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GAINSBOROUGH OLD HALL

Dais Window Survey 1995

for

ENGLISH HERITAGE

March 1995

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Summary
Recording of the Dais Window was completed in advance of repairs and conservation. Discovery of additional masons' marks provided fresh evidence to suggest that the window was originally constructed at the Hall and is not from another building. Traces of several layers of paint were recorded on the window, vault and arch.

Introduction
Lindsey Archaeological Services was commissioned by English Heritage to carry out pre-recording of painted areas of stonework in the stone bay window of the Great Hall, which had been recommended in the first survey report (Clark 1992). This included completion of the stone by stone recording begun in 1991. The repair work had been in progress for about 4 weeks before LAS began their survey.

This report is the third in the series of reports on the Dais window. The excavation report (Clark and Field 1990) and the survey (Clark 1992) should be referred to for information on features not described below.

Repairs
Repairs to the fabric were carried out by the Cliveden Conservation Workshop. Internal and external scaffolding, staging and access ladders were provided. Repairs to the external elevations were substantially completed by the time LAS arrived on site.

Repairs entailed
- raking out of failed mortar
- removal of hard cement
- replacement/repair of broken blocks and loose infill
- repointing and plastering
- surface cleaning and treatment
- repair of glazing
- repair/replacement of rainwater pipes

Some mortar/plaster samples were taken by the conservators but it is not known if these were from original archaeological contexts or repairs. Re-setting and re-pointing was in a sand and lime mortar. Replacement facing blocks were bed-marked by the stonemason as in Fig. 10 (c).

1. Recording of the Stonework
Although considerable alterations and improvements to the original photogrammetric drawings had already been made in 1991 further corrections and additions were necessary. This inevitably entailed revised and extended context numbering. The external 'flattened' elevation drawings

(Fig. 2) and buttress side elevations were given more detailed block definition and revised numbering, mostly from the window heads upwards. Contexts on the internal flattened elevations were given a prefix of 1000, e.g. 12 becomes 1012, to create a unique number sequence. The exceptions are those with an 'A' prefix (A1-A8) which were temporarily obscured in the earlier survey; these are renumbered 991-998.

Variations of the 1991 base copies illustrating structural defects and repairs remain unaltered as they refer to the original survey. Those used as a base on which to annotate paint layers in the 1995 survey carry the new numbering system. The internal (N) and external (X) elevation numbers are referred to on Fig. 1. A full photographic record was made during the recording, a selection of which are included in this report. Black and white photographs were also taken as an archive record .

Buttress Capping Blocks and Pinnacles (Pls. 1-8)

A revised version of the 1991 elevation drawings is given in Fig. 2. Alterations mostly entailed additional joint definition. Fig. 3 shows Buttress D capping block in plan and side elevation (see also Pls. 1-3).

The massive capping blocks of the buttresses each incorporated an outer seat of lozenge section for the separate pinnacles and an inner block, the upper rear surface of which is roughly diagonally cut away on each side to house the springers of the hood mould to the adjacent windows. The front upper edge of the inner block is flat chamfered; the rear angle of the pinnacle seat slopes down to merge with the lower centre of the inner block. The front flanks of the inner block slope downwards and forwards to merge with the lower stage of the pinnacle seat; a shallow groin serving as a water run-off. The eroded portion of this capping block was reconstructed from the intact profile of Buttress C (Pls. 4,5).

Buttress pinnacles are in the form of a much-debased and simplified *columna rostrata*. They are made of sandstone and have very thin base pads with rolled edges and of the same lozenge section as the pinnacle bases and buttress tops, with piercing for central iron bars which hold the three elements together. Only one pad was actually observed after dismantling. The sharpness of the carving and the good overall condition suggests that the pinnacles are replacements of the originals (Pl. 8).

Buttress head 515 is constructed in the same manner as the others and is in all respects a standard item. The window X4, to the left, is sprung from 517J at an angle of c.112 degrees (horizontal plane); the hood mould 517G and H is original and contemporary with 517J.

Hood Moulding Springer 516G

Fig. 4 shows the two halves of the standard original hood mould at X4: 517G and 517H, the latter rising from springer 517J, which is housed in the inner block of the buttress head. This arrangement and angle departure (112 degrees) is common to Bays X1-X4 (Pl. 9). The right-hand springer 516G,

which serves Bay X5 window is identically set, in that it is aligned with the symmetrical return angle of 248 degrees (i.e. at 112 degrees to the buttress centre). The sudden deviation of 16 degrees to the west however, results in window X5 and its hood mould being set in a different plane (Pl. 10). Unfortunately the original hood mould to the window at X5 was cut away for the insertion of a chimney stack, the present mouldings 516H and 516J being later replacements. The exact relationship and bonding angle (i.e. any evidence of alteration) between the predecessor of 516H and the surviving springer 516G, therefore is unknown.

Standard and non-standard window moulding

The window head section shown in Fig. 4 is the standard for X1-X4 (see also Pl. 12). The non-standard head of X5 is shown in Fig. 5. The tracery head appears to be the only one which is not in one piece, being divided down the centre of the mullion, 516 to the left and 516A to the right (Pl.11). It differs largely in the angle of the external mouldings but is contemporary with the other windows. It may have been chosen due to the overall narrower width of the jamb mouldings (the lights are the same width as in the other bays), to fit the smaller bay, but even so, it was necessary to cut away part of the buttress so that the jamb mouldings were exposed by a splay (Fig. 3). The distribution of internal masons' marks (Fig. 6) proves that this window is from the same source as the other parts of the structure.

It should also be noted that the original position of each window apex which carried an interval rib was crucial to the vault symmetry. The existing vault is so displaced and irregular that it is not possible to single out any part which may have been installed in an unconventional manner.

The Vault (Internal Surface)

The vault ceiling, based on a reversed photogrammetric drawing with added moulding and joint detail is shown in Fig. 7. (For an overall ground plan/section see Clark 1992, Fig. 5.) References for the capital/springer blocks are C1-6; internal elevations/ window bays are N1-N5.

Capital/Springer Blocks (Pls. 13-18)

Each capital is carved from a single block which also incorporates not only part of a jamb and arch-moulding to the adjacent windows but also a pair of diverging rib springers. The form and position of these springers and the amount of moulded detail thereon vary considerably. All springing blocks are shown in approximate section in Fig. 8.; a fully detailed section and elevation of C1 is given in Fig. 9.

This latter was chosen as an illustrated example because of the relatively good condition of both capital and springer (Pl. 13). It can be seen that the springer retains a near complete profile of the keel-fillet rolls at its junction with the slightly-domed surface of the capital, and is set a considerable distance from the front edge. The rough area around the springer may only be the unfinished (and invisible) surface resulting from the initial shaping. It may alternatively be the result of recutting of the profiles to obtain a new

springing position and/or a new profile to match a new vault. C3 and C4 have no rib profile at this level, being simply rough-hacked surfaces with a vestigial centre-notch (Pls. 15,16). Trimming back the profile would suggest either difficulty in installing an over-sized or off-centred vault, or an adaptation to accommodate a replacement whose ribs spring from a point farther from the centre, i.e. from a point almost flush with the internal wall face. This would not occur in the case of a repair of a collapsed vault resulting from outward-moving walls unless the same vaulting could be re-fitted only with a change in overall span profile, thus meeting the walls at a different angle. It is further possible that a total rebuild of the whole structure would result in minor errors that necessitated individual alterations at each springing point.

Rib Pattern (Fig. 7)

Eight ribs radiate from the central pendant (Fig. 11, Pl. 22) forming a central conoid divided into eight inner cells of varying size. Each rib joins the centre of a junction block which forms the head of eight outer cells (Pls. 19, 20). Each of the outer cells, except two to the south, is formed by two ribs diverging from a capital, the loop being formed by the outer edge of the junction block. An interval rib between each outer cell is sprung from the apex of a window head to join into the outer centre of a junction block, except for the three ribs to the south which are sprung from the positions above the entrance arch (Pl. 21). Fig. 12 (a) shows a rib section.

Brick from the vaulting

A brick was removed from the internal edge of the vault ceiling over the northern window bay by the conservators. Its precise position was not recorded but it seemed to have been used as infill immediately over, and to the left of, the window head at Bay N3 (Pls. 12, 23). Except for a thin rendering over the ceiling in this area it is possible that the fabric beyond had not been disturbed by the 1972 repairs. Beneath the render was a pinkish plaster of unknown date.

The brick dimensions were 255 x 125 x 50-55mm; colour was very pale orange-red of rough texture. The exposed core showed very few inclusions. The base was easily identifiable by its roughness but the surface was too damaged for proof of straw or other impressions. The upper surface, though similarly damaged retained enough area for tentative comparison with other bricks found in early contexts at the Old Hall. There was insufficient evidence to prove the existence of the typical neat sunken margin. Faint traces of lime or plaster adhered but it is uncertain if the surfaces were damaged by removal from their present mortar/plaster matrix or by previous use.

It cannot be absolutely shown that this brick was contemporary with, or was once part of, the brick suspension bracing which was found above the vaulting in 1969 although the scale used on the photographs suggests a similar size to the sample brick (see below).

The Vault (External Surface) (Figs. 14 and 15)
The roof of the vault was not part of the 1995 repair programme. Extensive repairs had been carried out in 1969 by local builders Pumfreys under the supervision of architects Fisher Hollingsworth and Partners. Eight photographs taken during these repairs were kindly lent to LAS. They are briefly described below with original reference numbers where known (Appendix 1).

Photos 7 and 8 almost fit together as a panorama, after removal of the roof lead, showing roof timbers as a north-south ridge cut away at the soffit centre to fit the peak of the mortar/plaster-covered conical over-vault. Seven flush lap-jointed rafters fall to east (hidden) and west. To the right is seen hooks protruding from the previously re-fitted southern ribs with the concrete lintel in the background. This photo shows that the south ribs were refitted before the roof covering, roof timbers and over-vault plaster were removed.

Photos 3 and 4 show the over-vault, after removal of the covering mortar/plaster, with replacement bricks bracing the pendant key. An architectural fragment 565 is shown ringed on photo 5 and a similar piece 554 is on photo 1. Were they pieces of the missing rib suspension, discarded in a rebuild? It is not known if the rebuild was due to a problem with symmetry that rendered them redundant or if the brick substitution was due to later subsidence or damage.

Photos 1,4 and 5 taken in 1969 show that the string course is the internally over-sailed joist ledge which is the course immediately above that containing the moulded fragments. The inference here is that as the string course/joist ledge does not appear to be a later rebuild then the reused moulded fragments were included in the structure originally and therefore are either contemporary (e.g. discarded or damaged components of that structure) or earlier and from an unknown source. If these mouldings are in fact through stones and represented externally by face-blocks 554 and 565 then they are approximately 0.30m high, 0.20m wide and 0.50-0.60m in length. These proportions may exceed those of the theoretical members replaced by the brick voussoirs. Definition of these pieces in the photos is poor and though it can be seen that they are straight with a neat central groove and partly faceted in section with slight indications of an out-turned end; there is insufficient evidence for further identification.

External Elevations
Raking out of old mortar by the present contractors was already too far advanced to assess the full extent of 19th and 20th century repairs but it is assumed from overall minor structural movement and sandstone replacements that they were considerable. General block alignment and wide joints suggest however, that other than replacement of specific elements, particularly decorative mouldings no substantial rebuilding was carried out.

From the photo evidence only the topmost parapet course was removed in 1969 and probably repaired or replaced and relaid in much the same position

relative to the course beneath, thus producing little change in the external appearance.

The evidence of the fissure in X4 (508A, 513A, 545A, 564A, 580A, 598 and 614) shows that displacement in the two upper parapet courses which therefore must have been relaid to result in aligned joints at the junction of the merlon and embrasure copes. This is also evident to a lesser extent (as original overall symmetry is not known) in the differing runs of merlon copes as opposed to the apparently regular lengths of embrasure blocks. The majority of merlons (621-631 and 633) are ?19th century sandstone replacements cut to neatly span the expanded angle intervals thus restoring an overall neatness to the parapet. Re-aligned merlons would include 622-624 and 628-630. The string course displays associated areas of expansion and one or two related cracks but no serious collapse.

The position of parapet joints in the upper two courses (viewed externally) generally is incompatible with the substantially opened vertical joints up to 120mm width in Bay X4.

Blocks 632, 583, 567 and 548 represent the normal and the deviating angle on single stones and are proof of an original intention to deviate rather than a later clumsy alteration (Pls. 24-27).

Discussion

Excavation in 1990 showed that although the foundation to Buttress D, **4**, has a vertical profile beneath Bay X5 it was over-sailed and aligned nearly perpendicular to the Great Hall. Bay X5, however, partly crosses this alignment, its angle with Buttress D being c.95 degrees instead of the c.112 degrees at Bays X1-X4 (112 1/2 degrees is required for symmetry on an octagon). The resultant position of Buttress E requires it to use the pre-existing Great Hall buttress foundation **33** with the addition of extension footing **28** to support the slight overhang (Clark and Field 1991, Fig. 4).

Bay X5 is 0.06m wider than Bay X4, the extra room being gained by the canting of the wall westwards. If Buttress E had been placed in the position demanded by conventional symmetry of the structure, the rebate to the right of the buttress would have nearly clasped the Hall buttress and the angle between Buttress E and Bay X5 would have been c.90 degrees, i.e., the opposite to their present positions.

Most of the constructional discrepancies of the Dais window are disposed of at the angle of Buttress D and Bay X5. The slightly expanded X5 was given a non-standard window of the same apparent width as the others, but with very shallow jamb mouldings at nearly 90 degrees to the glazing line. Even with the extra length gained by these two adjustments it was still necessary to cut a splay in Buttress D to expose the cramped jamb mouldings. Both X4 and X5 jamb mouldings were cut by the same mason, as evidenced by the marks.

The conventional arrangement of buttress capping blocks, which have integral rear springer housings, means that at this height alterations to the wall angle were not so easy to accommodate, since most components were fixed in their structural relationship. The problem was solved by retaining the symmetrical buttress block and hood-mould springers but canting the wall westwards exactly from the springer end, the remainder of the hood-mould taking up a new alignment with the new wall angle c.16 degrees further west. The original springer 516G remained aligned to the conventional, and originally designed, angle of return to the Great Hall.

The hood-mould terminal 527, to the south, is cramped by Buttress E capping 529 and may even have been trimmed to fit; this area is obscured by a rainwater pipe (Compare hood mould 465 in Bay X1, Pl. 29, with 527, Pl. 30).

The remaining external adjustments were relatively easy, incorporating both the fixed angle and the angle of deviation into wall-blocks 548, 567, string-block 583 and parapet cope 632. (The string course is utilised internally as a joist-ledge.)

Internally there is little evidence of any deviation from an intended design. However, Bay N1 splays outwards from the shaft S1 to reveal the mouldings on the north face of the entrance arch east jamb. Capital springer block C1 is shaped with this intention and it may be that the west side at N5 and C5 was originally intended to echo this symmetry. i.e. a stilted half-octagon in plan with X1 and X5 parallel, but with shallow internal splays to each. This design would result in a span which would still be about 0.45m short of the entrance arch span.

An explanation of how an error may have occurred is as follows:
A measurement of 3.90m (12.79ft) was taken to be the total horizontal clearance of the arch (i.e. including the mouldings) whereas in actual fact it was only the span (i.e. distance between reveals). If the intended symmetrical plan had been adhered to, then the internal north-south width would have been c. 3.22m (10.58ft) perpendicular to a line drawn between the north edges of the arch jamb reveals. If the intended east and west internal splays of the bay window were to be extended southwards as far as this same line of reference, then the distance between them would have been 3.90m (12.79ft) and would have exactly matched the quoted span; but not, of course, the moulded splays (see Dais Window Survey 1991, Fig. 10).

The entrance arch bears masons' marks which occur not only on the non-standard window jamb in bay N5 but also on the symmetrically angled walls. These in turn display marks which also occur on the standard and non-standard window (Fig. 6, Pls. 31,32). If, from the evidence of the masons' marks, it can be assumed that all the standard and altered components are contemporary, it follows that the anomalies were in fact an on-site adaptation to compensate for an error of measurement or other unforeseen circumstance.

The footings alignment at X5 suggests the original intention to construct a symmetrical figure. This was intended to enclose a contemporary arch whose span (including the jambs) was apparently too large for it to contain. This alone may be the reason for the expansion of the window westwards. To contain the arch fully within a symmetrical window would have meant relaying a plan to a new centre reference and lengthening each bay. This was out of the question because it would also have entailed, not only extending the whole area of the footings, but also including new fabric in the area between window jambs and buttresses. This latter task would have been impossible because of the dual role of certain jamb blocks and items such as buttress caps with integral springer seats. The only solution, therefore, was to extend the only part of the structure which was, or could be made to be, free from the rigidity of fixed symmetry, namely bays X1 or X5. X1 could not be altered because it contains the door, and because of its proximity to the external cellar access beneath the solar. Alteration to X5 on the west side of the window, at least as far as the main storey post and buttress on the Great Hall would allow, would have been the only remaining option.

It will be noted that the arch is not central to a roof principal, but slightly west of it. Assuming that the main Hall frame was already in place, this may be further indication that some difficulty in precise positioning of the arch increased the problem of adequately enclosing its span in the restricted external space.

The vaulting may have been repaired or replaced but there is insufficient evidence to say with certainty that the composite capital/ springer blocks have been recut to match and fit a new vault. However, some of the undamaged springers have earlier paint which does not exist on the actual ribs. This only serves to authenticate the springers which are of the same moulding as the vault ribs; the latter have the appearance of being later but their surface is obscured by the ochre yellow paint layer applied in 1972.

Nothing further can be conjectured concerning the vaulting at present other than the logical assumption that given the above anomalies any alteration in the symmetry would have severely impaired the builders' ability to maintain the built-in geometry of a pre-fabricated vault.

Michael Clark
February 28th 1995

References

Clark, M. and Field N., 1991, *Gainsborough Old Hall: Dais Window Excavation, February 1990.* Report for English Heritage.

Clark, M., 1992. *Gainsborough Old Hall: Dais Window Survey 1991.* Report for English Heritage.

Appendix 1
Description of photographs held at offices of Fisher Hollingsworth and Partners

Numbers 1-6 are 8" X 6" and dated 22nd October 1969.They appear to have been prepared for a display. Numbers 7 and 8 are not dated or numbered are 7 1/4 x 6" in size.

1. 71/24/2 E side of over-vault from NW. Roof joists removed and phosphor bronze suspension hooks already in place on the south side. Reused architectural fragment (ringed on photo) near new concrete lintel. Bricks replace rib suspension. Typed caption on reverse incorrect (refers to Plate 6)

2. 71/23/1 External elevation (Bay 5?), probably the vertical joint between 568 and 569 above window and below string course. Photo intends to show joint movement of 1/4". The pointing is of 1 1/4" width and was a relatively recent repair of faults resulting from considerable movement which had commenced at least as early as the mid-19th century.

3. 71/24/3 Over-vault from N, showing replacement bricks bracing the pendant key.

4. 71/7/2 Similar view to 1

5. Over-vault and parapet from NE. The caption describes a 'splayed coin member, the angle of the splay not coinciding with the general layout of the bay'(ringed on the photo). This is the internal face of 600 whose angle of return is a normal or standard one.

6) 71/25/2 External view showing movement of wall block outwards by 1 1/2" and close-up of buttress pinnacle

7 (north) and 8 (south) /no. 69/87/3
These almost fit together as a panorama showing roof timbers as a north-south ridge cut away at the soffit centre to fit the peak of the mortar/plaster-covered conical over-vault.

2. The Paint Survey (Figs. 16-27)
The recording of paintwork on the internal stonework was undertaken while the internal scaffolding was in place, allowing access to the upper areas of the window as well as the vault which had been previously inaccessible.

Initially the chronological sequence of the paint was recorded, each block being inspected in turn. The extent of each layer was drawn onto a copy of the internal elevation base drawing, creating nine elevation drawings in total. These are reproduced as seven drawings to accompany this report, with four of the colours of limited extent being amalgamated onto one drawing (Figs. 16-22). There are also five vault and arch-top drawings (Figs. 23-27).

It became apparent that little remained of the paintwork below door level. This may be due to damp causing the paint to flake off, the action of people rubbing against the walls and shafts or, more likely, the use of a disc sander which left grooves on treated stonework. Wire brushing was also evident on the lion shaft terminal. Stains from liquid concrete were recorded on arch blocks 1282, 1257 and 1234, drips from when the arch lintel was repaired in 1969.

The paint layers are described in chronological order with the latest first. Samples of paint were taken by the conservators. The term 'paint' is used advisedly since no analysis of the material has been carried out. The yellow ochre colour was identified as limewash by the conservators and it is likely that other colours were also limewash.

There is no indication whether more than one application was made of the same colour. Equally it has not been possible to tell if more than one colour was visible at a time.

Off-White (after 1972) (Fig. 23)
An off-white limewash covered the yellow ochre (see below) across about three-quarters of the upper arch, suggesting that the painting had not been completed.

Sealant (1972) Fig. 16
This originally covered both the Dais window and the stone arch. It was difficult to detect on the upper levels possibly because it had been absorbed by deposits beneath. In some areas the sealant was discoloured brown, perhaps as a result of reacting with the existing paint.

Yellow Ochre (1972) Figs. 17 and 24
This was painted over the window heads, jambs and the vault after the repair work of 1972 was completed. The ribs and pendant, including the repairs, were painted at the same time as the rest of the window. Identification of paint colours below this layer on the vault was very difficult because of the thickness of limewash applied. Only on the ribs emanating from the capital springers where the limewash hadn't been applied, was it possible to record other colours.

White (1972)
This was applied to the vault ceiling between the ribs and is not illustrated.

Black (?) Fig. 18
This black layer caused problems of interpretation. The wall blocks may well be covered in black paint but, in and around the elevation N5, stonework had been blackened because of the insertion of a stove. Its chimney is depicted in Terrot's painting of 1844 (see Clark and Field 1991, Fig. 1A). Parts of the black deposit could therefore be soot or a build-up of pollution products rather than paint. It was also noted on the vault ribs at the capital/springer bases only.

Olive Green (Figs. 19 and 25)
This covered the whole of the Dais Window. The paint was more brown-green towards the arch area. Olive green paint was found beneath the ochre yellow on the vault ribs and pendant but not the replacement pendant shaft.

The paint sequences on the window and the vault suggests that the vault was in place from at least the period when the olive green paint was applied.

Red Brown (Fig. 20)
This colour survives only on shaft responds 1 and 6 and arch blocks 1096 and 1124, areas which would have been protected from the disc sander. The respond is inaccessible and the arch block mouldings protected the paint. There is no proof that the two areas of red-brown paint are contemporary as the traces on the arch have no overlying or underlying layers, unlike those on the shaft responds.

Pink (Fig. 20)
This colour was found only on blocks 1252 and 1279 above the door. Although it occurs in the same sequence as the red-brown paint there is no proof that the two colours are contemporary.

Light Green (Fig. 20)
A light green was found on arch block 1124. It cannot be put into the chronological sequence because it was not found associated with any other colour.

Blue- Grey (Figs. 21 and 26)
There was difficulty in determining the precise colour of this paint because of the artificial neon lighting. It was found on the window elevations and the arch.

A shallow, narrow groove extends across Bay N1, (north of the door) across Bays N2-5 and beyond shaft S6, to the edge of the arch west jamb. The top of the groove is defined by a thin line of blue-grey paint in Bays N3-5. At one point the paint fills the groove. Below this groove is a zone 60-75mm deep

which is without any paint. It is defined in Bays N3-5 by another thin line of blue-grey paint.

This zone lies between 0.26m and 0.32m above floor level, may represent the position of a raised floor or platform, possibly connected with the use of the window as a Green Room when the Hall was converted into a theatre between 1790 and 1848. The presence of blue-grey paint beneath is problematical. Either the paint above and below the gap were of different dates or alternatively the zone may mark the position of a batten attached to the wall for some unknown purpose.

Light Grey (Fig. 22)
The recorded extent of this colour suggests that it extended over the whole of the window

Light Yellow (Figs. 20 and 27)A light yellow paint which survives only in protected areas, on the shaft responds and under later layers of paint.

Red
Red paint was found only in the eyes of the lion terminal.

Damage
The removal of paintwork by means of a disc sander is said to have taken occurred in 1968. However, the lack of ochre yellow paint (applied in 1972) on the lower levels of the window may indicate that the cleaning was carried out at a later date. The removal of the yellow ochre paint from the lion terminal also indicates a late phase of aggressive cleaning.

Michael McDaid
February 28th 1995

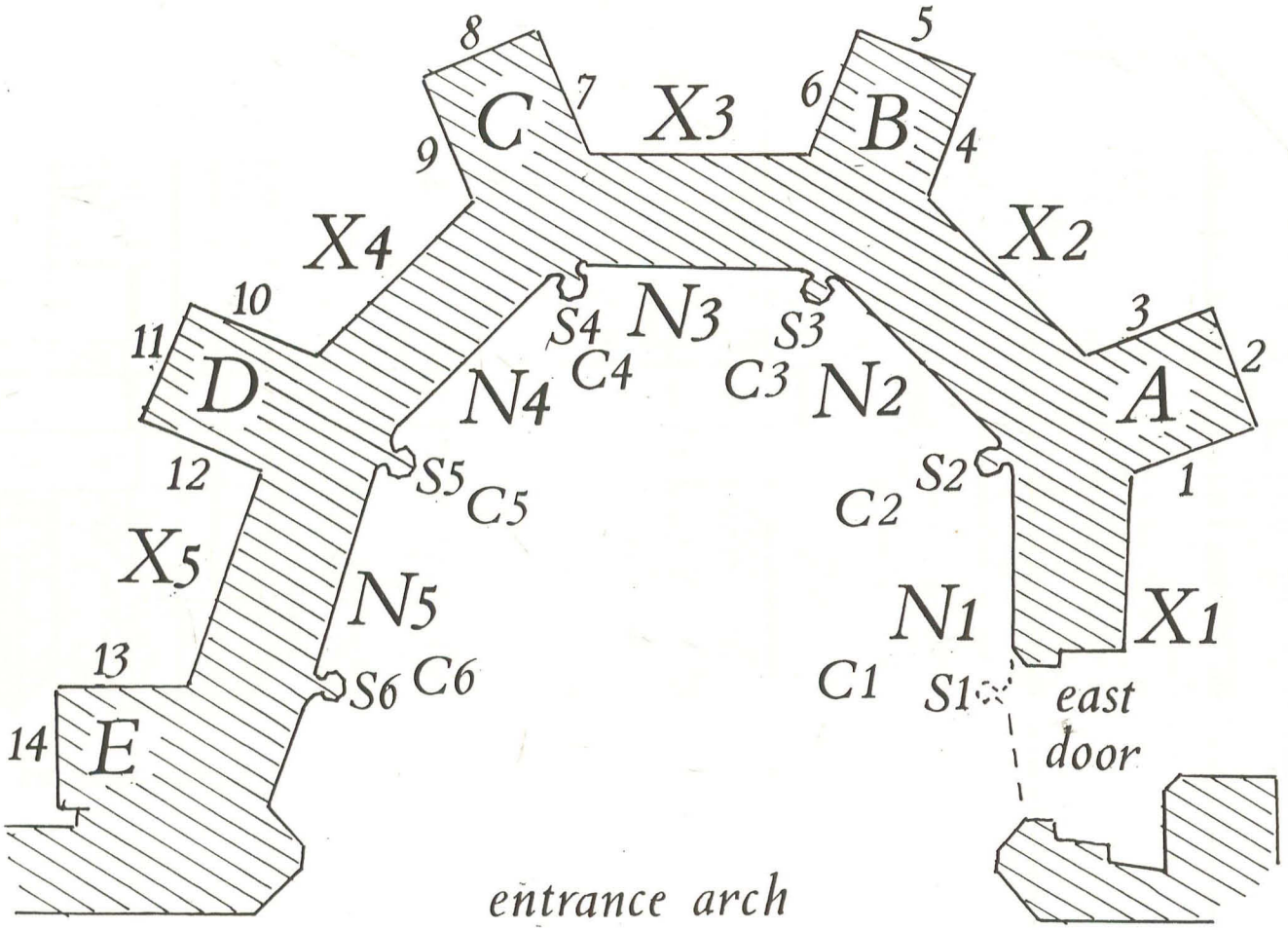


Fig. 1 Elevation reference diagram

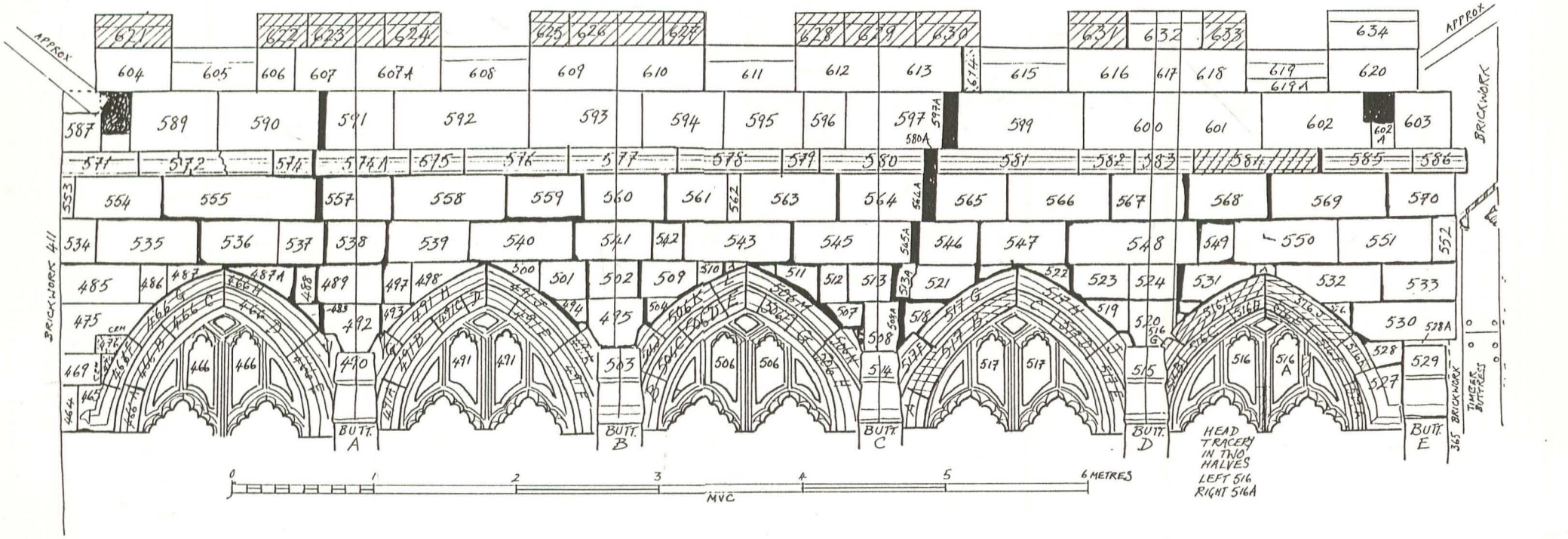


Fig. 2 External elevations revised drawing of upper courses

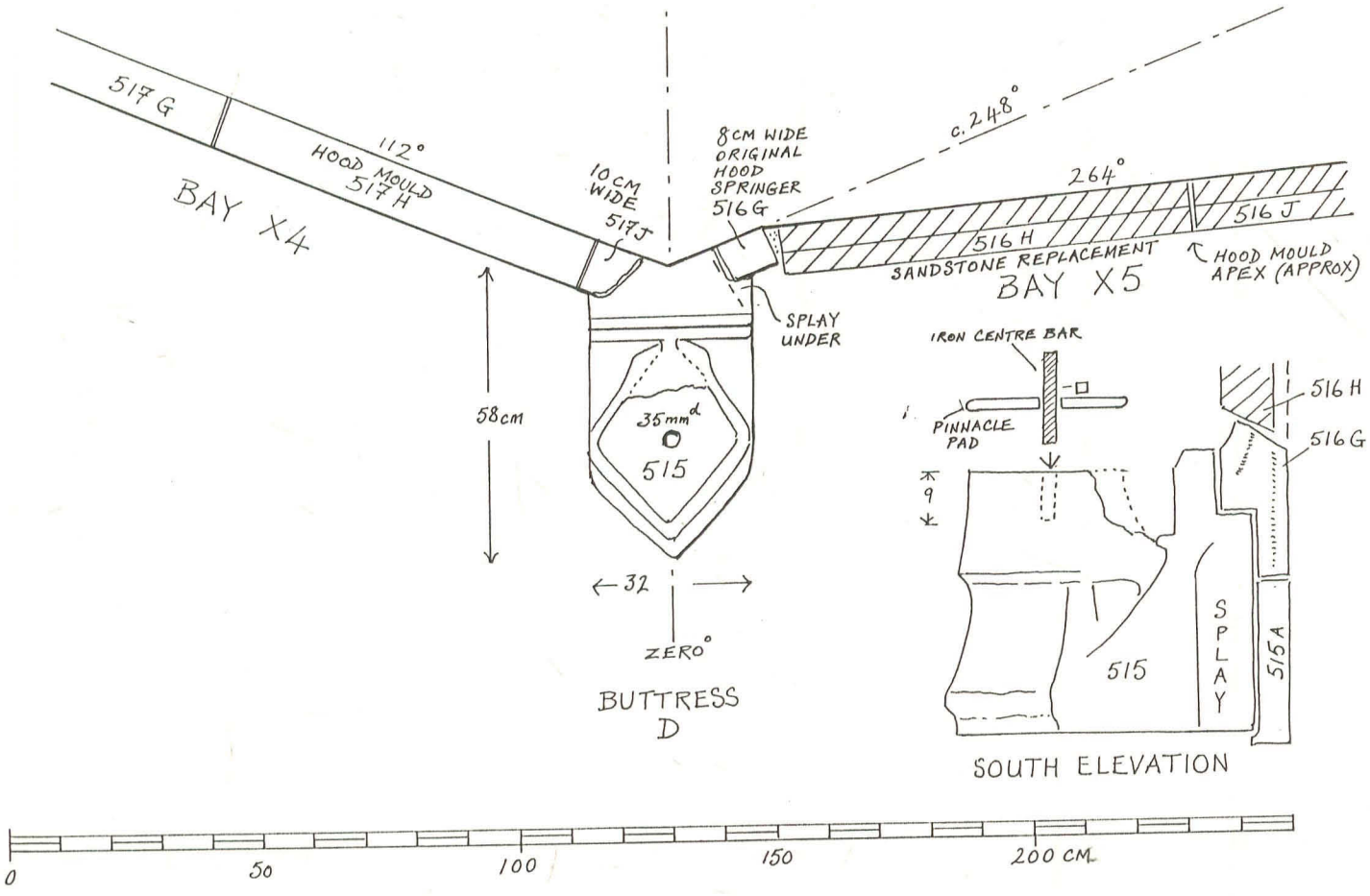


Fig. 3 Buttress D capping block and hood springers

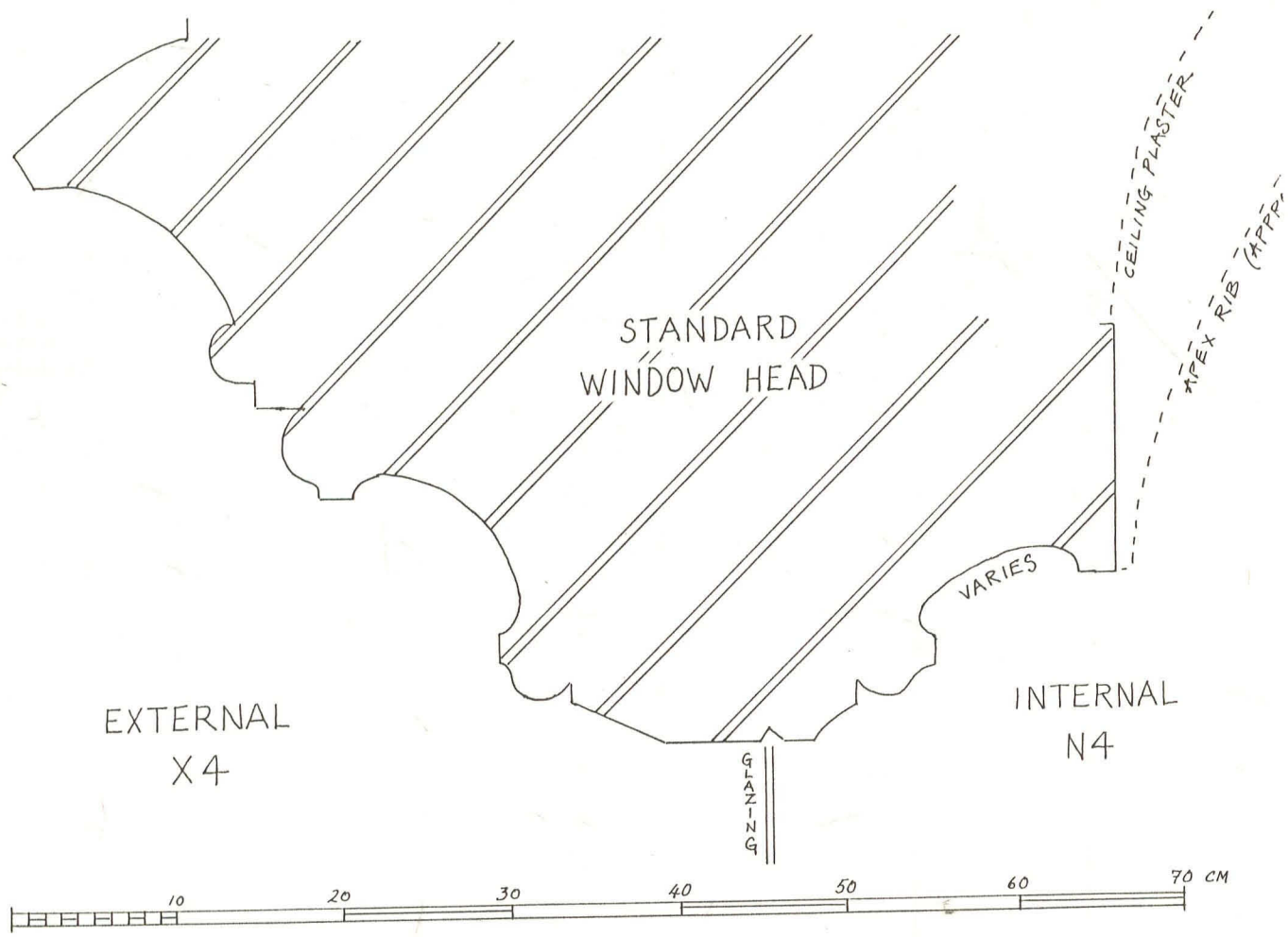


Fig. 4 Standard window-head section (X4 shown)

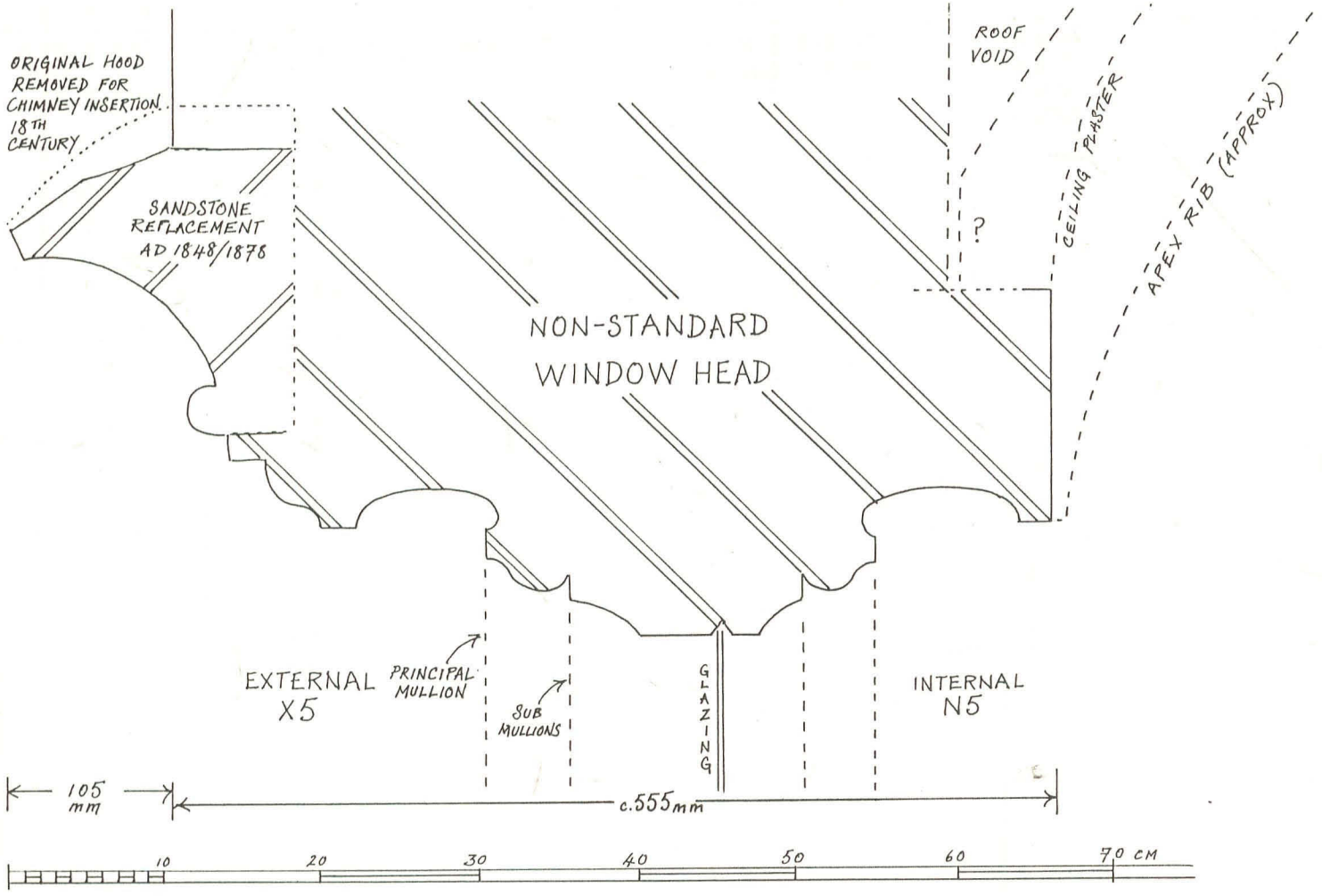


Fig. 5 Non-standard window-head section (X5)

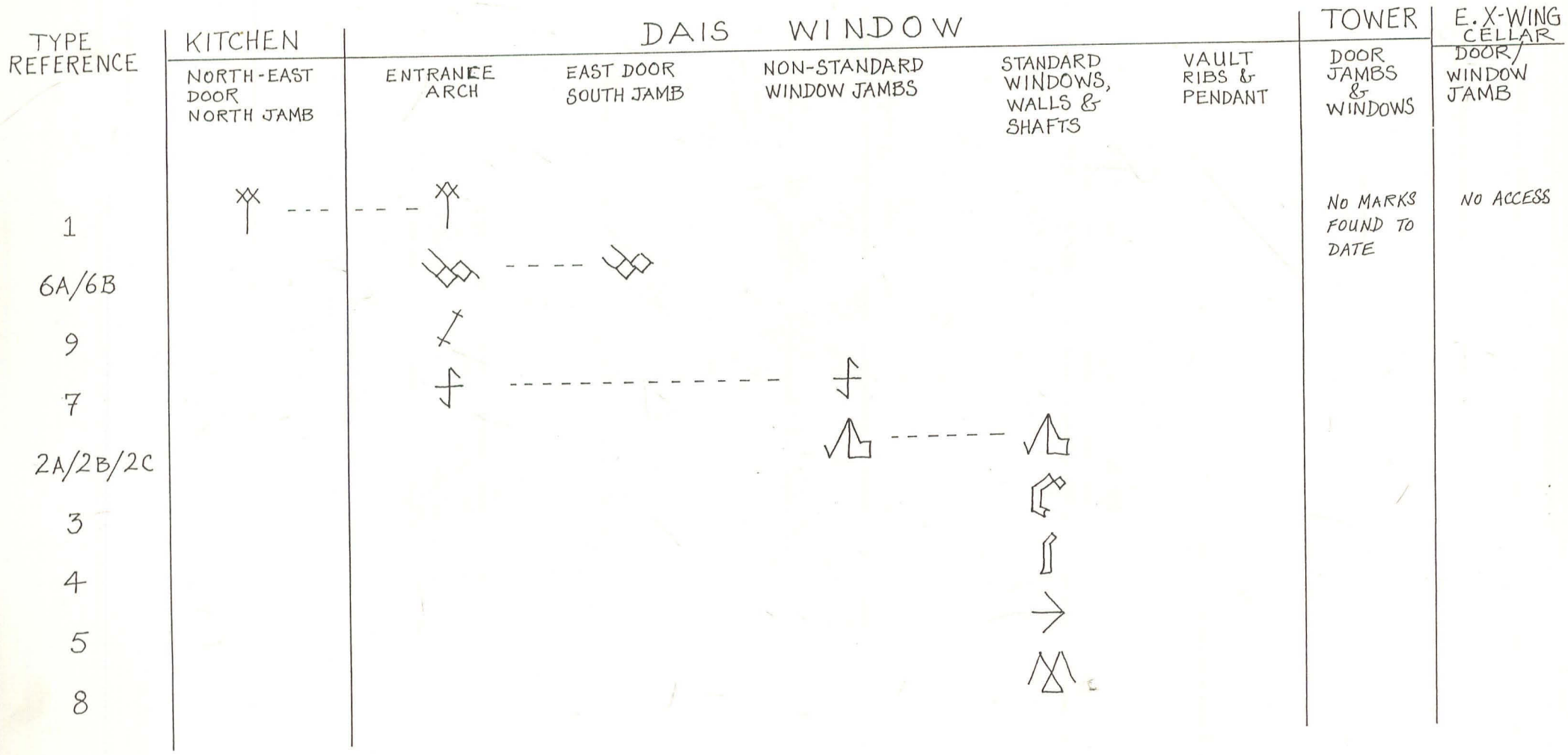


Fig. 6 Masons' marks showing correlation of different parts of the structure

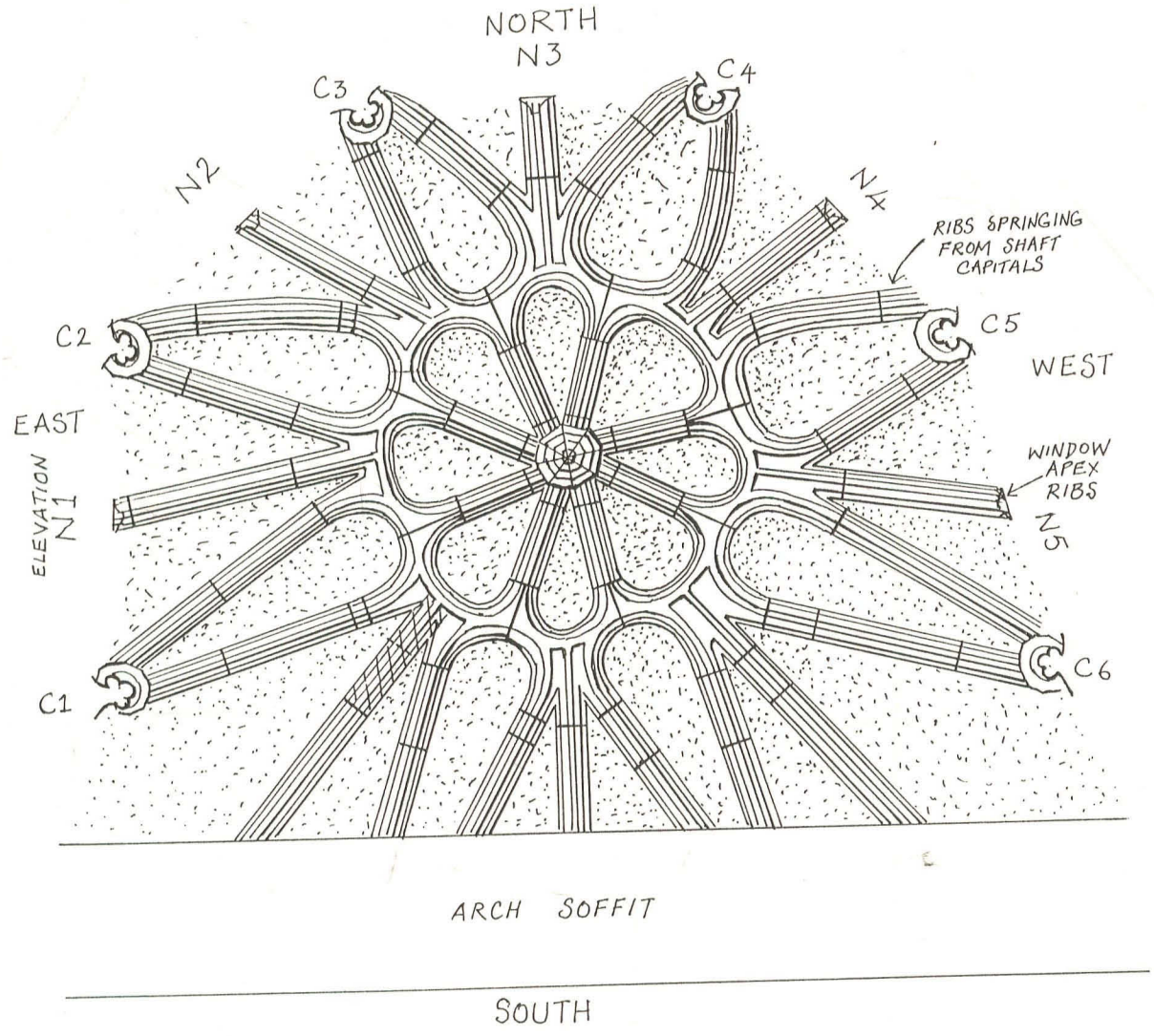


Fig. 7 Vault internal under-plan

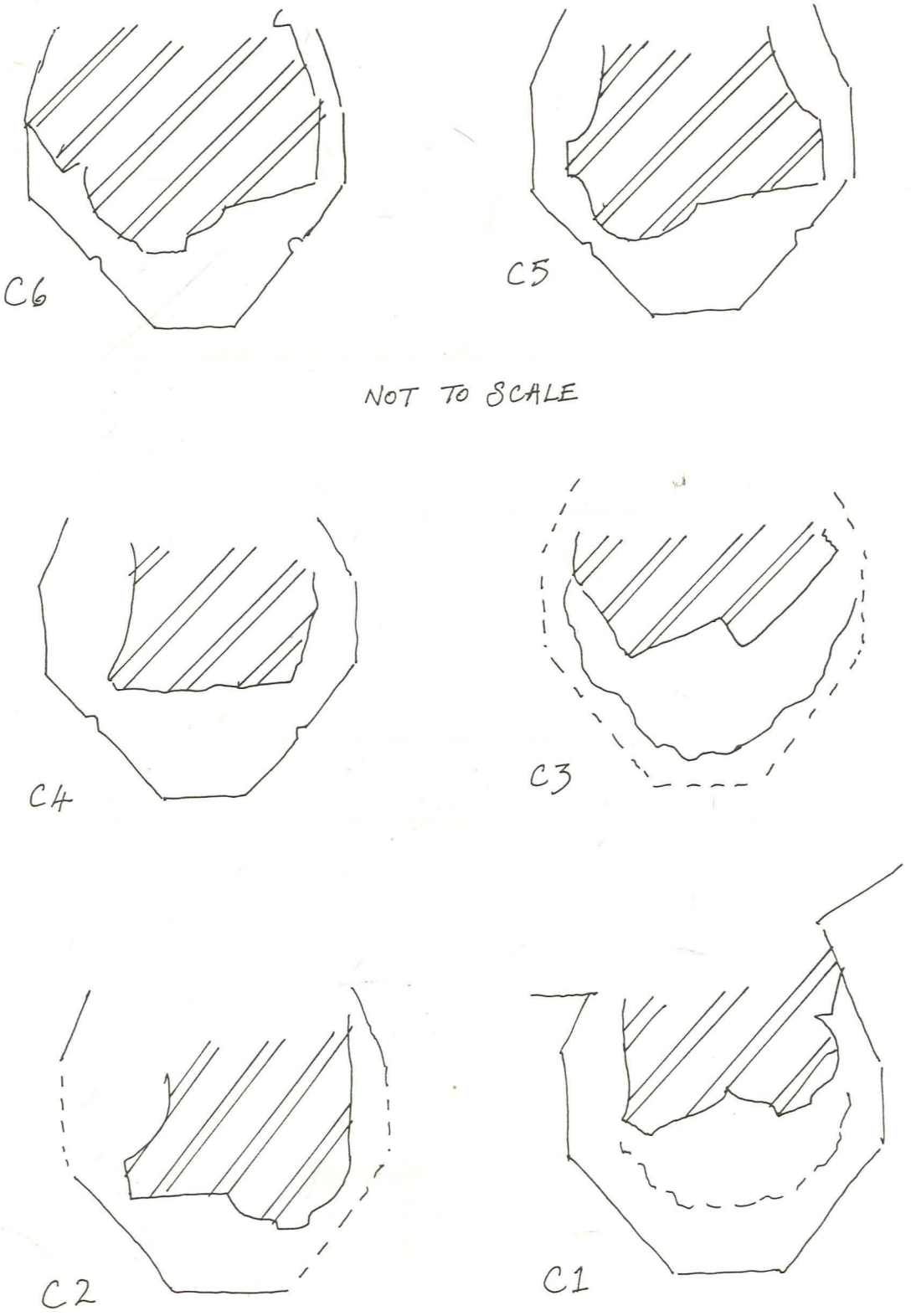


Fig. 8 Section of springers (C1-C6)

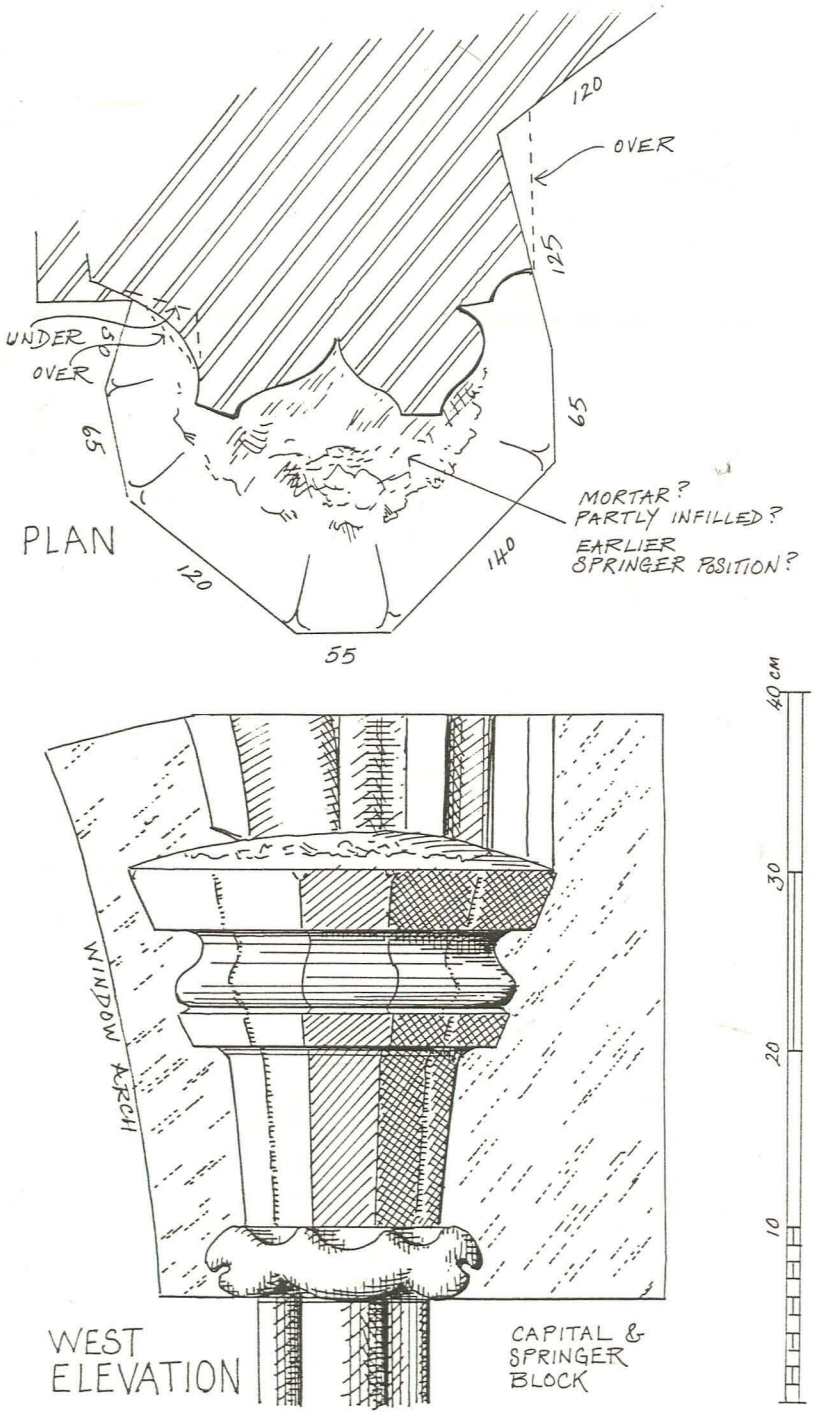


Fig. 9 Capital/springer C1 section and elevation

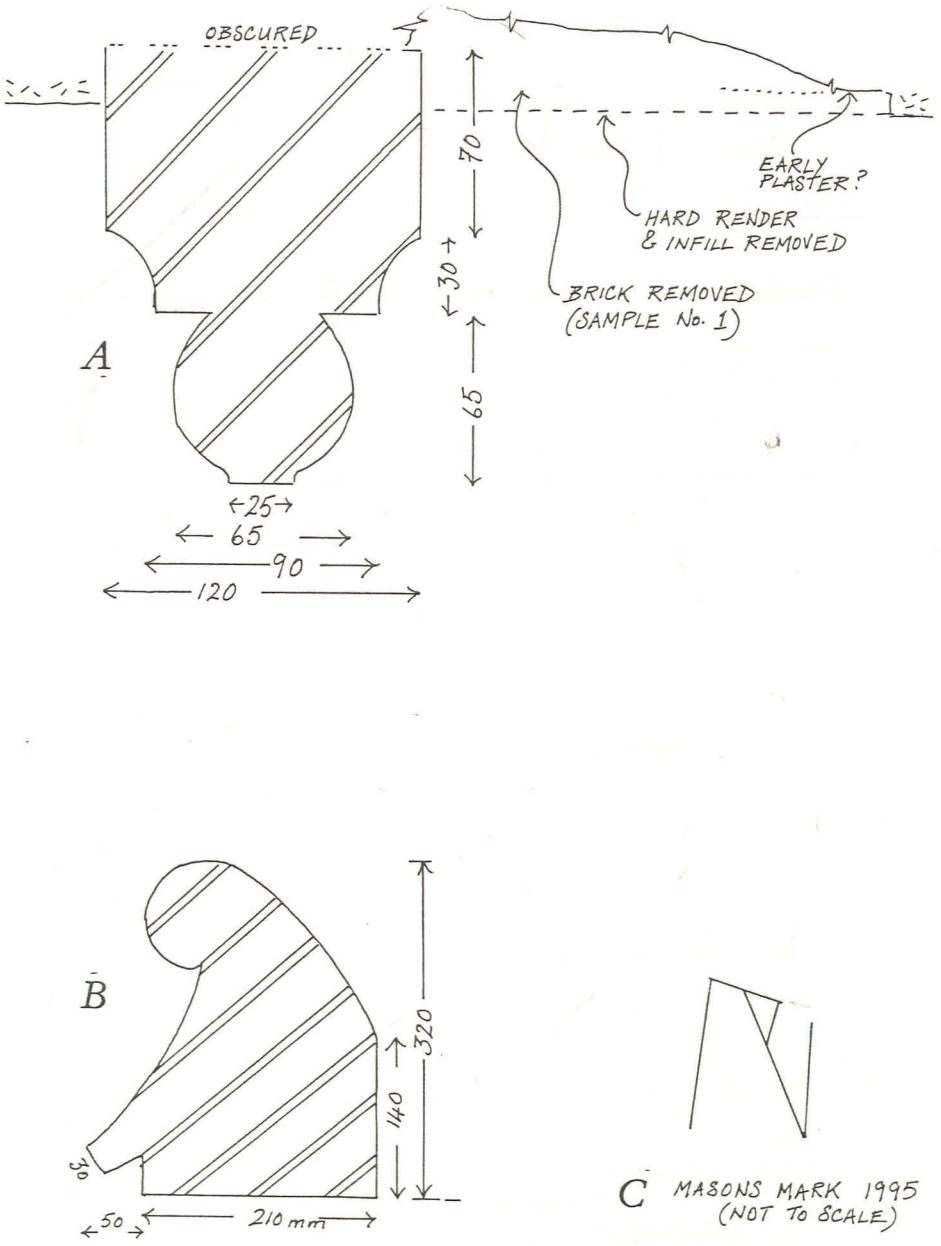


Fig. 10 a) rib section b) parapet cope section c) Mark used by Cliveden Conservation Workshop mason in 1995

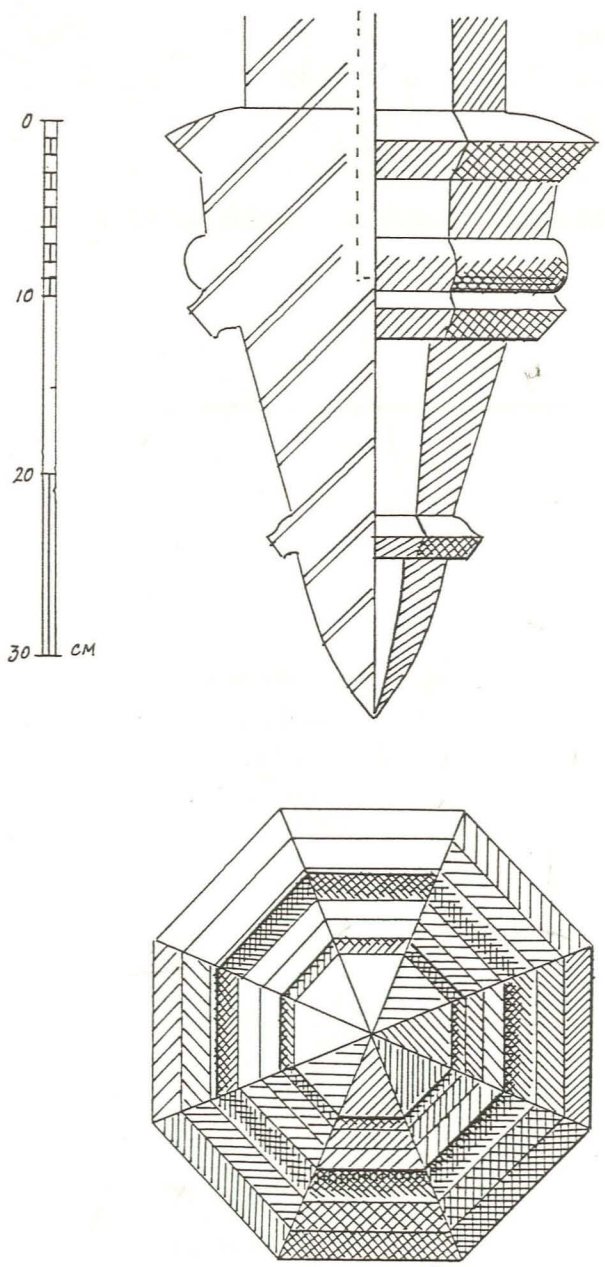


Fig. 11 Vault pendant

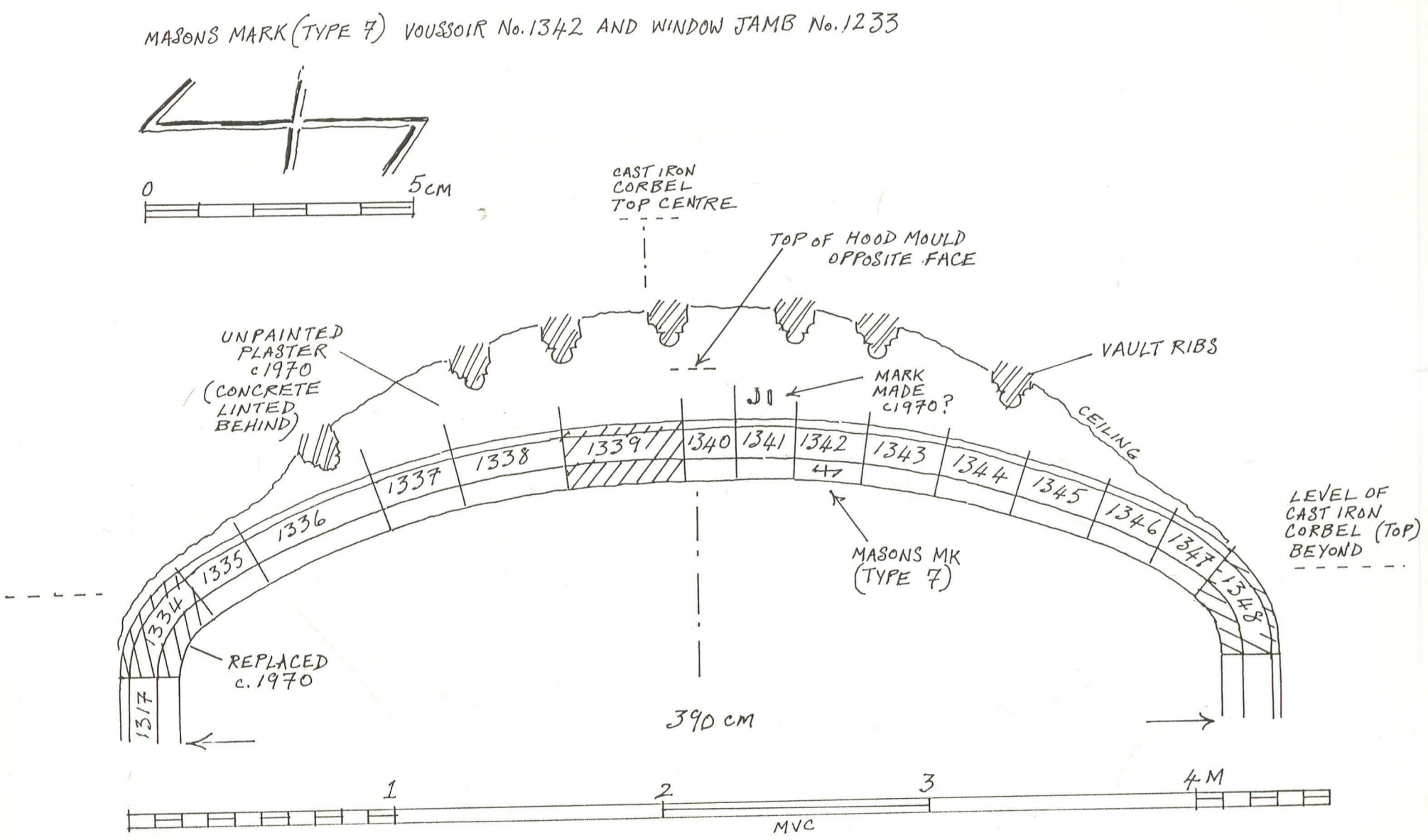


Fig. 12 Entrance arch, north elevation

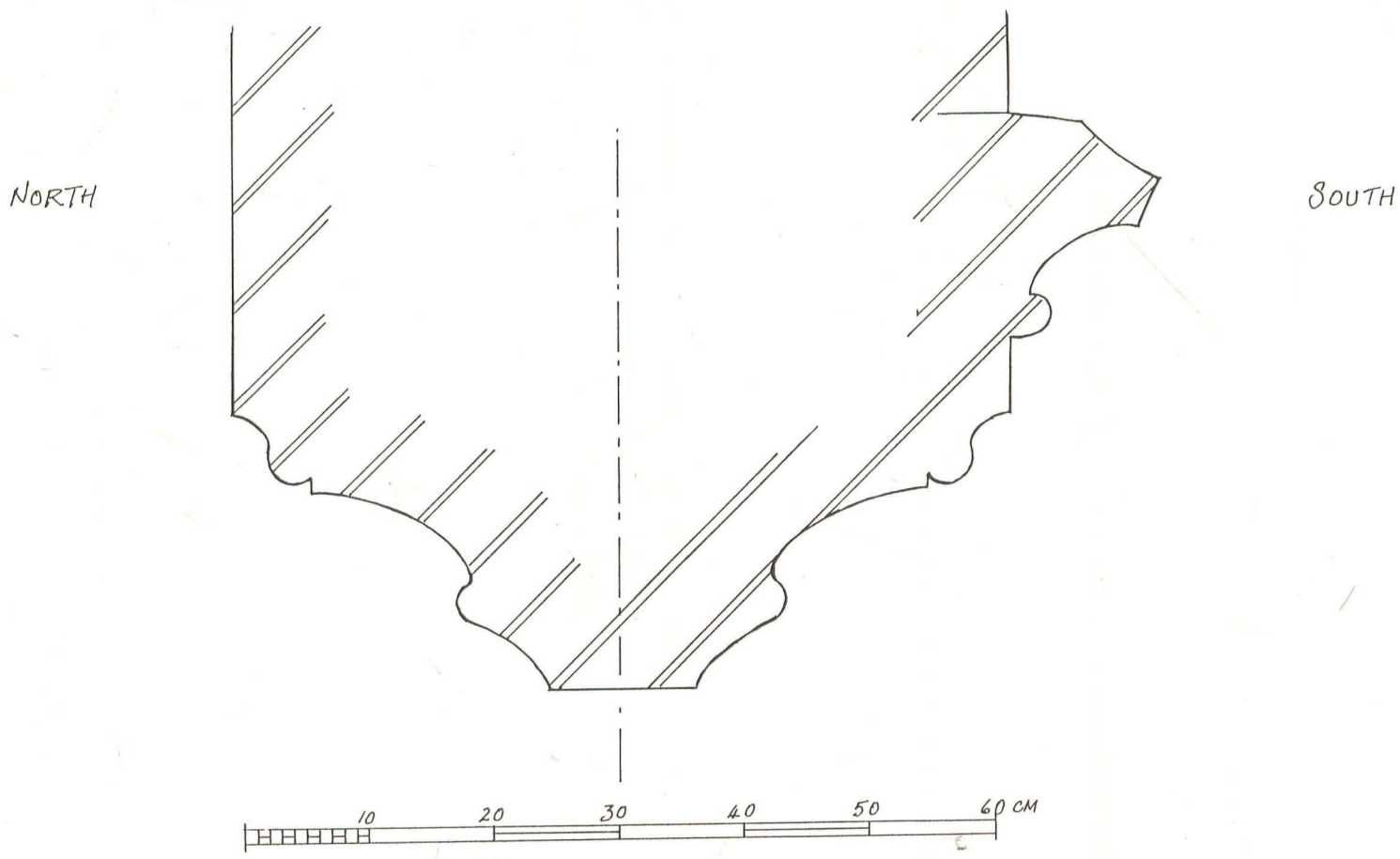


Fig. 13 Entrance arch moulding, section

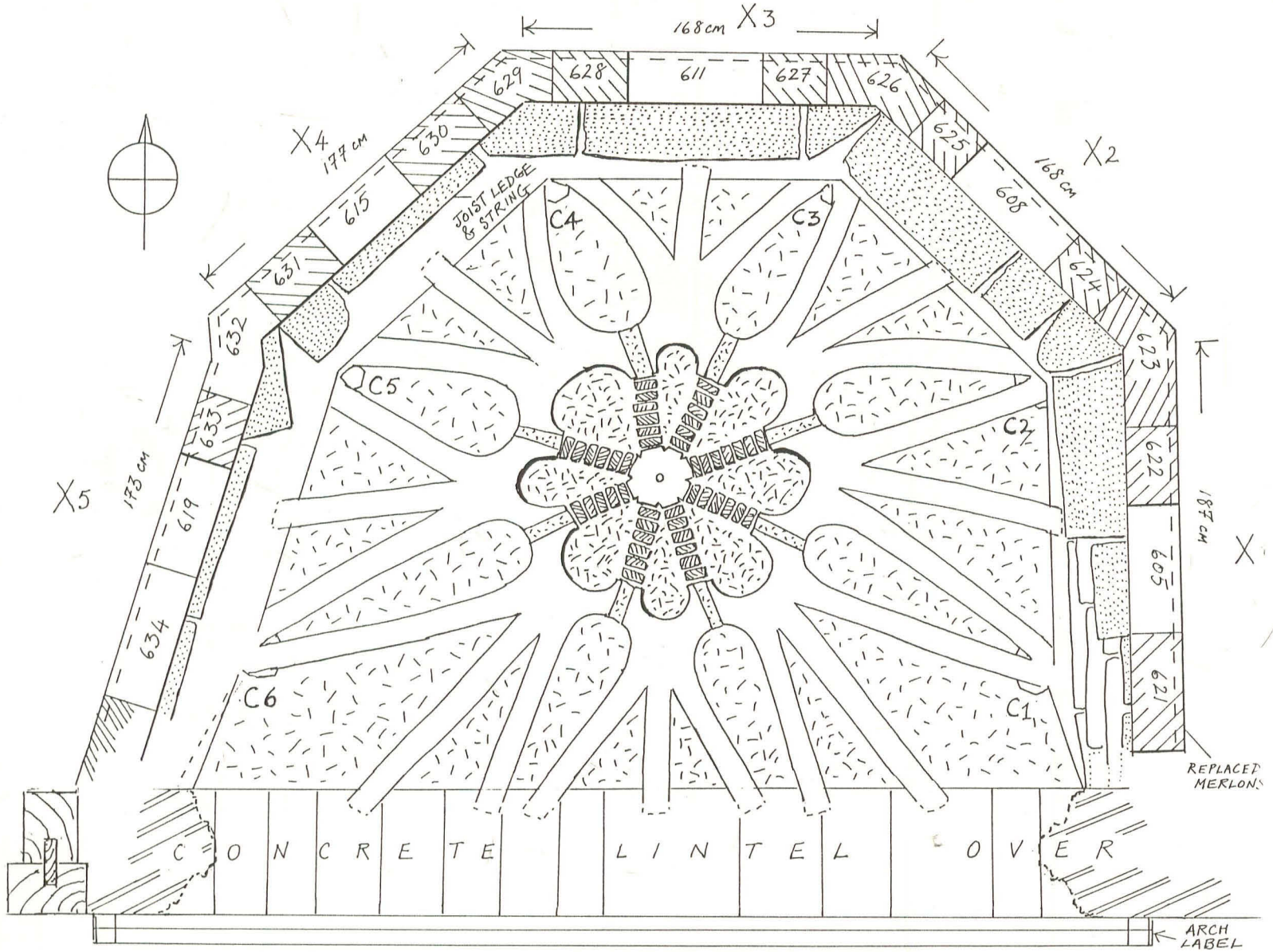


Fig. 14 Over-vault, joist ledge and parapet plan

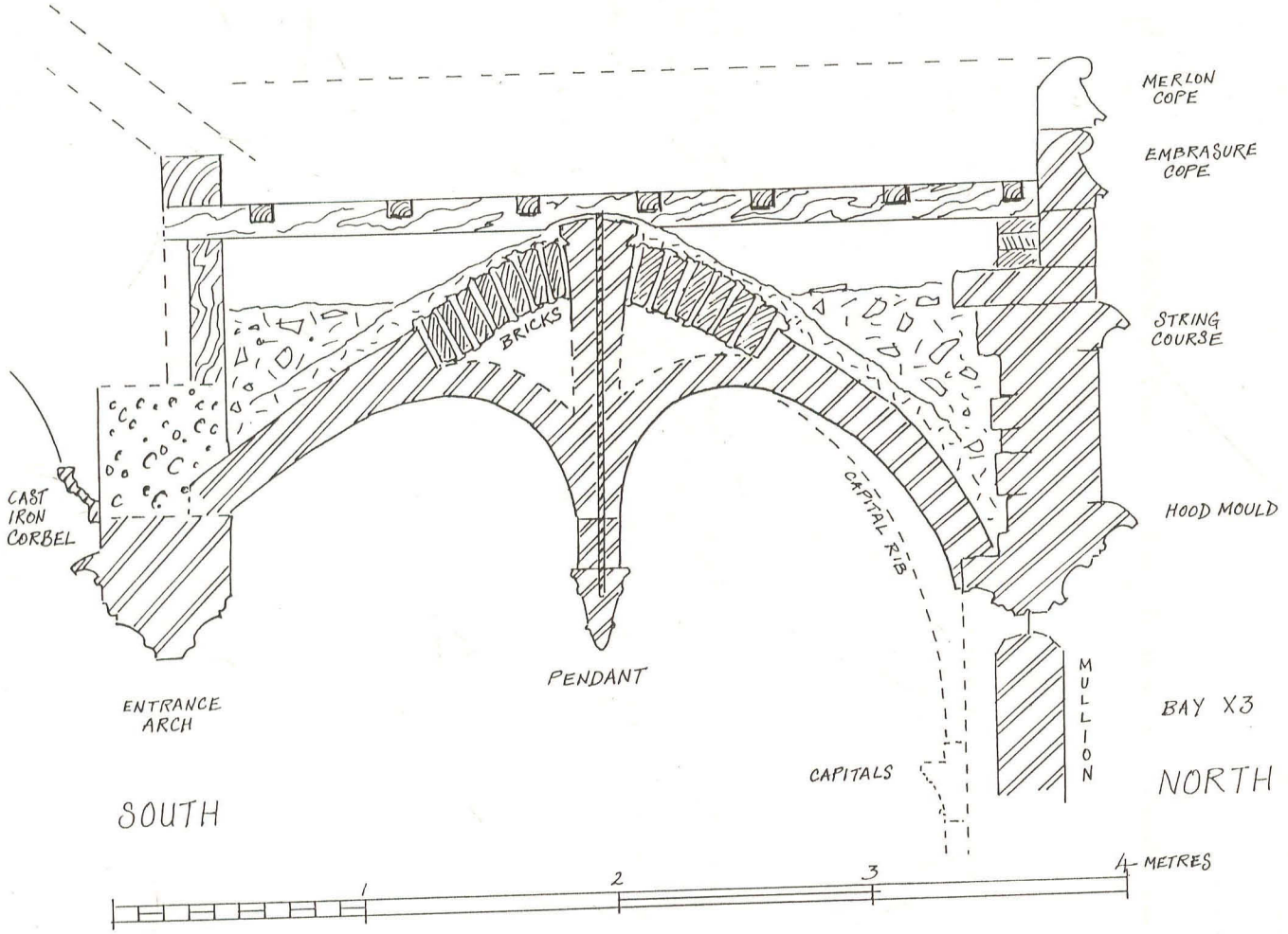
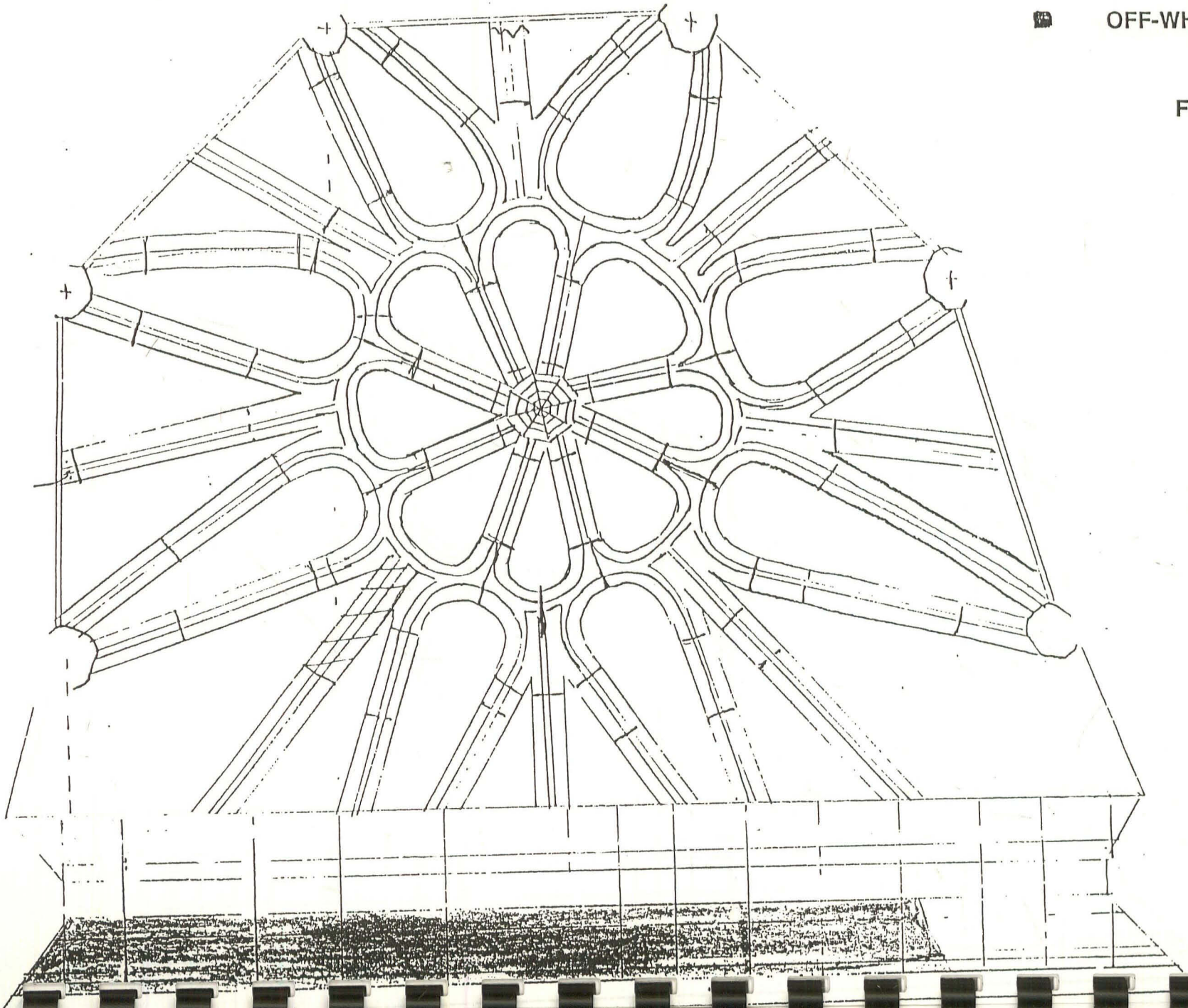
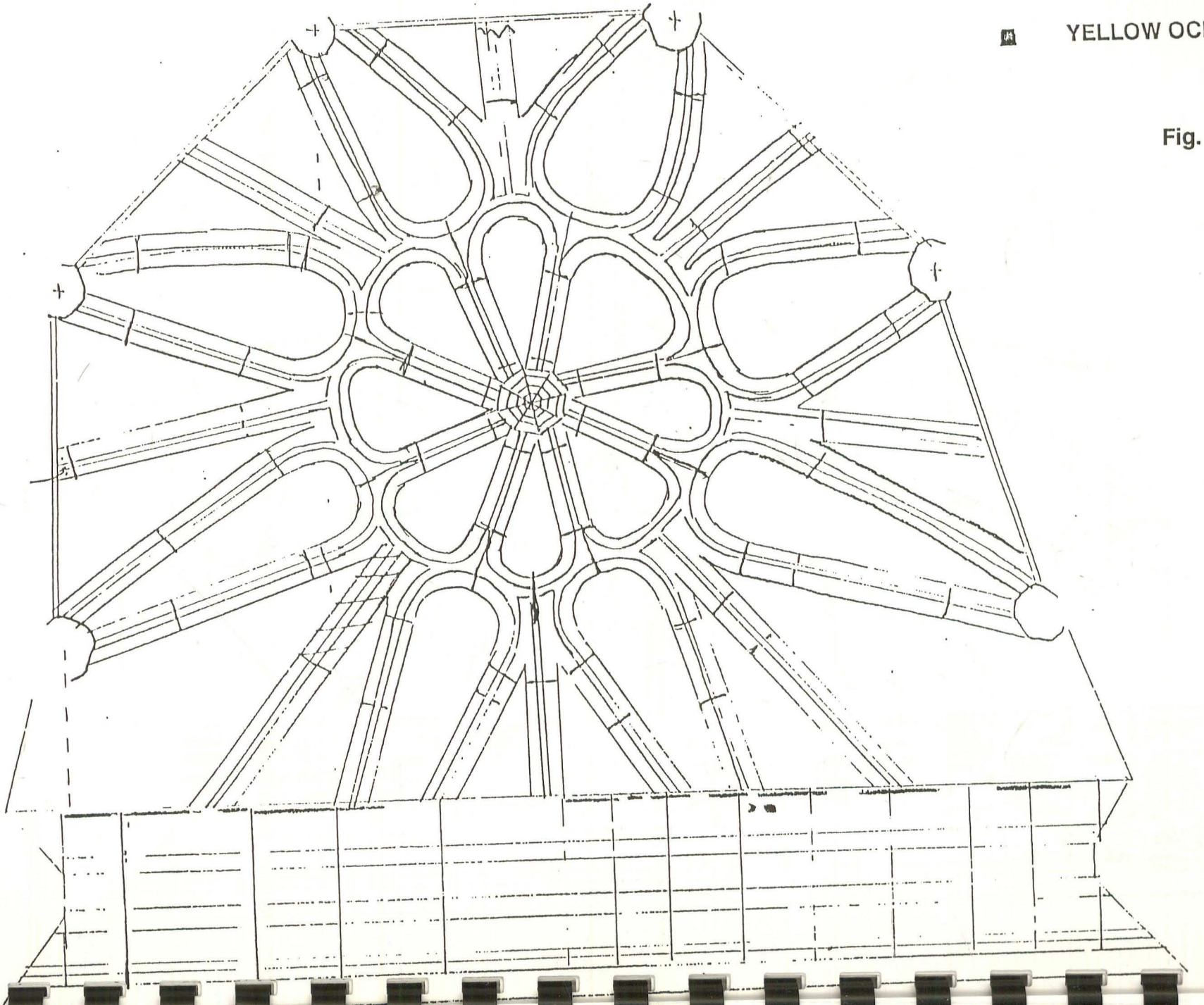


Fig. 15 Vaulting, north-south section, partly conjectural

OFF-WHITE

Fig. 23



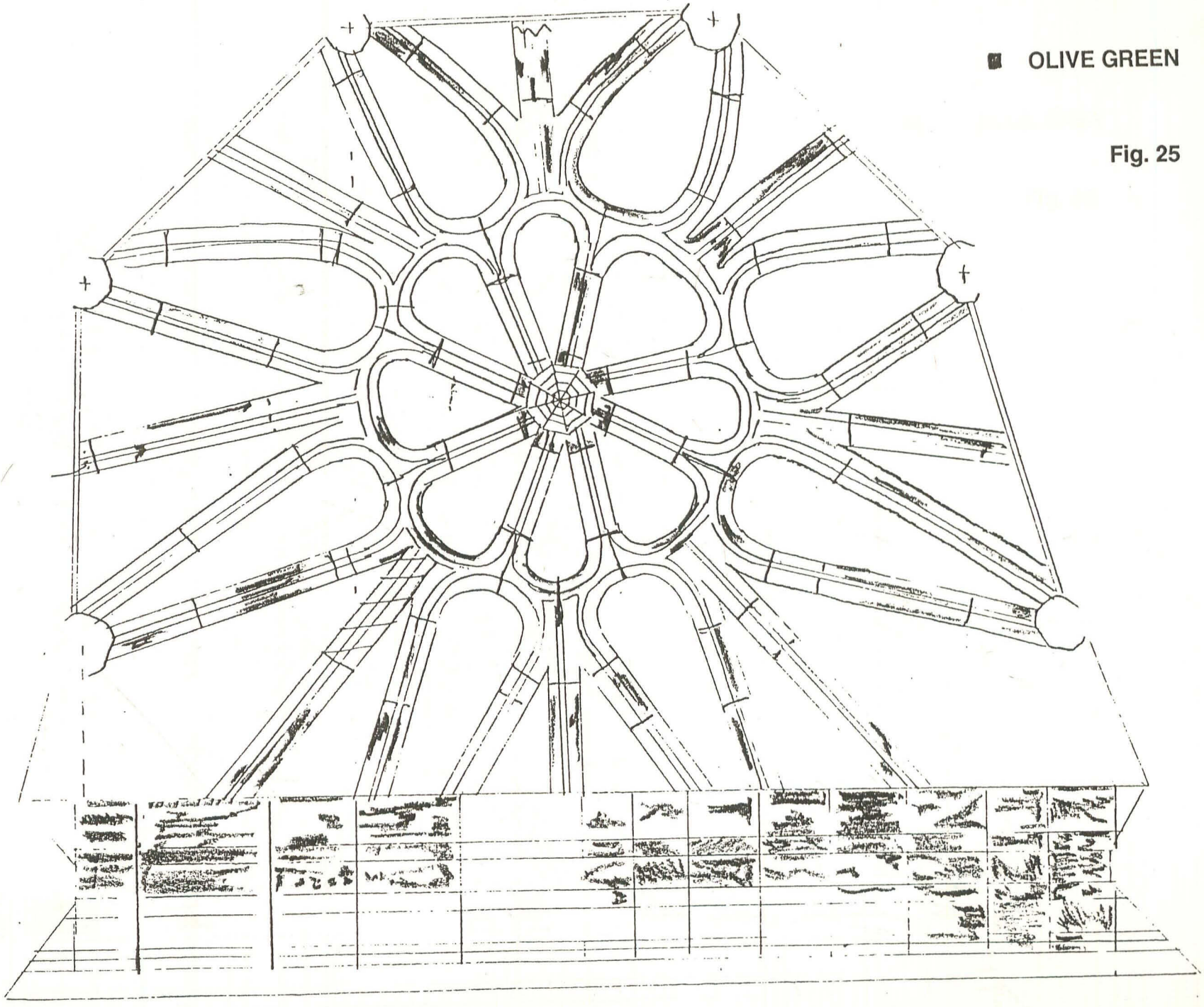


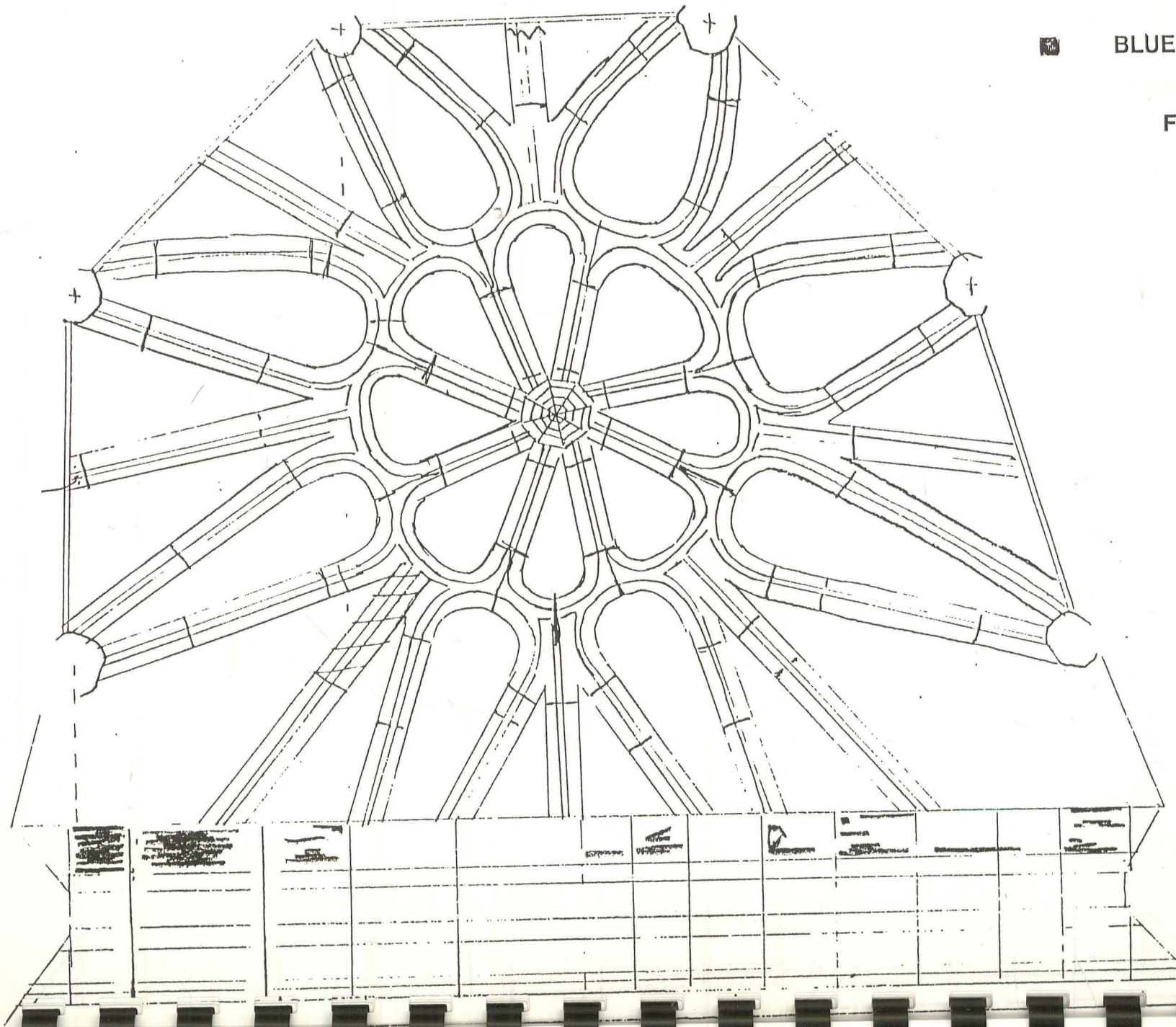
YELLOW OCHRE

Fig. 24

■ OLIVE GREEN

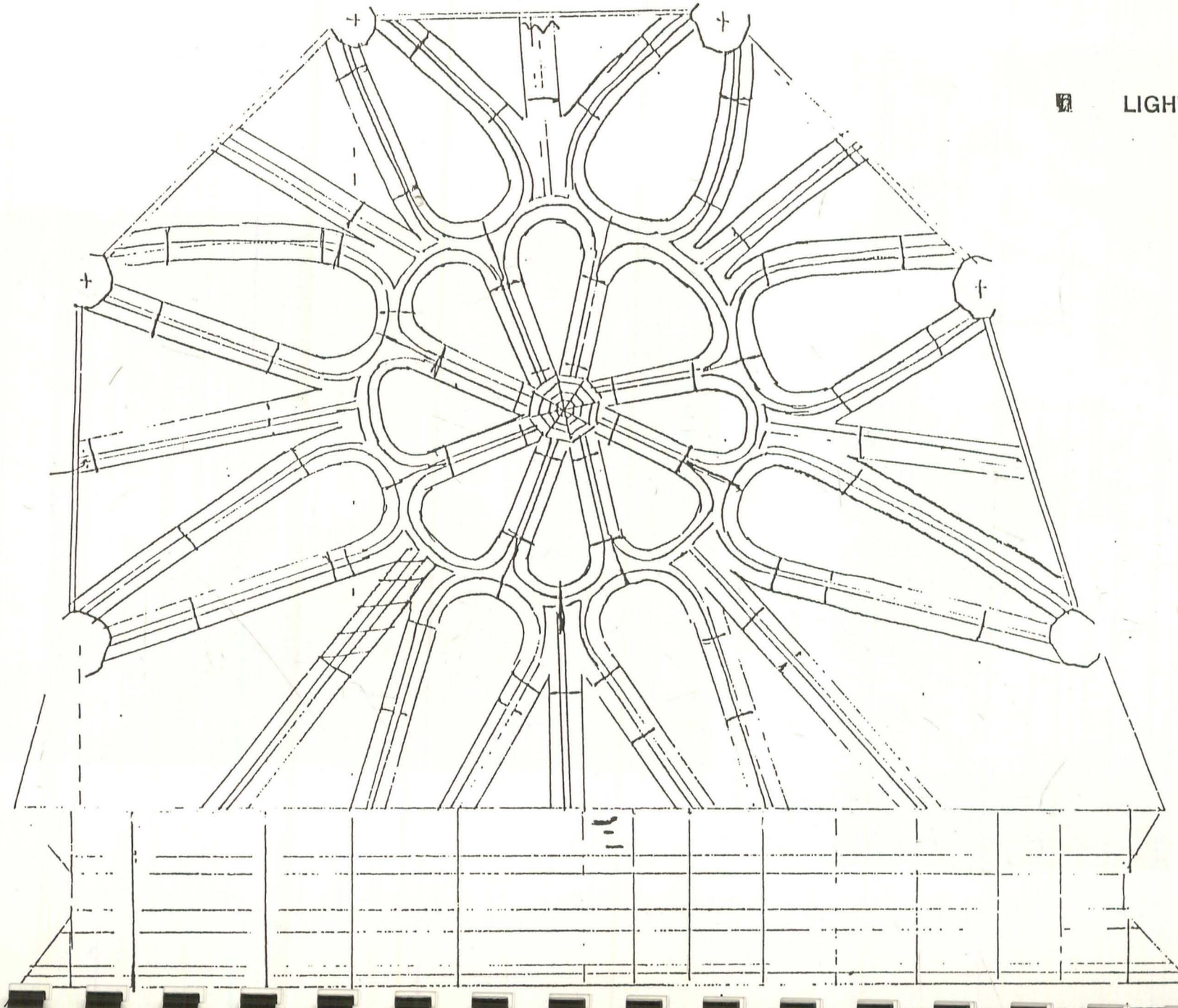
Fig. 25





BLUE GREY

Fig. 26

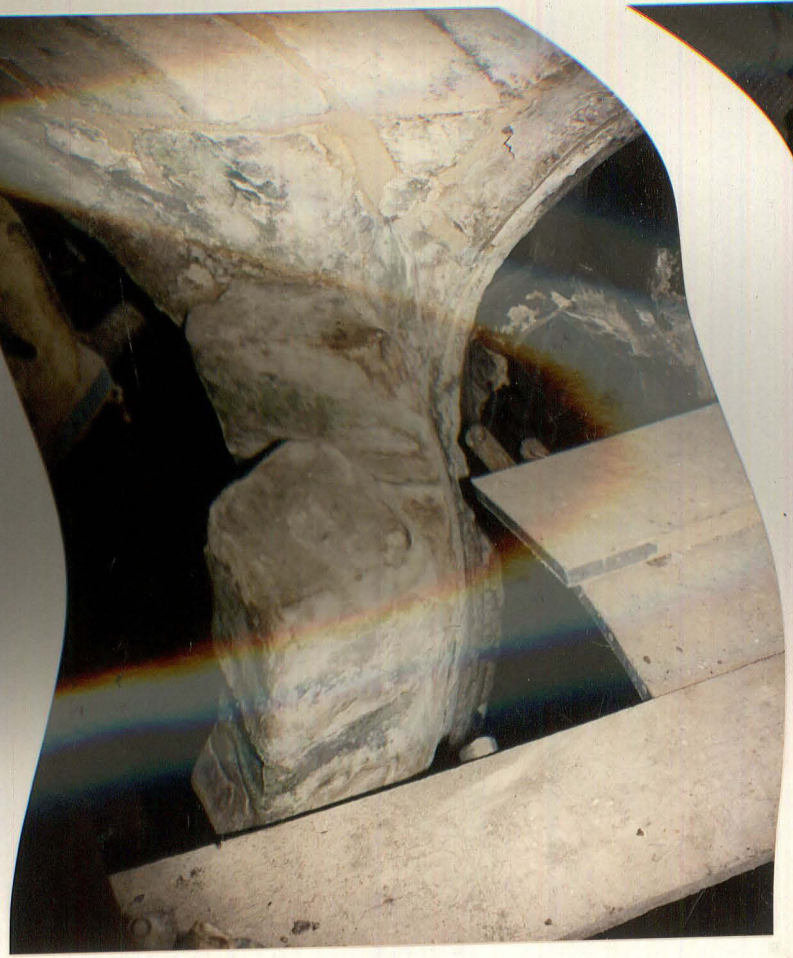


LIGHT YELLOW

Fig. 27

1. **Buttress D pinnacle seat and hood springer housing block.**

2. **Buttress D cap from south, showing original hood springer.**



7. **Buttress A cap from east, showing springer housing block.**

8. ***Pinnacle, pad and fixing rod (scale 1.20m).***

9. X4 window, standard jamb moulding.

10. X5 window, non-standard jamb moulding.

3. Buttress D cap from north, showing (background) original hood springer angle.

4. Buttress C cap from north-west.

5. **Buttress C cap from west.**

6. **Buttress B cap from north-east.**

7. **Buttress A cap from east, showing springer housing block.**

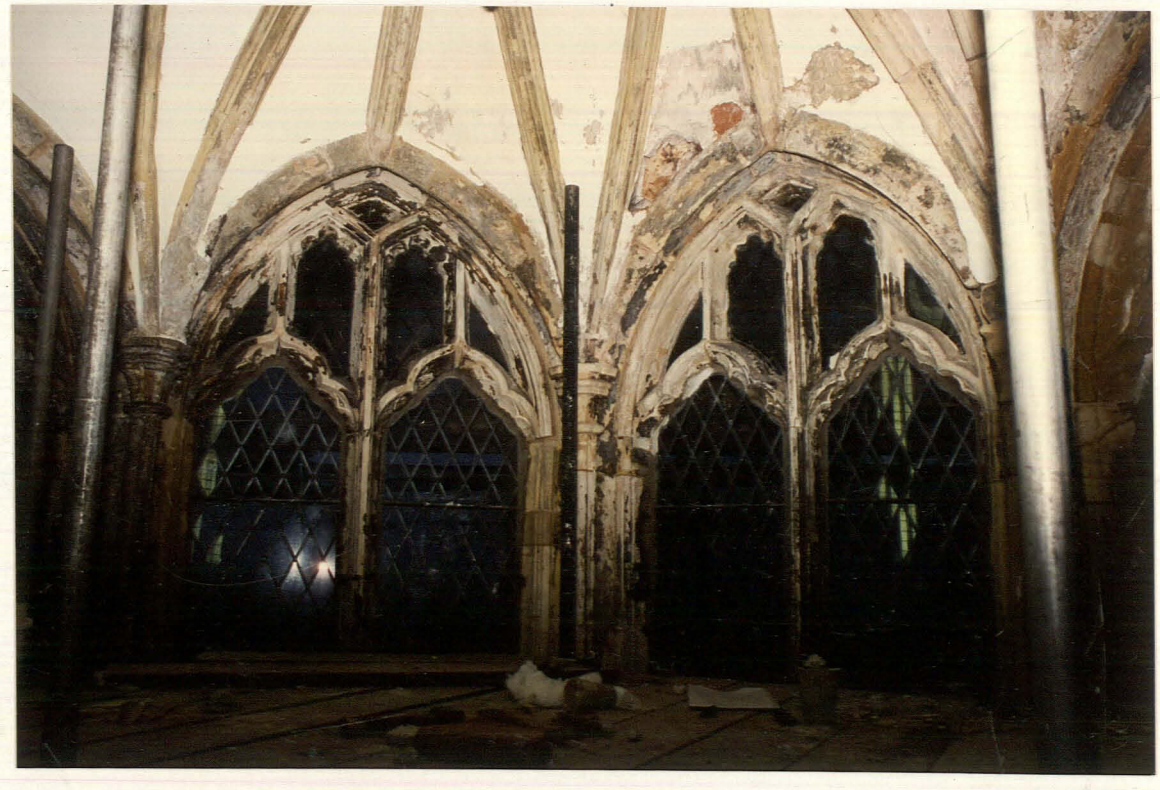
8. **Pinnacle, pad and fixing rod (scale 1.20m).**

9. X4 window, standard jamb moulding.

10. X5 window, non-standard jamb moulding.

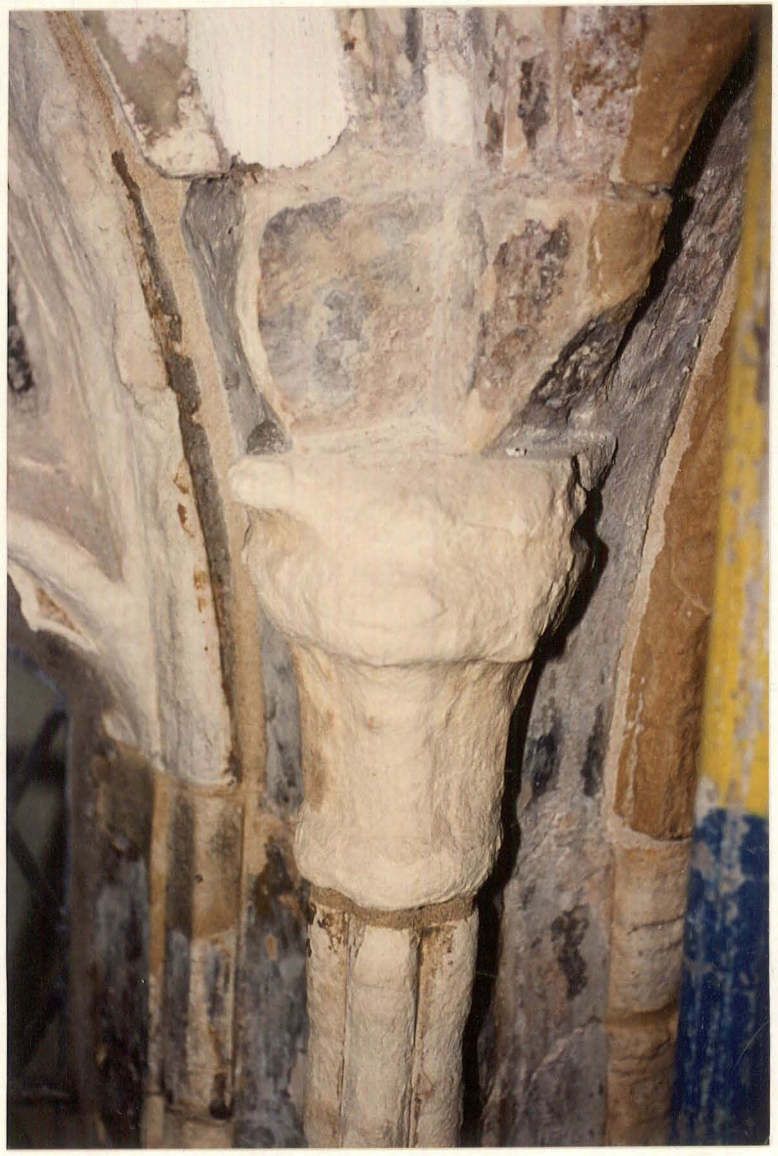
11. N5 two-piece window head 516A (left) 516 (right).

12. N4 (left) and N3 (right) standard window heads.



13. C1 composite capital and springer.

14. C2 capital and springer.



15. C3 capital and springer.

16. C4 capital and springer.

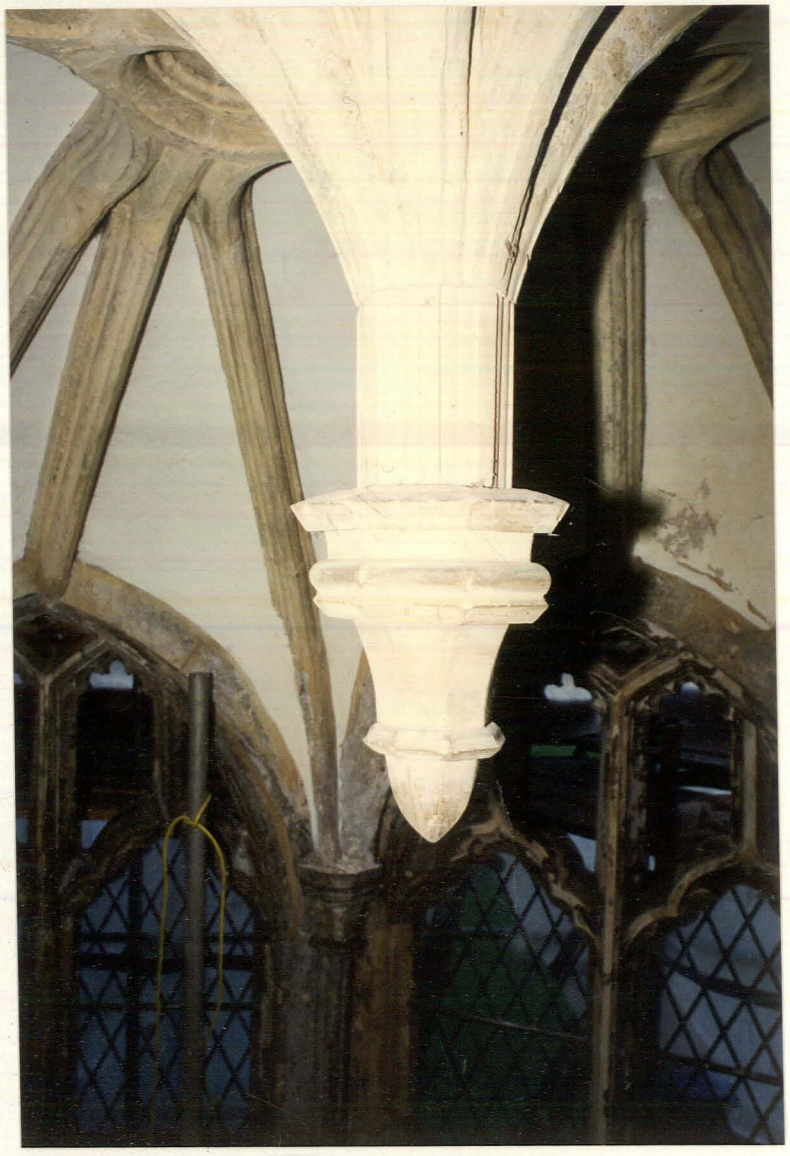
17. C5 capital and springer.

18. C6 capital and springer.

19. Vault, showing 'junction blocks' between inner and outer cells.

20. Vault, showing distortion at outer junctions.

21. Entrance arch from north, capital C1 to left.



22. Vault pendant.

23. Brick infill and plaster over window head at N3.

24. X5 wall deviation at string course 583 and block 567 (below).

25. X5 wall deviation at parapet, from north-west.

26. X5 wall deviation at parapet coping, from north.

27. X5 wall deviation: parapet cope 632; replacement 632 to left.

28. X5 parapet northern most original merlon 634.

29. X1: Hood-mould terminal 465.

30. X5: Hood-mould terminal 527.

31. Masons mark (type 7) on arch voussoir 1342.

32. Masons marks (type 7) on shaft/jamb block 1233.