 6 Plans of moulded girding beam. (A), View of underside showing position of joist mortises on inner face, (B) inner face showing mortises, (C) top side of beam showing mortises for jettie brackets. Scale 1:20.

# Exeter, 46, High Street

## First Floor

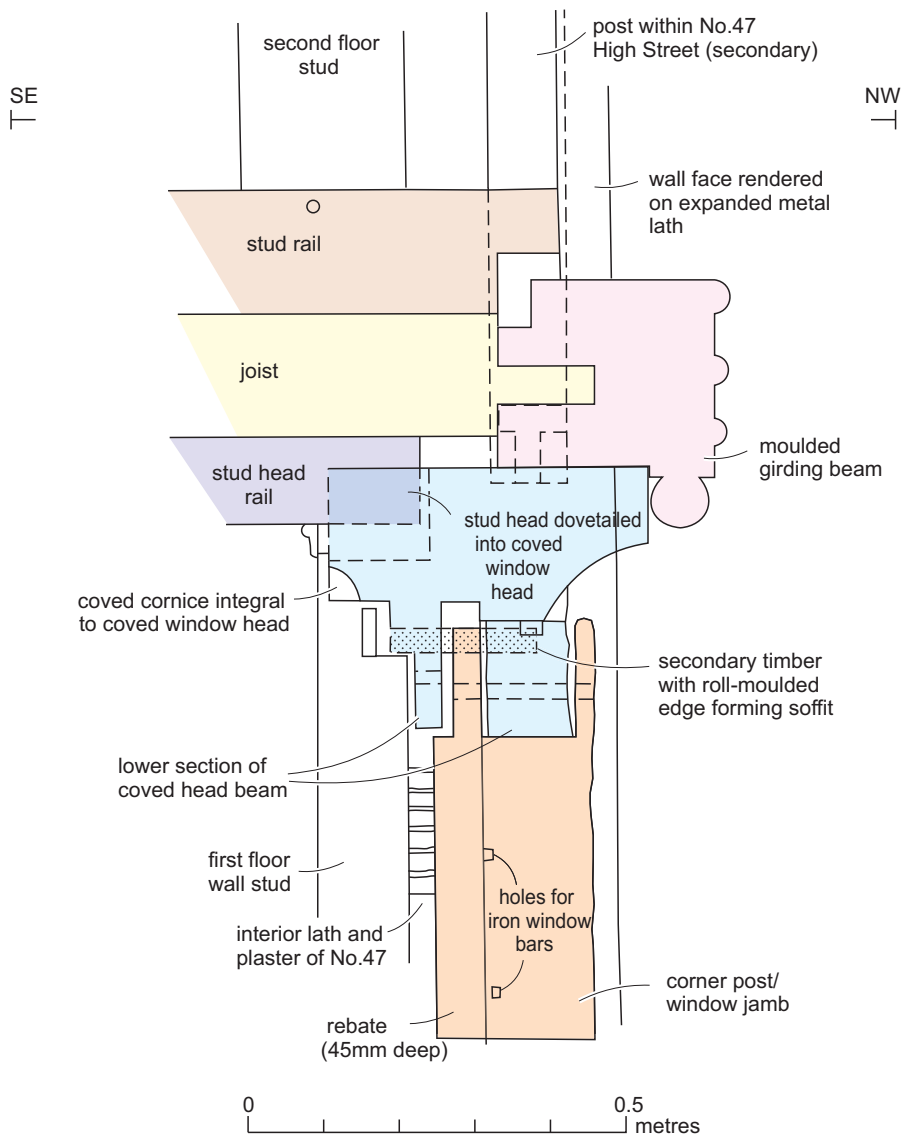
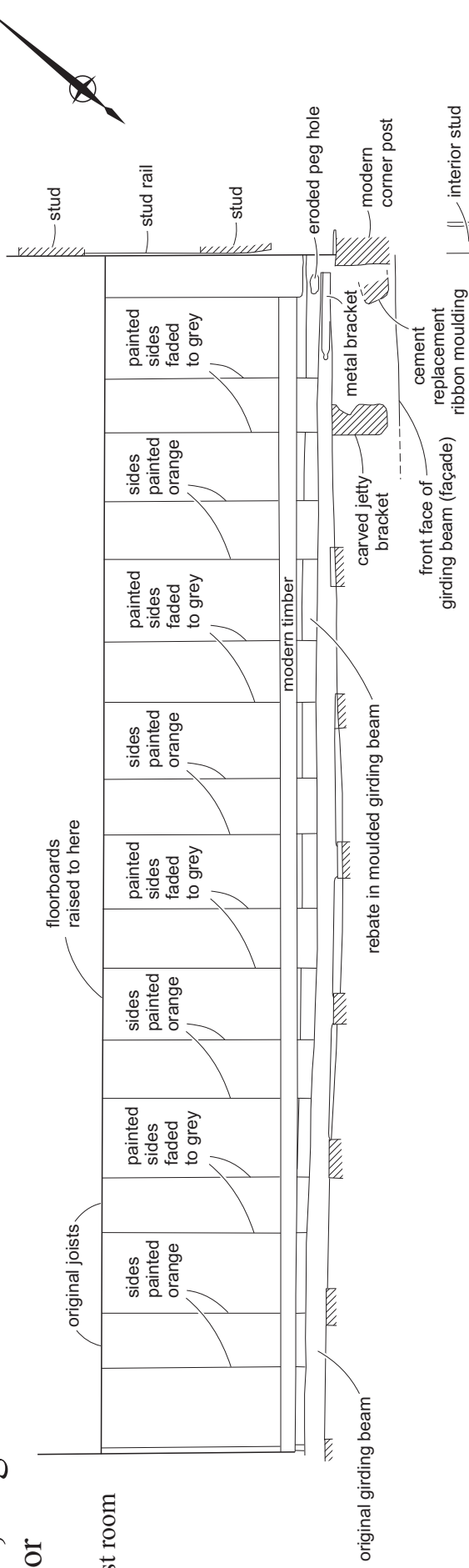


Fig. 7 Section diagram through the front façade at the west end showing the timber construction. Scale 1:10.

# Exeter, 46, High Street

## Second Floor

**A**  
Plan, north-west room



**B**  
Elevation, north-west façade

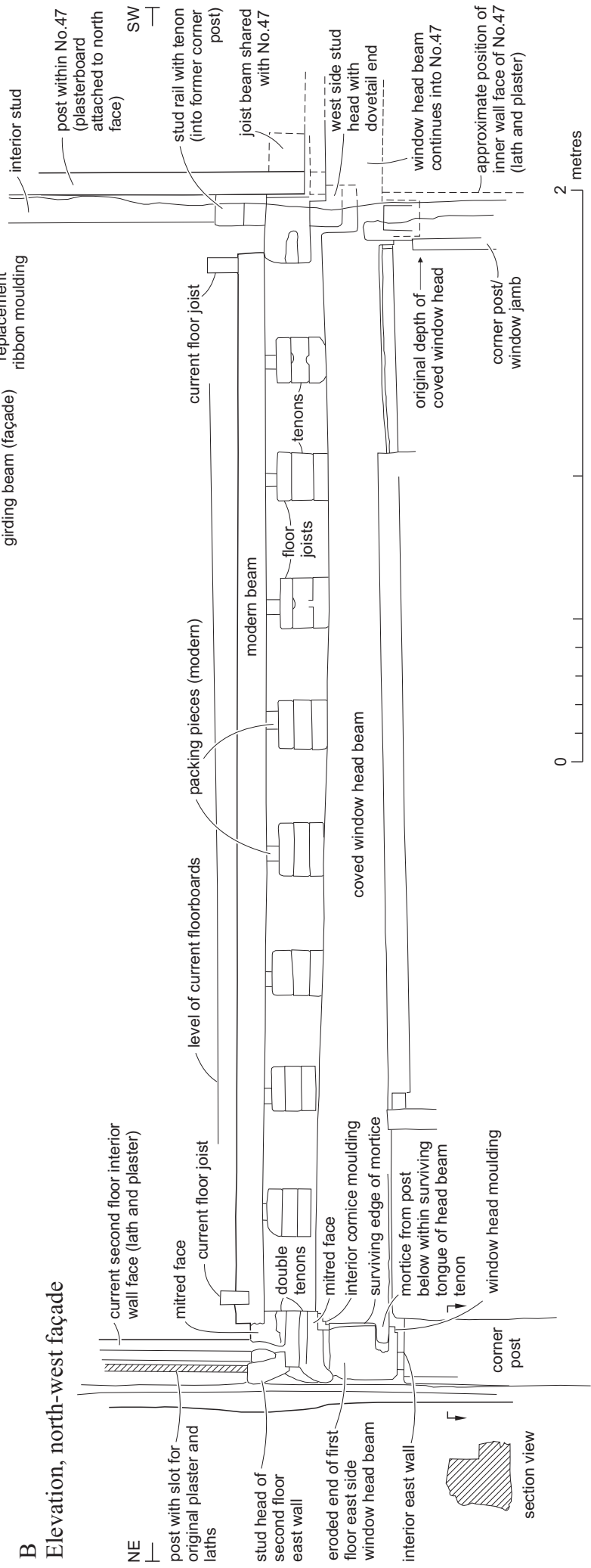


Fig. 8 (A) Plan of exposed joists in the second floor north-west room and (B), elevation showing the exposed joist ends after removal of the moulded girding beam. Scale 1:20.

# Exeter, 46, High Street Second Floor

## Window head beam

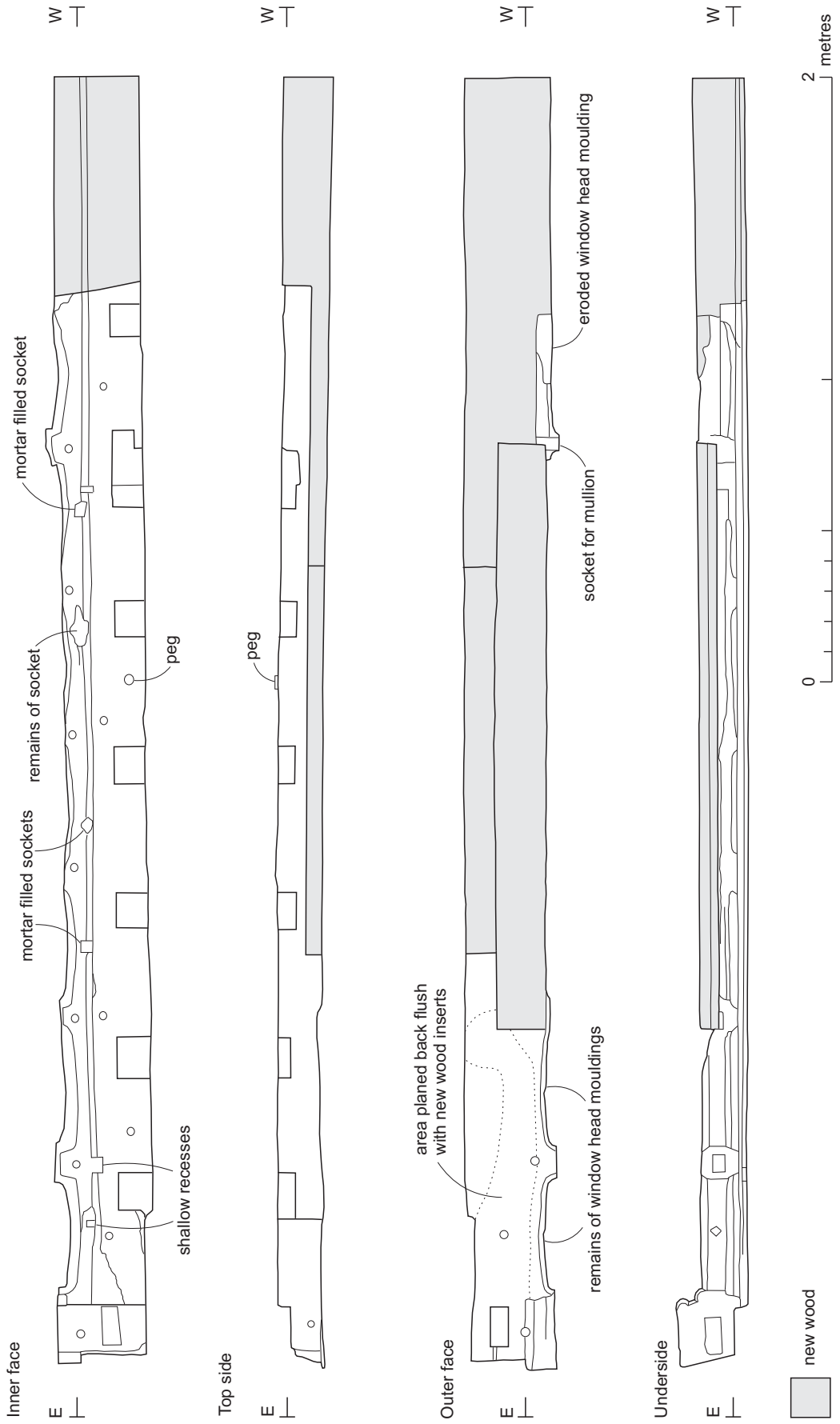


Fig. 9 Window head beam from second floor north façade during renovation. Scale 1:20.

# Exeter, 46, High Street

## First floor

Plan, north-west room

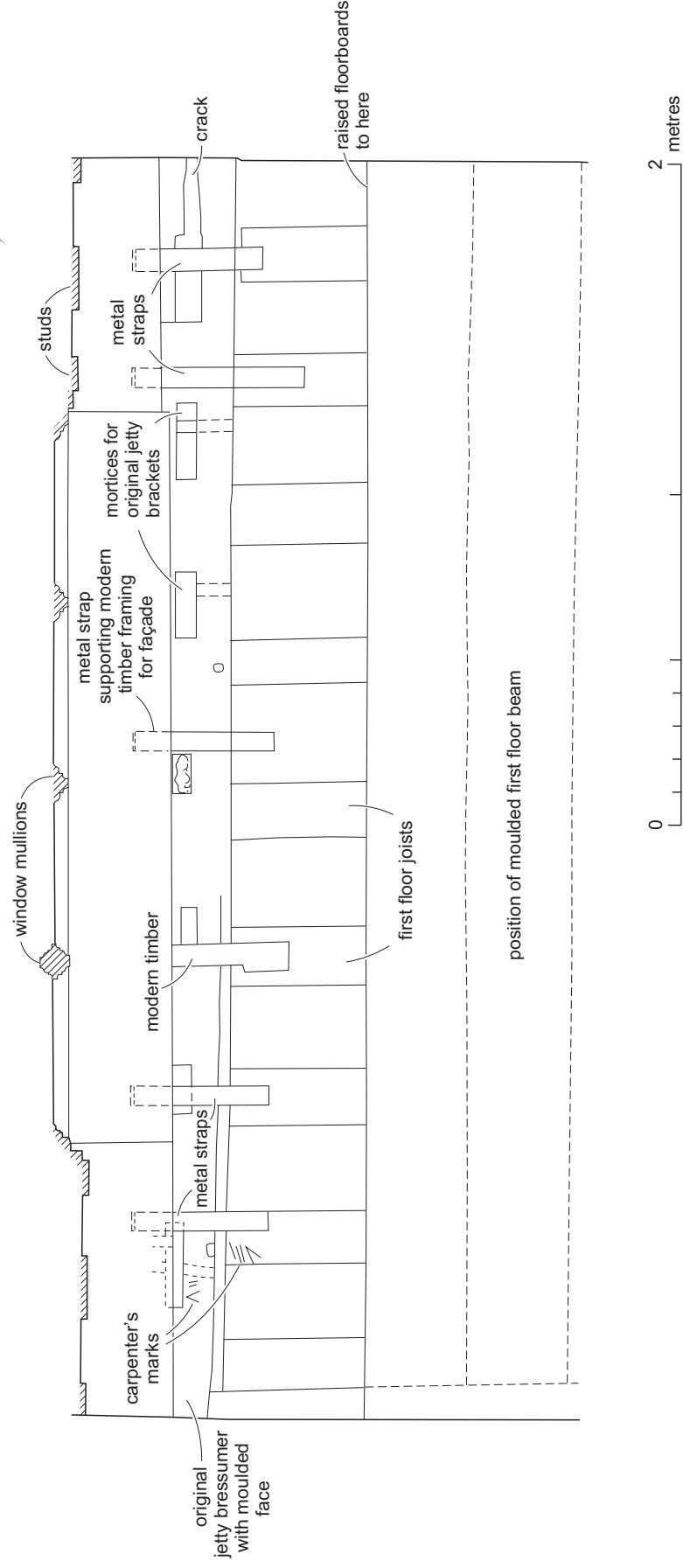


Fig. 10 Plan of exposed joists in the first-floor north-west room. Scale 1:20.

# Exeter, 46, High Street

## Structural details

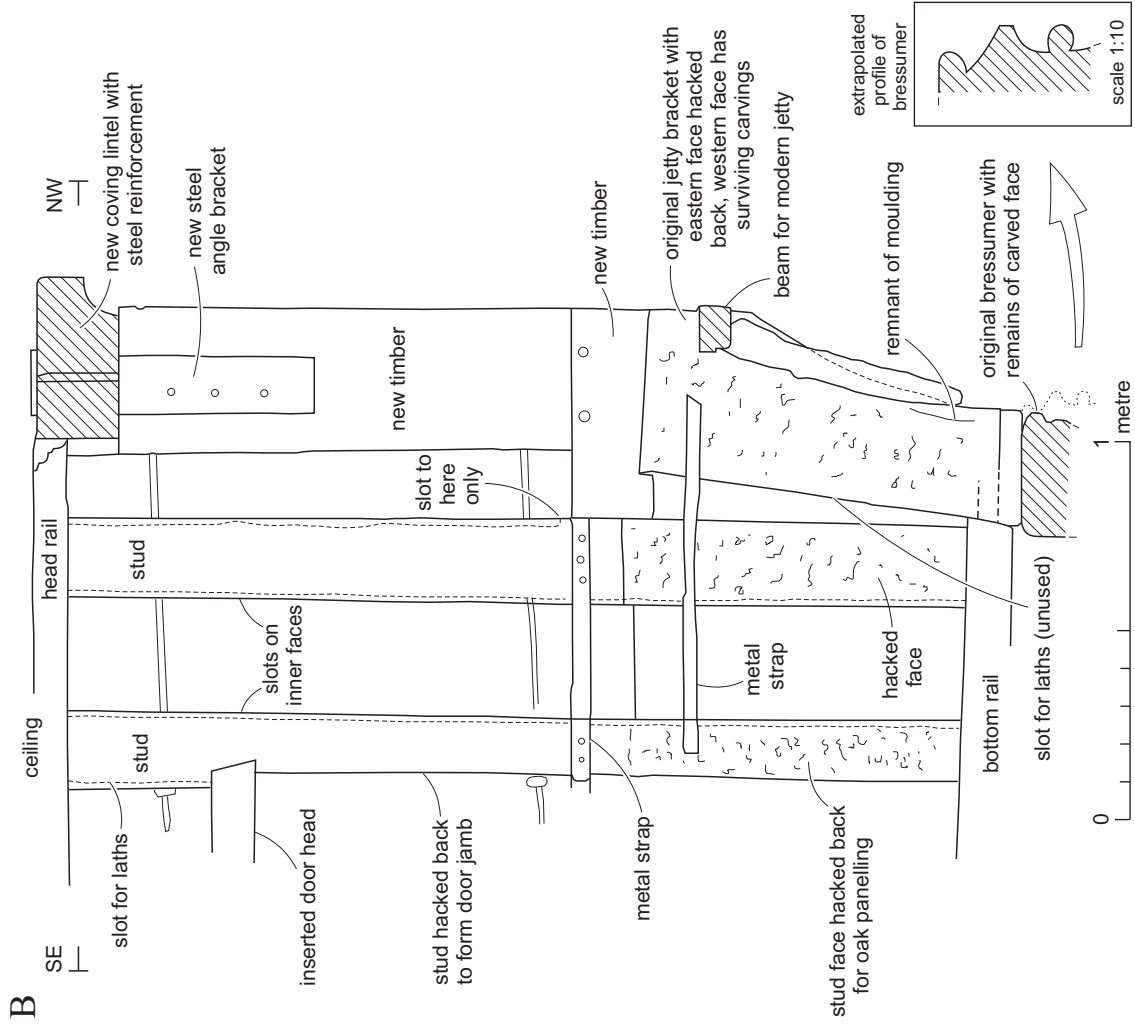
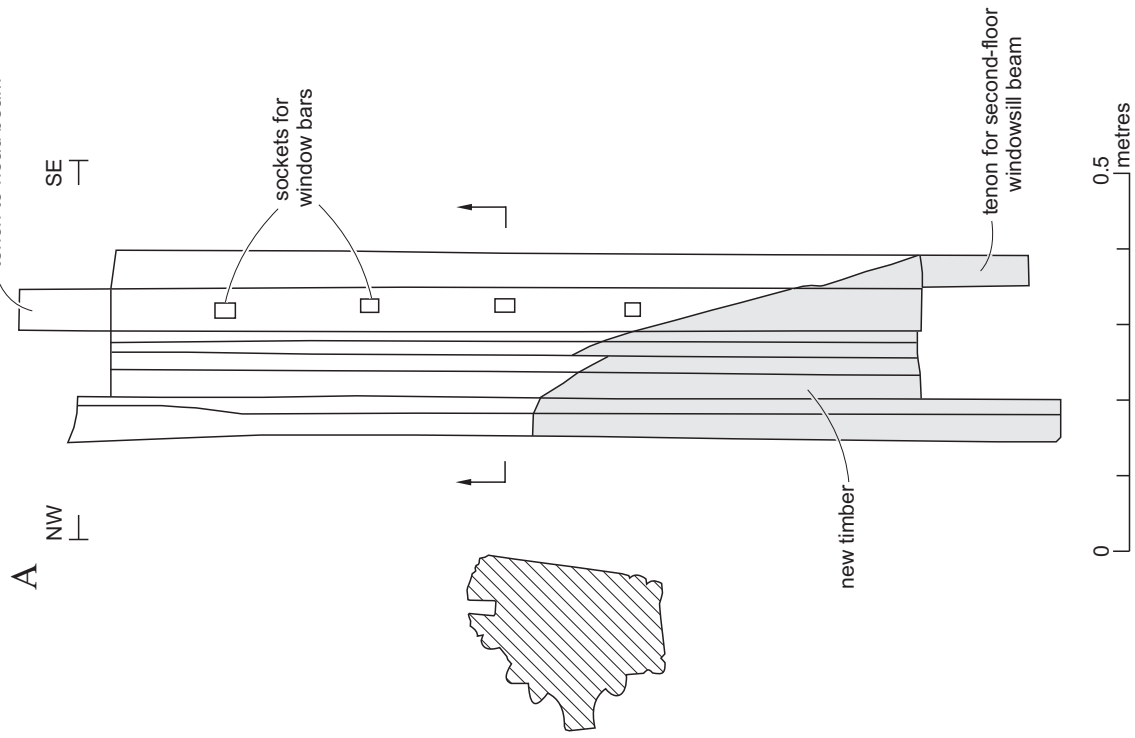


Fig. 11 (A) elevation of the inner face of the second floor east side upper corner post. Scale 1:10. (B), elevation of the first floor south-west wall of the north-west room after removal of early C20th oak cladding. Scale 1:20.

# Exeter, 46, High Street Second Floor

## North-east corner jetty post

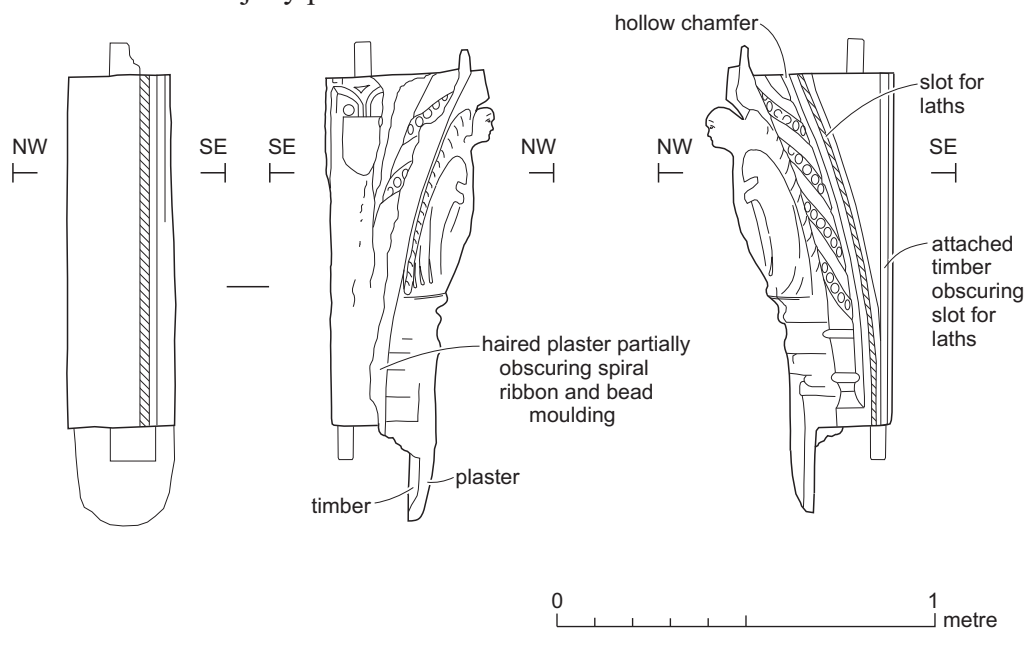


Fig. 12 Detail of the second-floor north-east corner post and jetty bracket with attached angel casting after removal. Scale 1:20



# Exeter, 46, High Street Ground Floor

## Plan of Ceiling

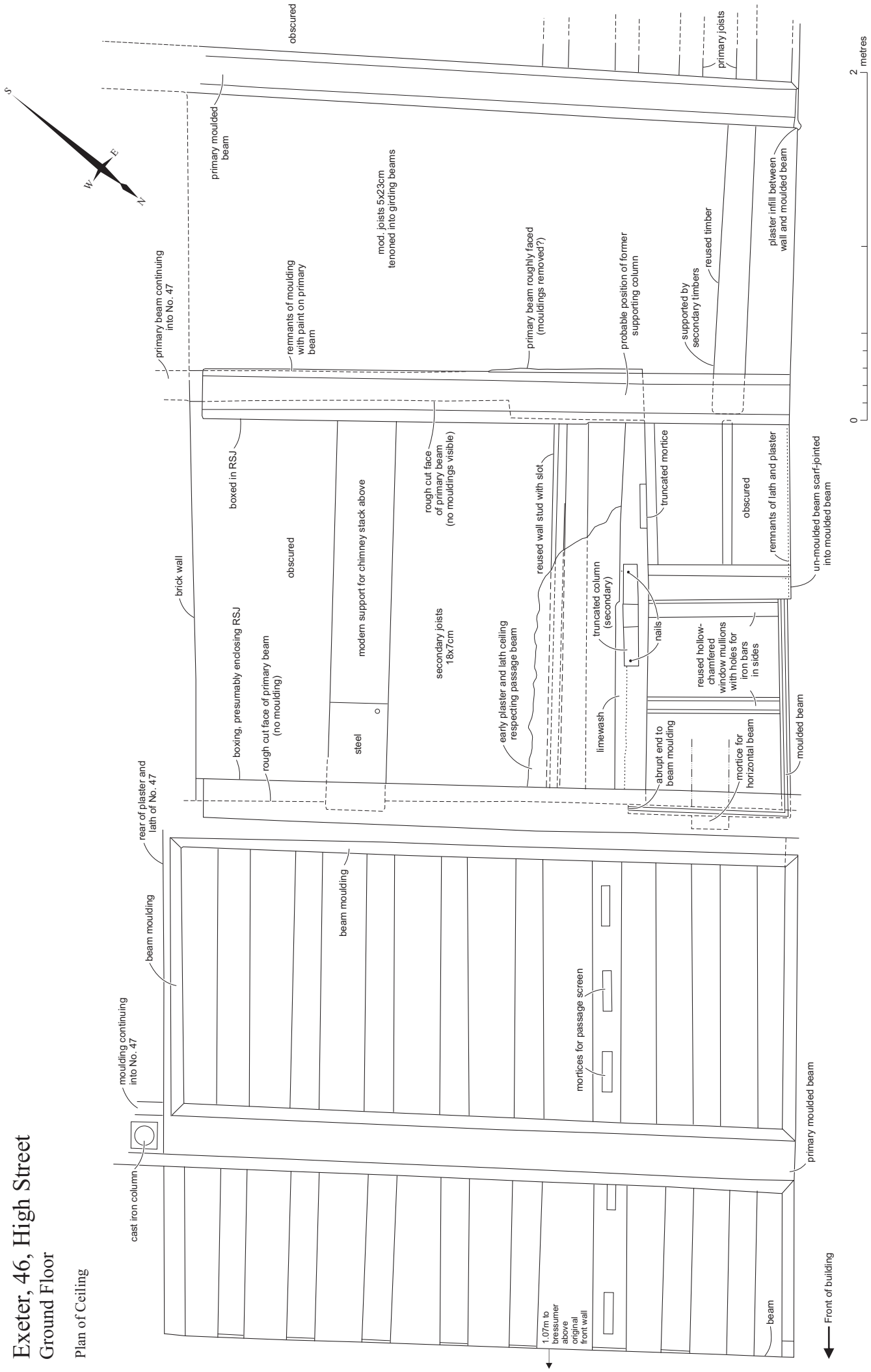


Fig. 13 Worm's eye plan view of ground-floor ceiling. Scale 1:20.

Exeter, 46, High Street  
North-east elevation  
Phases of exterior fabric

- KEY
- C16th or earlier
  - Late C18th/  
early C19th
  - Mid to late C19th
  - C20th



Fig. 14 Phased elevation drawing of the frontage showing the exterior surface fabric prior to works. Scale 1:30.

Exeter, 46 High Street  
 North-east elevation  
 Areas of new fabric

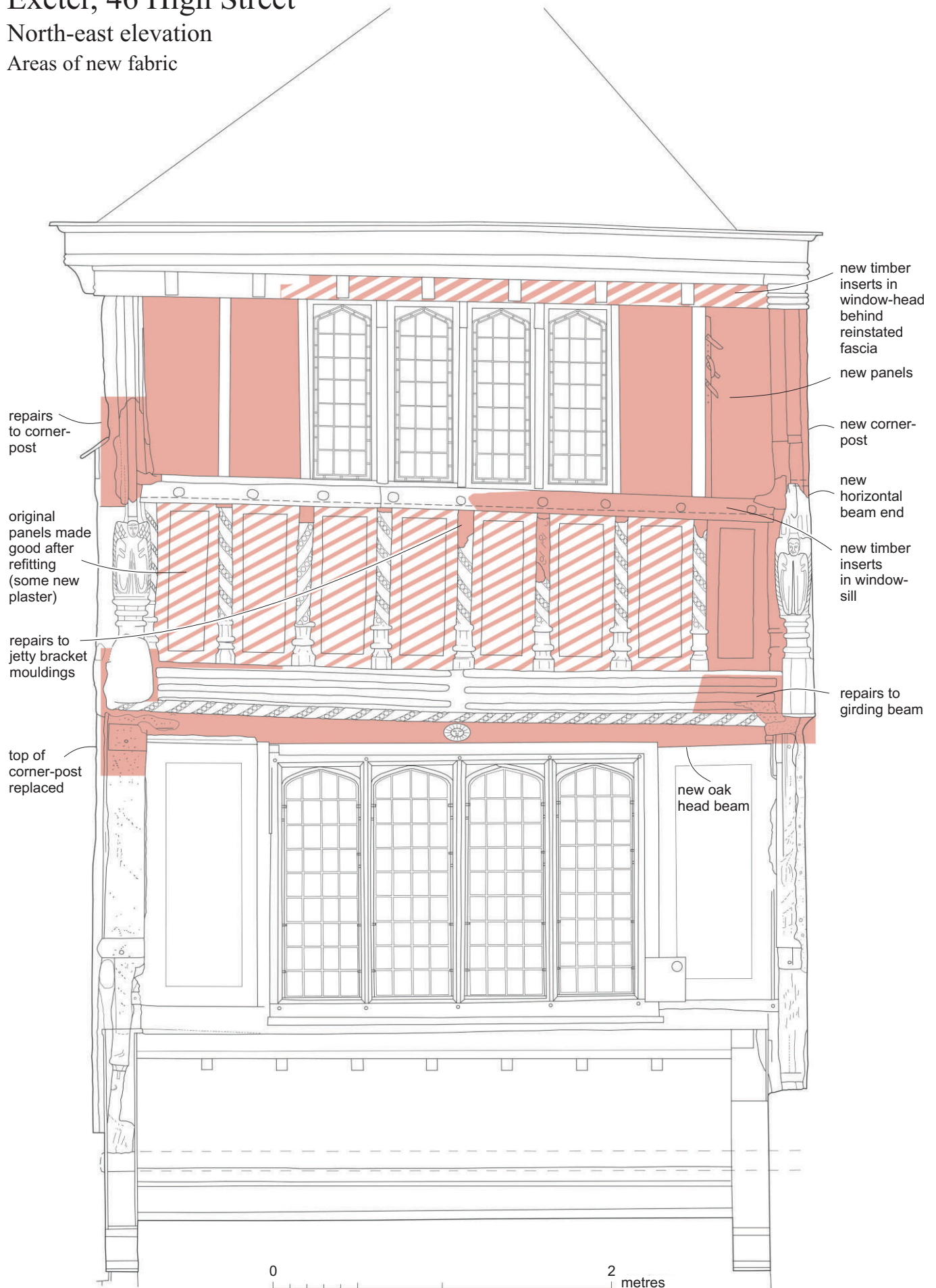
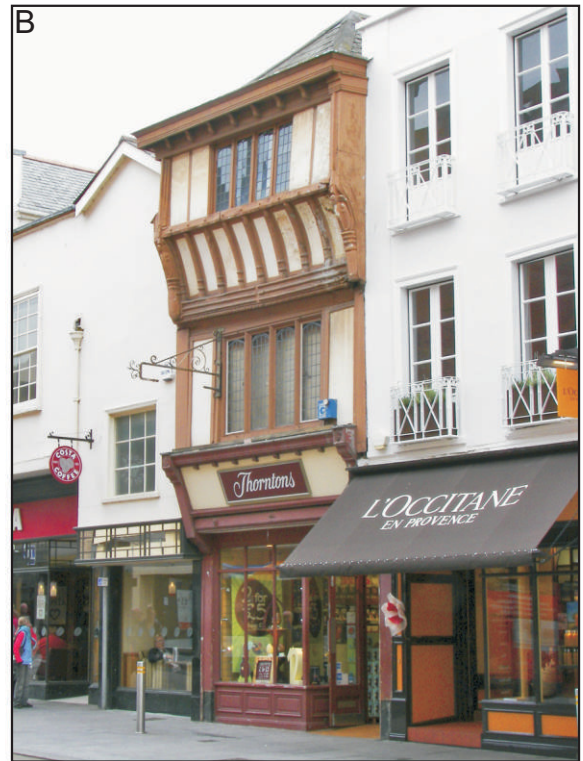


Fig. 15 Drawing of the front elevation showing areas of new fabric following repair work.





Pl. 1 Views of the north elevation of 46 High Street with the heavily altered elevation of No. 47 visible on the right. Scale 1m. Views south-east and east.



Pl. 2 Second-floor corner jetty post figures, (A) C18th/19th cast gypsum angel at the east end, (B) C20th cast cement angel and adjacent spiral ribbon and bead-moulded jetty bracket at the west end. Scale 0.25m. Views (A) south-east, (B) south-west.





Pl. 3 Detail of the roll-moulded girthing beam with spiral ribbon and bead moulding below. Note thickness of paint layers obscuring the carving detail. Scale 100mm. View south-east.



Pl. 4 Second-floor windowsill beam with spiral ribbon and bead moulding clamped between steel straps. Modern panel infills have been removed from between the jetty brackets. Scale 0.25m. View south.



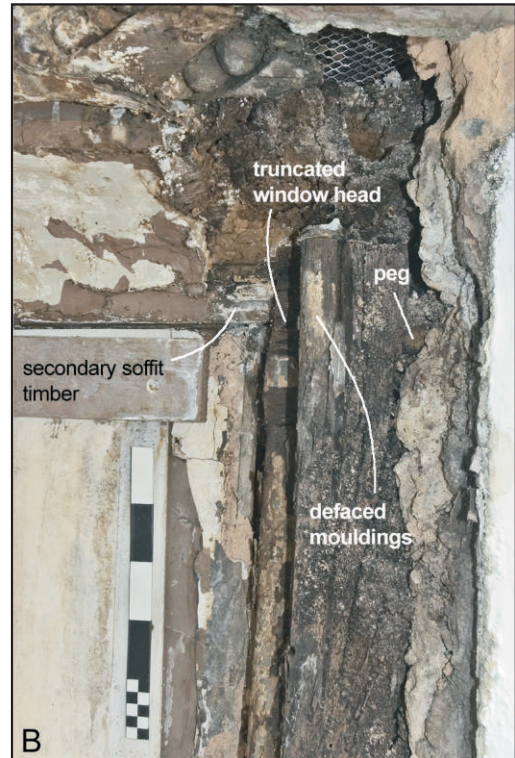
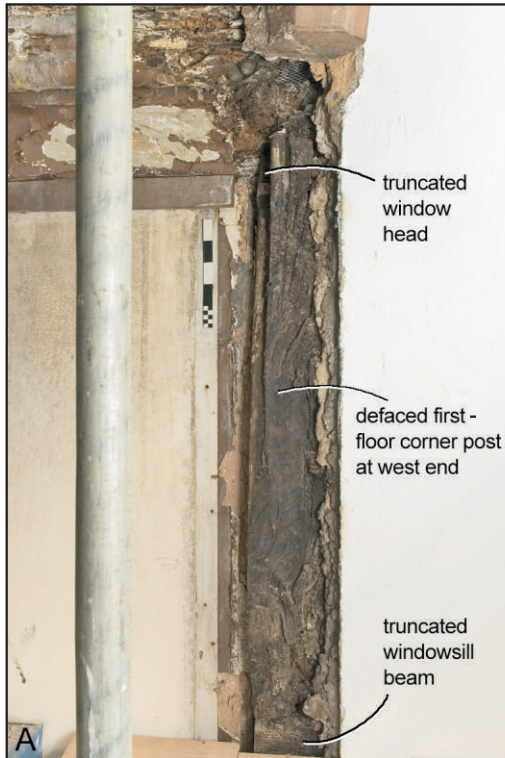


Pl. 5 Detail of a second-floor covered jetty bracket after removal of the modern panel showing the grooves for lath and plaster infill. Scale 0.25m. View east.



Pl. 6 Detail of the west end of the facade showing the deterioration of the timbers of the second floor. Scale 0.25m. View south-east.





Pl. 7 Views of the first-floor corner post at the west end showing (A) overview with truncated head and sill beams, (B) detail showing the position of a tenon peg and the remains of mouldings. Scale 0.25m. View south-east.



Pl. 8 Details of the first-floor corner jetty brackets showing similar remains of carving detail possibly depicting draped clothing. (A) east-end jetty post. (B) west-end jetty post. Scale 0.25m. View south-east.



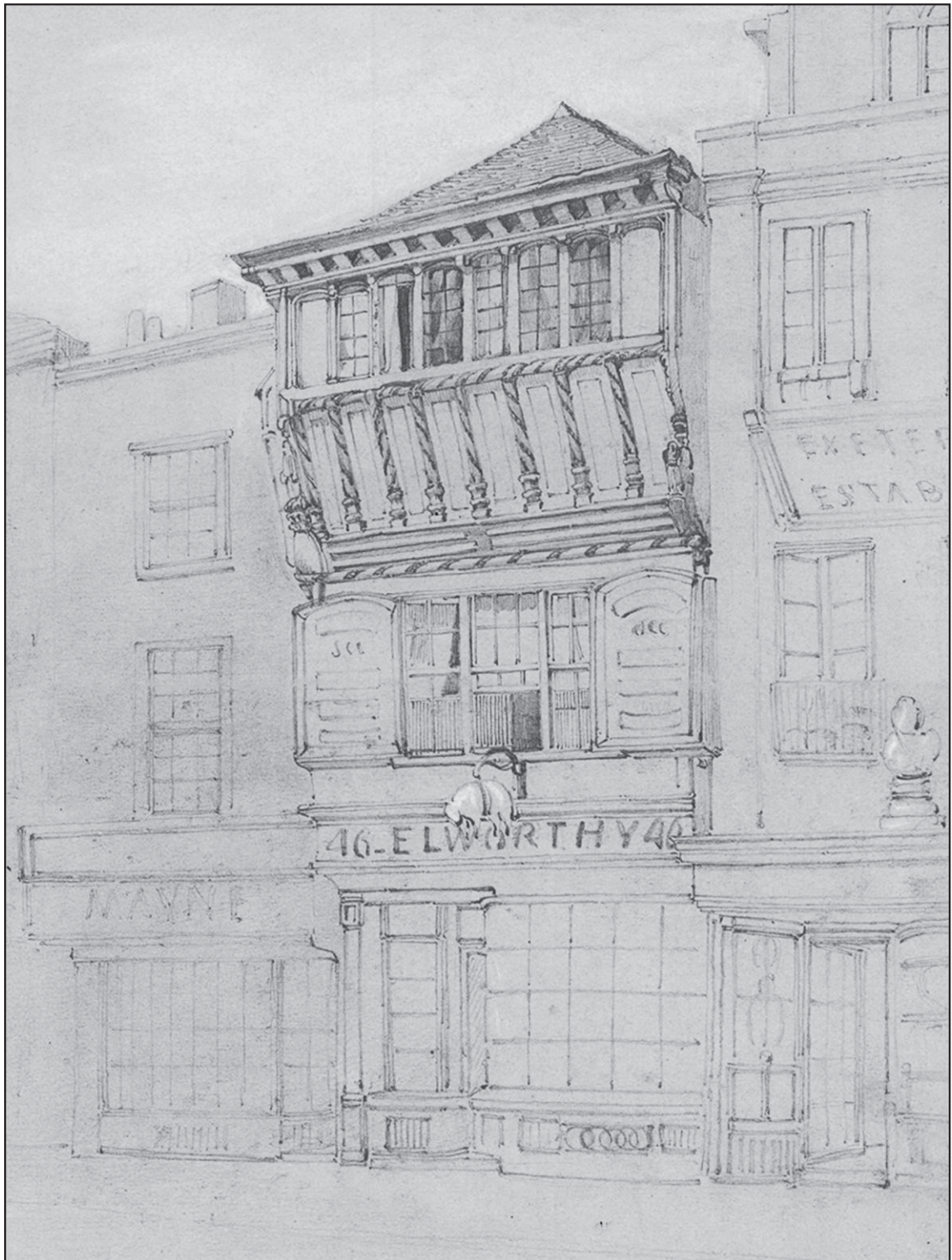


Pl. 9 View of the second-floor corner post at the east end showing lancet and shield carvings after limited paint stripping. Scale 0.25m. View south-west.



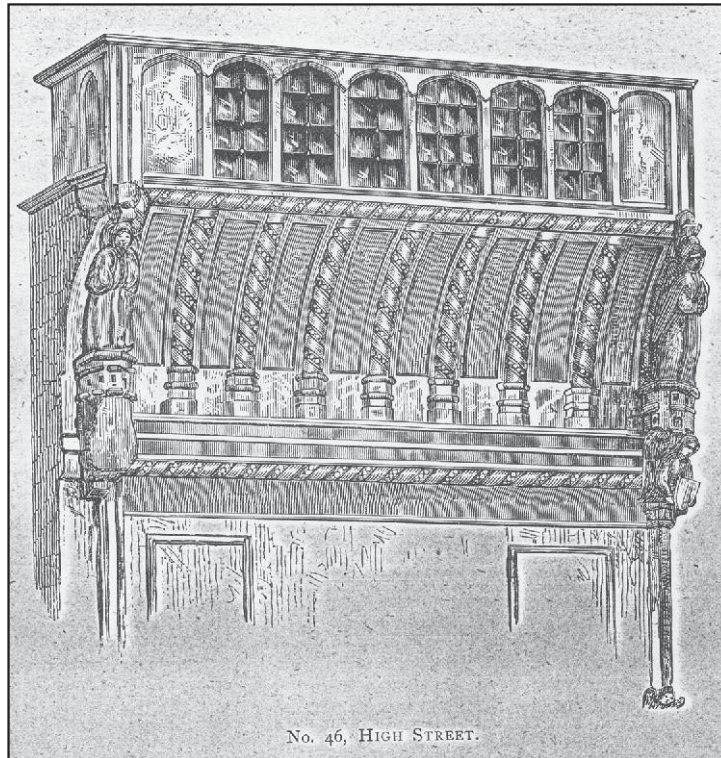
Pl. 10 Detail of the C18th/early C19th fire insurance plaque attached to the first-floor covered window head. The sun emblem appears to be pressed in tin-plated iron. Scale 100mm. View south-east.





Pl. 11 A drawing by John Gendall showing the state of the building in c.1830. It shows the first floor fitted with sash windows. On the second floor, all eight of the original south-facing windows are still present, although two have been blocked. Courtesy of the Westcountry Studies Library, Exeter.





Pl. 12 W. Cotton's drawing of the facade of No. 46 showing the former carved angels *in situ* flanking the second-floor coved jetty.



Pl. 13 Photograph from c.1900 showing remodelled second-floor windows and the absence of an angel at the west end. (Collection of Dr. Sadru Banji.)





Pl. 14 Detail of the second-floor moulded girding beam after removal from the facade showing the mitred joint incorporating three interwoven tenons. Note the mortice with peg hole for the upper corner post. Beam is viewed upside down. Scale 0.25m.



Pl. 15 Detail of the east end of the second-floor covered window head showing the remains of joints to adjacent timbers and the resulting gap created by truncation of the head beam following the insertion of later windows. Scale 0.25m. View south-east.





Pl. 16 Detail of the east end of the first-floor covered window head showing the lowest extremity of the beam surviving truncation for later windows (arrowed). Scale 0.25m. View south.



Pl. 17 View of the second-floor joists, after removal of the girding beam, showing alternate colours painted onto both sides and also presumably the soffits. Scale 0.25m. View south.





Pl. 18 View of the south-west cellar wall showing a blocked doorway with a rolled edge to the jamb and an iron pintle below. Scale 0.25m. View south-west.



Pl. 19 View of the stump of the breached south-eastern cellar wall showing the splayed reveal of a former window. Scale 0.25m. View south-east.





Pl. 20 View of the north-east corner of the roof showing the remnant of a timber base to a former parapet gutter that was later made redundant following the in-fill of Lamb Alley with No. 45. Scale 0.25m. View south-west.



Pl. 21 View of the partially stripped ground-floor ceiling of the north-west room showing the joist with mortices for a former passage screen along the north-east side. Scale 0.25m. View south-east.





Pl. 22 View of the ground-floor ceiling of the north-west room showing the joist with a truncated mortice for a possible passage screen and the remains of a possibly later post. Scale 0.25m. View south-east.

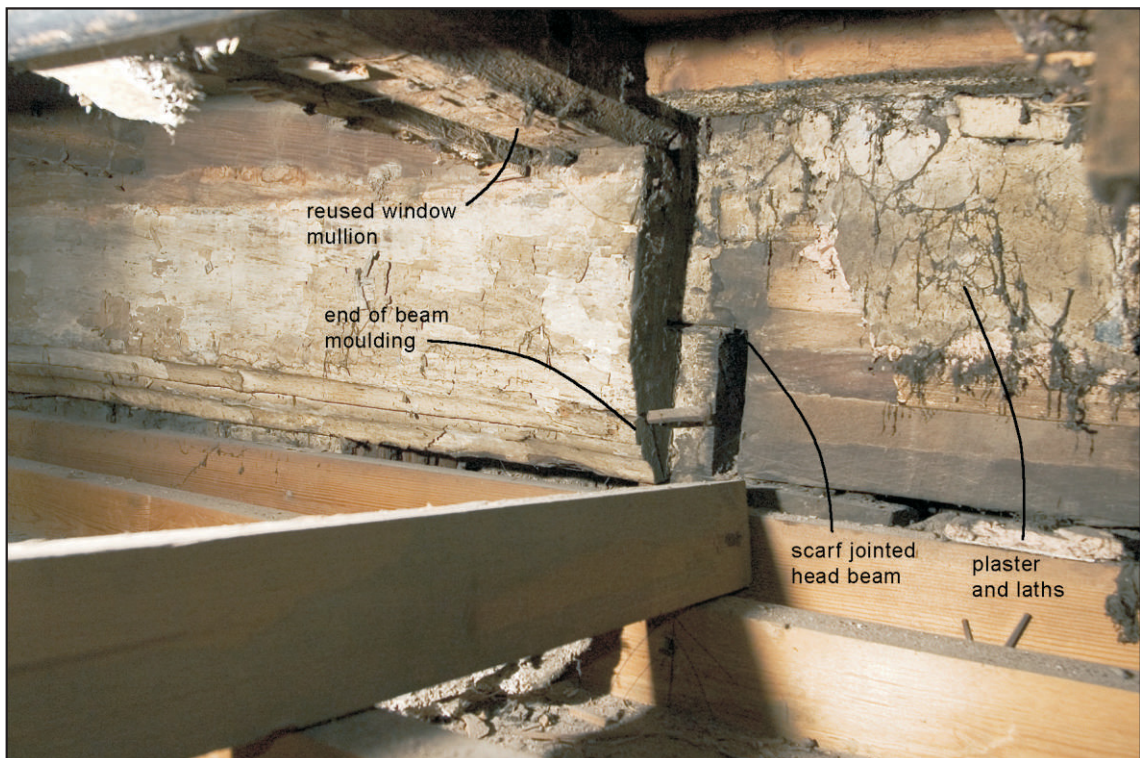


Pl. 23 View of the shorter main beam in the third bay of the ground-floor ceiling of the north-west room showing the abutment of its south-east end against the joists marking the former position of a passage screen. Scale 0.25m. View south.





Pl. 24 View of the short section of moulded beam in the ground-floor ceiling of the north-west room overlying the site of the former passage. Note how the terminus of the moulding is aligned with a straight edge to limewash on the adjoining joist. Scale 0.25m. View north-west.



Pl. 25 View of the head beam of the ground-floor north-west room in the area of the former passage showing the scarf joint between beam sections and the termination of the moulding. View north.