Suffolk County Council

ARCHAEOLOGICAL SURVEY REPORT

SCCAS REPORT No. 2010/012

Tower Survey
St Andrew's Church, Wissett
WSS 012

D.Gill

www.suffolkcc.gov.uk/e-and-t/archaeology

Lucy Robinson, **County Director of Environment and Transport**
Endeavour House, Russel Road, Ipswich, IP1 2BX.

HER Information

Planning Application No:	NA
Date of Fieldwork:	May 2009
Grid Reference:	TM 3660 7929
Funding Body:	Heritage Lottery Fund 'Your Heritage/Young Roots Scheme', English Heritage, partnership funding and local donations
Curatorial Officer:	Bob Carr
Project Officer:	David Gill
Oasis Reference:	Suffolkc1-71018
	Digital report submitted to Archaeological Data Service: http://ads.ahds.ac.uk/catalogue/library/greylit

Contents

Summary

		Page
1.	Introduction	1
2.	Location and historical background	1
3.	Methodology	3
4.	General description of the building	4
5.	The Tower	4
	Exterior	4
	General description	4
	Norman Phase 1	7
	Norman Phase 2	8
	Norman Phase 3	8
	Interior	12
	Tower Room	12
	The floor/ceiling	18
	Second Floor (ringing chamber)	19
	Belfry	22
6.	Finds	25
7.	Discussion	27
8.	Conclusion	31
9.	Archive deposition	31
10.	List of Contributors and acknowledgments	31
11.	Bibliography	32

Appendix 1. Catalogue description of shoe by Quita Mould 33

Appendix 2. From the Churchwarden's book 1789-1868: An account of the removal of the north porch 35

Disbursements made by the churchwarden during 1838 from a transcription of the Churchwarden's book 36

List of Figures

1. St Andrew's Church, Wissett, site location 2
2. General views of the church 5
3. Tower elevation photographs 6
4. Durable stone used on the door and first floor 7
5. Treatment of Phase 3 windows 9
6. West and south elevations 10
7. North elevation 11
8. Tower room: interior 13
9. Door details 15
10. Window details 17
11. Former ringing chamber floor from below 18
12. Former ringing chamber; second floor 20
13. Alteration to the belfry floor 22
14. Re-modelled belfry windows and remains of Norman openings 23
15. Interior of the belfry after the removal of the bell frame 24
16. 16th century shoe 26
17. Reconstruction of the Norman tower (after Everson and Stocker, 2006) 30

Summary

A survey to record the internal and external details of the round tower of St Andrew's Church, Wissett was undertaken during May 2009. The survey was undertaken in advance of the replacement of the 15th century bellframe which would necessitate some alteration of the original fabric of the tower.

The tower is a fine example of Norman craftsmanship and the building lifts common to both the tower and nave demonstrate that the two were constructed simultaneously during the mid-12th century. Evidence within the fabric of the tower gives a clear insight on how the masons worked; how the windows were constructed and their building schedule. This showed twelve clear annual construction lifts each c.0.9m high, but suggest a cessation of work after the construction of each of the storeys, at which point the building may have been temporarily roofed to enable it to have been used.

The belfry was enlarged and the tower height was raised in the 15th century to accommodate the (now) former bellframe and this work included modification to the belfry windows and floor. The tower's original belfry would have been designed to contain a hanging bell or bells and the introduction of bells designed to swing full circle, and their requirement for greater space is likely to have precipitated the change. Evidence of the original wall plate, which may have also served as the bell hanging, indicated the lower level from which the original roof was raised.

The body of the church was also extensively remodelled and enlarged. Part of these changes included the addition of the spiral stair which altered the access to the first floor tower room which had previously only been accessible via a ladder through a high door in the gable end of the nave. This door was blocked and it is likely that the use of the whole tower changed at this time from one occupied by the priest alone, to an integral part of the function of the church, housing the bells and used by the bell ringers.

1. Introduction

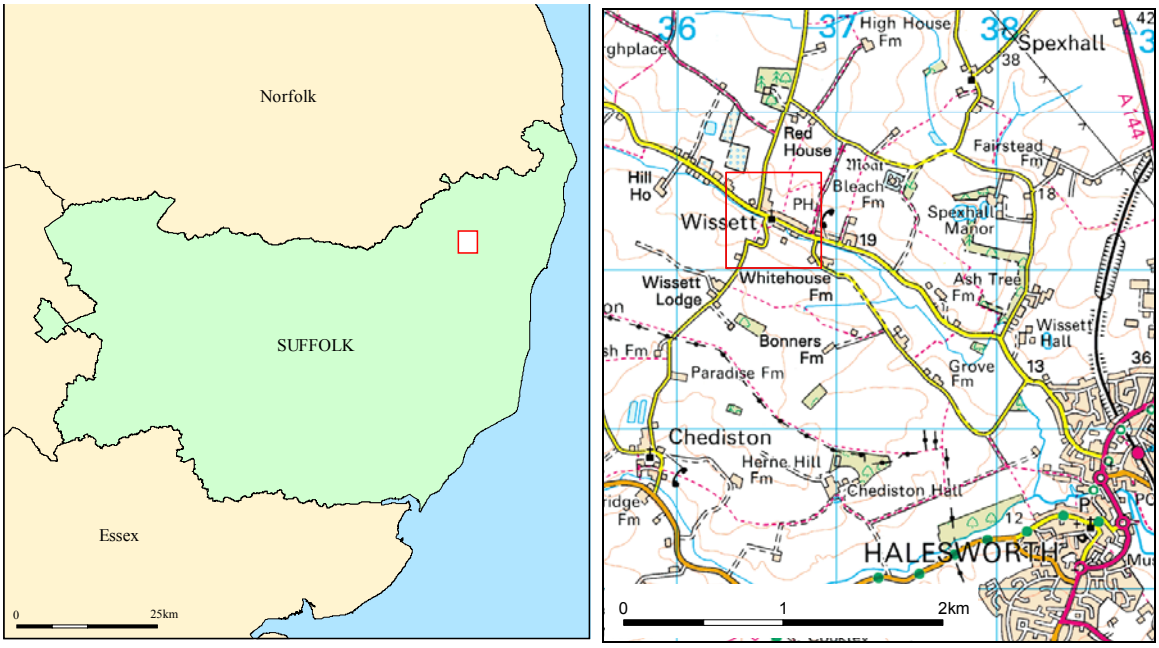
A survey to record, internally and externally, the round tower of St Andrew's Church, Wissett was undertaken during May 2009 by members of Suffolk County Council's Archaeological Service, Field Team. The survey was part of a project to replace the existing wooden bellframe, which is thought to date from the second half of the15th century (Joyce 2007), with two single tier frames. These were to be located in the belfry and the third floor room below and their installation would require some alteration of the original fabric of the tower. The survey was completed in advance of the start of work and with the wooden bellframe still in place. It was hoped that from the work would provide an opportunity to gain a better understanding of the towers original form and its subsequent development, as well as being a record of the existing tower. The work was funded by the Heritage Lottery Fund 'Your Heritage/Young Roots Scheme', English Heritage, partnership funding and local donations. The survey was completed in accordance with an outline brief prepared by Bob Carr of Suffolk County Council Archaeological Service and archaeologist on the Diocesan Advisory Committee.

2. Location and historical background

Wissett is situated *c.*2.5km north west of Halesworth, and St Andrew's Church (Suffolk HER no WSS012) stands at TM 3660 7929 at the west end of the village (Fig.1). The settlement has a ribbon pattern that follows the line of a small beck, a tributary of the River Blythe, which flows through the centre-line of the village. The Street, the main thoroughfare through the village, and the majority of the houses lie on the north bank of the stream with the church opposing them on the south. The beck forms the boundary to the graveyard and the church is situated alongside a crossroads and crossing point of the stream.

Paired ditches (WSS005), identified from aerial photographs, suggest that the ends of Lodge Lane and Gray's Lane, to the west of the church, were once aligned and the dog-legged line of the road and current crossing point of the beck are the result of the road being moved.

.



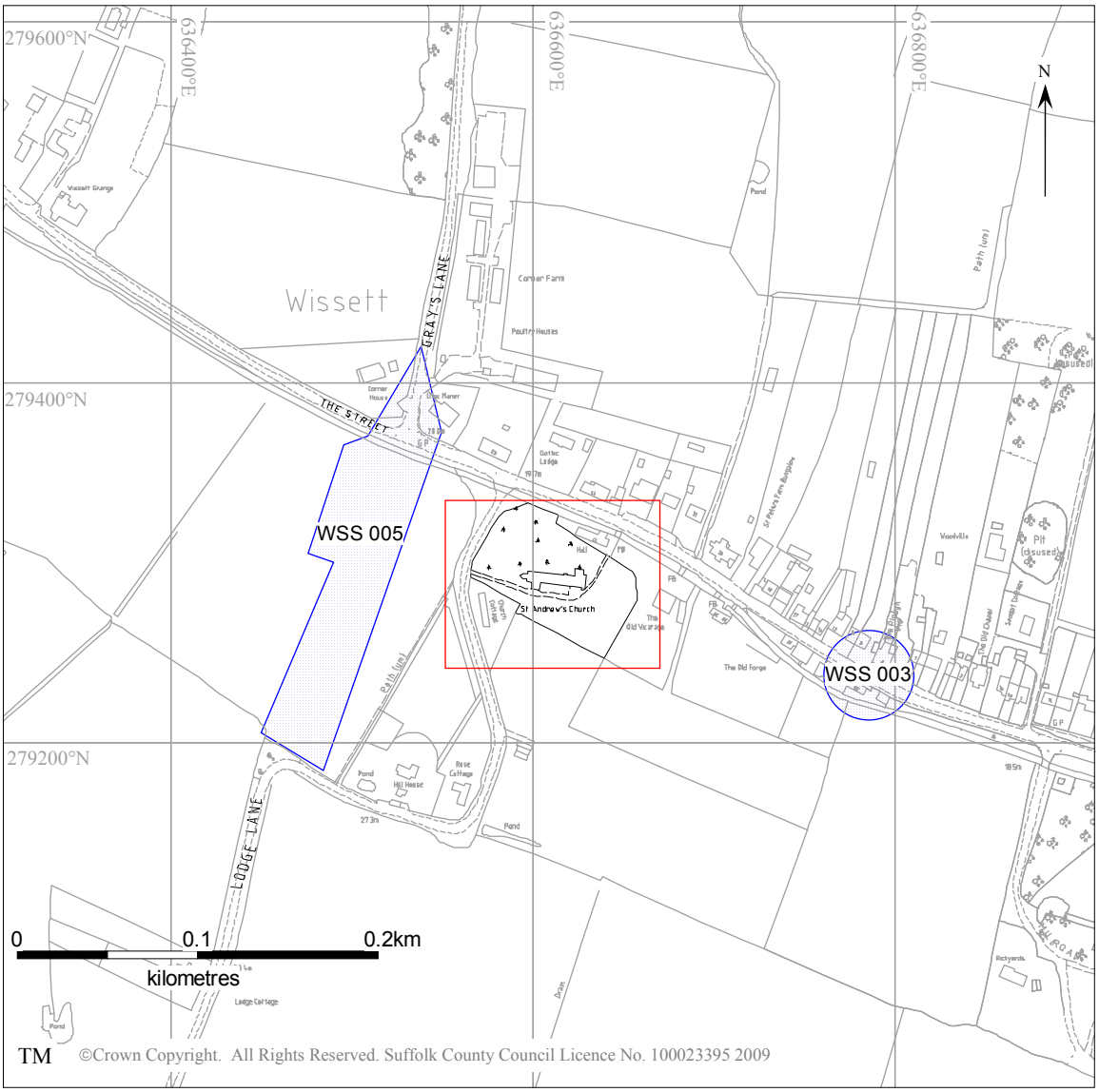


Figure 1. St Andrew's Church, Wissett, site location

A church at Wissett is mentioned in Domesday and D.P Mortlock (1992) in his guides to Suffolk Churches describes the Norman features of the building but suggests, erroneously, that the circular blocked circular windows, edged with flint rather than limestone is proof of the current building's Saxon origin.

The county Historic Environment Record (HER) lists Roman find spots at the east end of the village (WSS 003, see Fig. 1, WSW 008 and WSW 0011, east of Fig. 1) all within 580m of the church.

3. Methodology

The recording consisted of a digital survey using a Total Station Theodolite (TST) of both the exterior, and where possible, the interior of the tower supported by a photographic record and selected hand drawing. The digital survey recorded the dimensions of the tower and the positions and outlines of the architectural details including the belfry openings, windows etc. In addition, alterations to the fabric, phases of build and repairs were also recorded. The exterior and interior were surveyed as part of single survey in order to produce a simple 3D digital model which enabled details observed within and without the tower to be compared. The survey data was downloaded using LisCad, processed in Auto Cad and converted into MapInfo V8.5 tables, which were used to produce scale plans and drawings for the report.

Scaled elevation drawings at 1:20 were made of the windows and the tower room door within the tower. The drawings were annotated describing the fabric and outlining the phases of build and areas of recent repair. Internal architectural details were photographed, using a scale where possible, and the exterior of the tower along with a general record of the whole building was photographed from ground level. The photographic survey results are held in the archive and have not been reproduced for this report.

The survey data, photographs and site records have been archived in the small and main stores of Suffolk County Council Archaeological Service at Bury St Edmunds and with the County's Historic Environment and Monuments Record

under the parish code WSS 012. A copy of the report has also been lodged with the OASIS on-line database (ref: suffolk c1-71018).

4. General description of the building

The Church of St Andrew is of Norman origin and comprises cells of nave and chancel, with a round tower at the west end of the nave (Fig. 2). The nave has been lengthened and the eaves height raised (Fig 2d) and re-roofed, probably during the 15th century when the large perpendicular windows were added. It seems that the windows were inserted into the same position as the Norman originals as no evidence of the former windows survives. There are fine Norman Romanesque style doorways on the north and south side of the nave; the north side with three orders of arches with billet, scalloped and chevron moulding, flanked by spiral carved shafts (Fig 2c). The porch over the south door was added in 1470 and a wooden porch removed from the north door in 1838; no physical evidence remains but the event is recorded in the Churchwarden's book (Appendix 1) and the carving of the door surround remains crisp and un-weathered. The chancel was first rebuilt during the 14th century but the present structure dates to the 19th century, although its east wall and window were replaced after the storm of 1987. Mortlock alludes to an original chancel with an apsidal end but there is no visible evidence of this. The tower was re-pointed during 1977, this was done sensitively and the history of the build of the tower can still be read in its fabric.

5. The Tower

Exterior

General Description (Fig. 3)

The walls are constructed of a mix of medium-large flints and rounded brown sandstone pebbles laid neatly, in well defined horizontal courses. The tower measures 5.40m in diameter at the base and, to the top of the merlons on the parapet wall, stands 15.45m (c.50' 6 ft) tall. The sides are not vertical and the tower is built with a slight but even taper towards its top (where its diameter is 4.70m). There are four floor levels including the ground floor and the belfry of which the first and second floors retain their original windows, or evidence of them. The majority of the tower is Norman, dated by the horizontally coursed flintwork

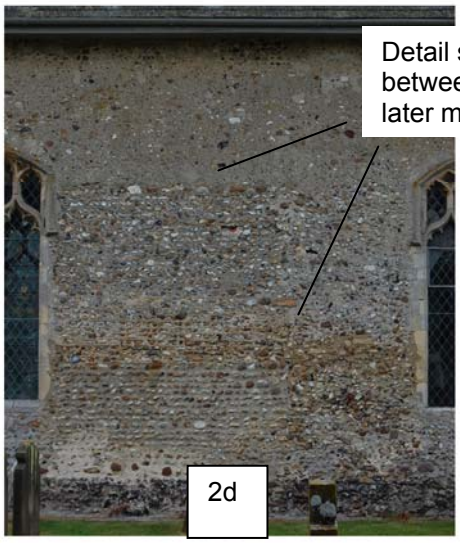


Figure 2. General views of the church

and the round-headed slit windows on the first floor which are characteristic of 11th or early 12th century work. The top of the tower from the midpoint of the belfry windows is a replacement or later addition constructed in the late 14th or 15th century.

The Norman built tower was raised in at least three distinct phases which can be identified as changes in the building fabric on the exterior. These match with the first and second floor levels within the tower demonstrating that it rose by one storey during each of these building campaigns. The junction of the phases also correspond to original eaves and ridge heights of the nave suggesting strongly that the nave and the tower and the body of the church were built together and progressed at the same rate.

Within each of the Norman phases the construction of the tower could be sub-divided into building lifts, a lift being the wall height achieved in each season of work, and at Wissett each lift was a consistently a height of 0.9m. The extent of the lifts could be identified by rows of putlogs; holes built into the fabric of the wall into which the scaffold stages were secured, and by thicker horizontal mortar joints; where the fresh mortar of the new year's work was laid over the mortar that capped off the old. The putlogs pierced the full thickness of the wall but were most apparent on the internal face of the tower, as on the outside they had been blocked in when the scaffold was struck; the infill is very well matched with the rest of the surrounding fabric and they are difficult to spot.

Figure 3. Tower Elevation photographs

The slit and belfry windows are finished in freestone. The stone used on the slit windows is a durable, fine-grained, pale yellow stone similar to those produced by the Lincolnshire quarries at Ketton or Clipsham which matches that used on the nave north door. The stone on the belfry windows is more like that of the quoins on west corners of the nave and although it looks superficially similar to the stone used in the Norman built phases, is a softer stone resulting in both the belfry windows and the nave quoins suffering a greater degree of erosion (Fig 4).

Figure 4. Durable stone used on the door and first floor windows contrast with the softer stone used on the later quoins, the belfry windows are made up of a mixture of both

At its base the exterior surface has been coated with a black pitch/paint in a 0.43m band which together with a concrete gutter around the tower base is to combat damp. There is localised patching on the north side which, along with a repair to the north west corner of the nave, has been completed in early post-medieval brick.

Norman Phase 1 (Figs. 6 and 7)

The flints of the first phase of work are well coursed at a rate of *c.*12 courses per metre. The flints are regularly spaced and appear to have been sorted for uniformity of size. The top of this phase can be identified by a row of very small flints which are distinct from the row of large rounded sandstone pebbles with which the second phase of construction starts. In the first phase of work the builders achieved a tower height of 4.42m, completed in four building lifts, bringing the tower to first floor level.

The top of the first phase coincides with the original eaves height of the nave and suggests that the nave and the tower were raised simultaneously. There is no evidence of any windows in the first stage of the tower in its original form although the west window, which is a later addition, may have replaced an earlier opening.

On the inside of the tower there is no evidence of Norman work as the lower stage has been rendered and white-washed. The tower arch is a later form and the door to the spiral stair dates to 15th or 16th century.

Norman Phase 2 (Figs. 6 and 7)

During the second phase the tower room was completed in four lifts each of c.8 rows of flint which lifted the tower to a height of 7.5m. This is equivalent to the estimated ridge height of the original nave roof and part of the gable and the east side of the tower are a shared wall. Externally the top of the phase can be identified by a slightly inset band of flintwork, 2-3 courses wide, which gives the profile of the tower a slightly indented appearance at this point (Fig.5a).

The narrow slit windows on the first floor and the blocked circular windows on the second floor are integral and contemporary with the construction of the tower walls. Their position does not disrupt the neat lines of flint courses and there is no evidence of secondary repair work or 'making good' around the windows which would betray them as being later insertions, if they were so. The early slit and circular windows are aligned vertically with each other and whilst those on the south side are aligned at 6 o'clock, the ones on the west and north side have distinctly drifted 'past the hour'. This is particularly true on the north face where the first and second floor windows are not centred below the belfry opening.

Norman Phase 3 (Figs 6 and 7)

Phase 3 is constructed in five lifts and the treatment of the wall in terms of flint type and size is very similar to the second phase of work below. The upper limit of the horizontally coursed flintwork and top of the Norman-built tower runs level with the arch springing points of the belfry windows. The belfry openings themselves appear to be part of the original fabric although all of the current embrasures have been extensively altered and their position within the tower raised. The original depth of the openings can be seen in all of the windows, in an area of flint infill below the current sills. The original openings were probably simply edged with flint cobbles, similar to the circular windows below and evidence of this can be seen below the belfry window on the east side (Fig. 5c). On the west side however the dressed stones framing the embrasures extend down to what was the original sill level and the lines of the flint courses, which continued right to the edge of the

dressed stone suggest that the stone edging here is an original feature (Fig. 5b). However this is not so conclusive on the other openings where the surrounding flintwork has been heavily re-pointed or in the case of the north opening reworked as part of a repair. The dressed stone that frames the windows, despite appearing similar to that used on the slit windows is a softer stone and more like that of the later quoins on the nave corners and it is possibly contemporary with the remodelling of the nave.

There are four circular windows on the second floor, three of which are blocked, whilst those on the north and west faces are edged in flint that radiate around the head of the embrasure (Fig 5a). This pattern of radiating flint does not continue below the mid-point of the windows where they simply fit as part of the coursed rows. The positions of the south and east windows are discernible but less well defined.

Figure 5. Treatment of Phase 3 windows.

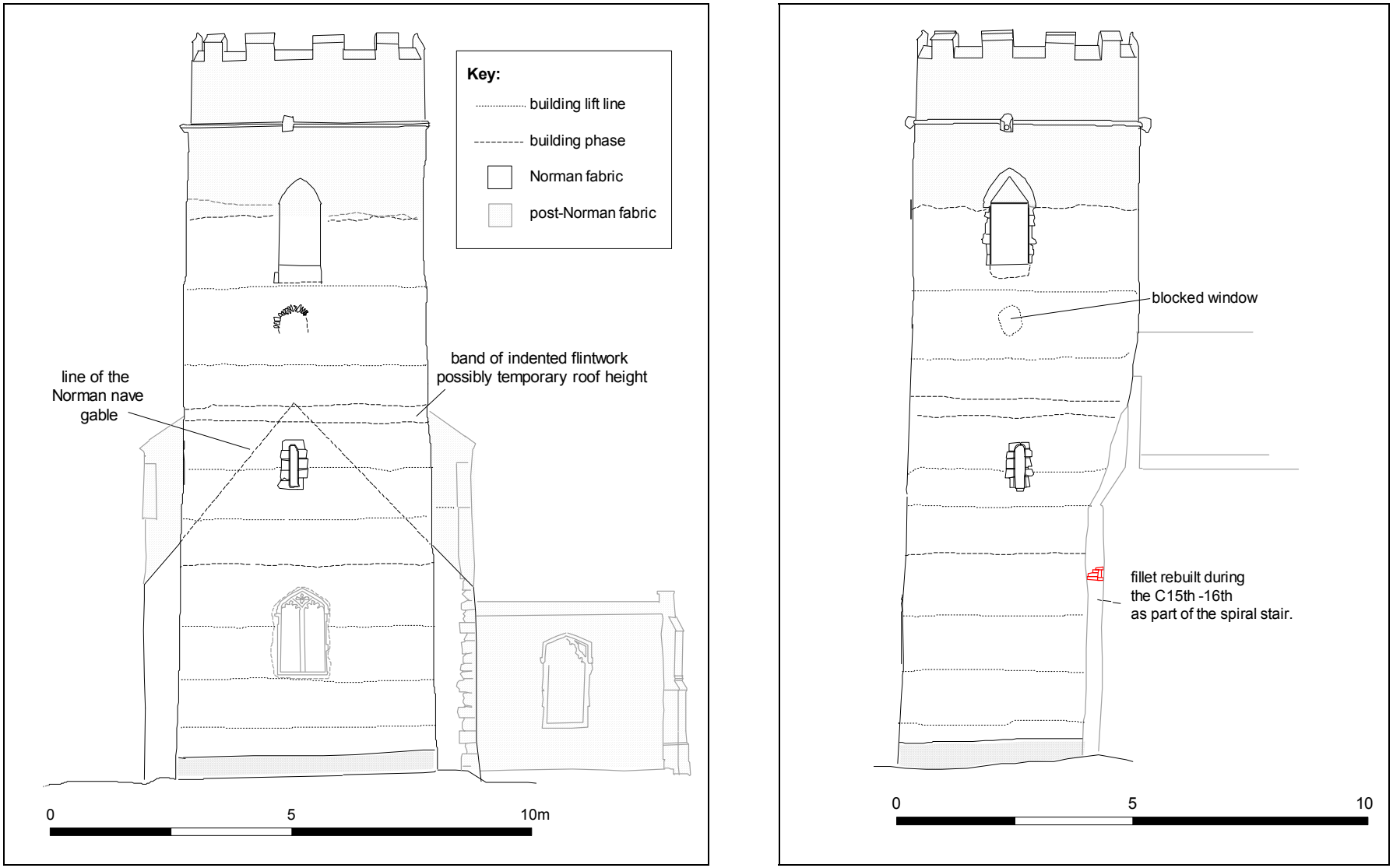


Figure 6. West and south elevations

Figure 7. North elevation

Interior

Tower Room

The first floor tower room has an internal diameter of 3.02m and is 2.95m high to the underside of the floor above. It is illuminated by narrow single light windows on its north, west and south sides.

A spiral stair which winds up from an elevated door in the south side of the tower arch now accesses the tower room. The stair is a later addition hacked out of the thickness of the tower wall and the internal wall has been left in an unfinished state and chisel marks can be clearly seen at the entrance to the room where the wall has been hewn. The external fillet in the angle between the tower and the nave was rebuilt when the stair was added and the horizontal flint coursing used to form the tower does not appear here. The fillet (Fig. 6) is pierced by a small window formed in plain, handmade, narrow bricks and a similar brick type has been used to form the stair treads. The bricks measure 2″x 4¾″x 9″ and suggest a 15-16th date. The door to the stair is perpendicular in style.

Door to the nave (Figs. 8 and 9)

Entry to the tower room was originally, presumably via a ladder, by a door through the gable of the nave. This has now been blocked and can no longer be seen from the body of the church. Within the tower room the former doorway appears as a 0.85m deep alcove. The arch at the top of the door is a round headed form; the opening is 0.6m wide and 2.05m tall. The edge of the opening, both for the verticals and the face of the arch is formed using large flint cobbles and no freestone is used. The facing flints over the arch, 0019, have been robbed leaving a 0.15m deep recess over the door (Fig. 8). The interior of the arch is parallel sided, unlike those of the windows which open out to an internal splay. The underside of the arch displays impressions of wooden shuttering; part of the temporary centering over which the arch was constructed (Fig. 8 and 9b). The shuttering was made up of 12 narrow boards/slats which were not of uniform size. The depth of the impressions suggests a variable thickness to the timber and the widths vary from between 60-120mm. The span of the arch is slightly wider than the doorway creating a 40mm ledge at the springing point on each side of the door onto which the timber centering was set. The arch springing point occurs at

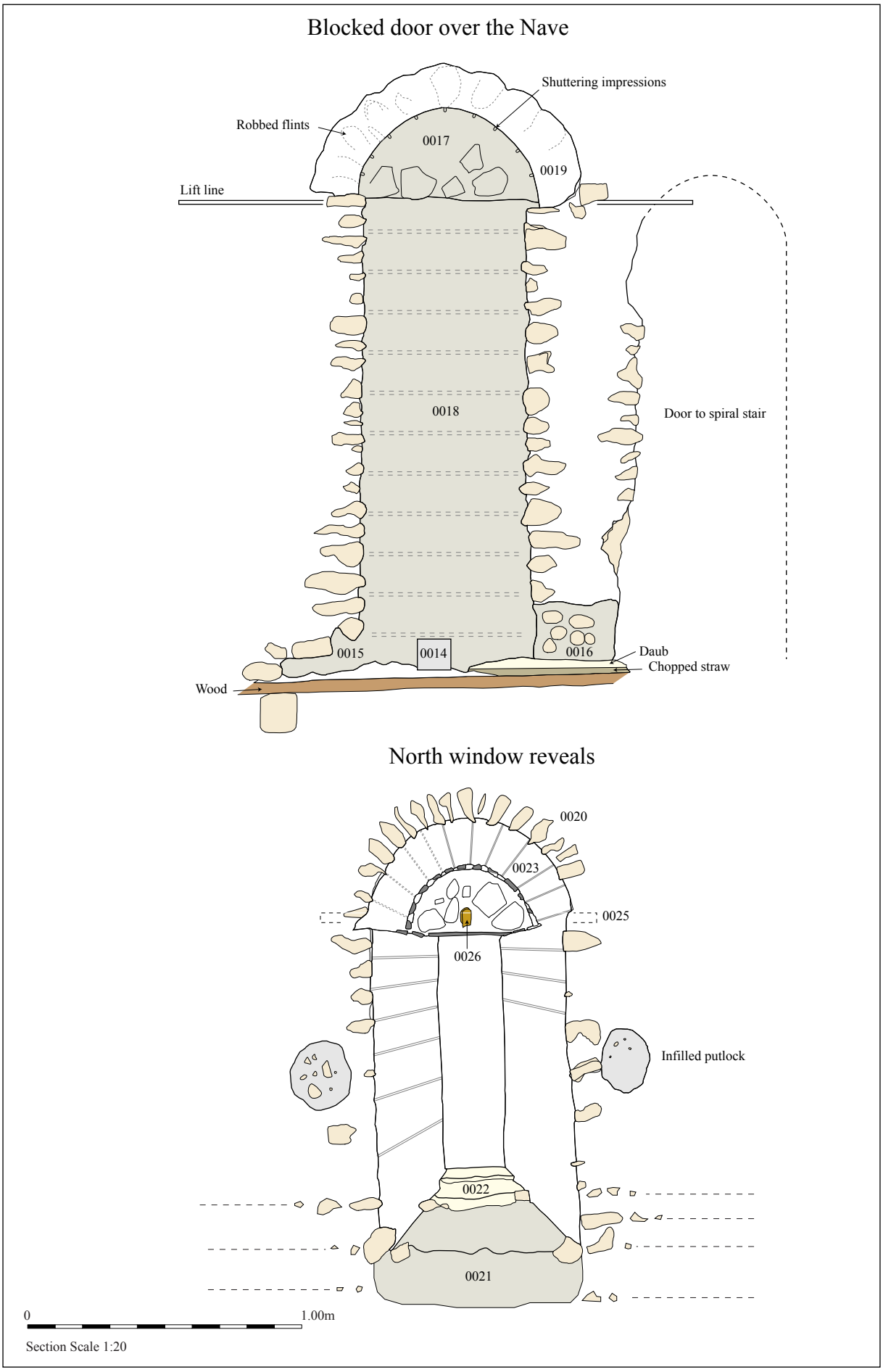


Figure 8. Tower room: Interior

beginning of a new building lift, indentified by a deep mortar bed and a row of putlog holes recorded around the circumference of the tower, and demonstrates that the building of the doorway was spread across two season's work.

The doorway was blocked on the east side with a single thickness flint wall, 0018, probably when the spiral stair was added. The flints of the infill are laid neatly in rows similar to the Norman work but have been set dry into a thick bed, and there is no mortar between the vertical joints. The mortar is a white lime mortar unlike the Norman mix and it has been flattened suggesting that the infill material was built against shuttering and constructed from the east side.

The threshold of the doorway is slightly higher (about 50mm) than the surface of the floor within the tower room and is not level. In the main it is uneven and made up of rough flints, and there are the remains of a 5cm deep screed in the rear corners of the alcove but otherwise it is simply a cross section through the core of the wall. At the base of the doorway opening there are cut-outs or sockets, 0015, for timbers (Fig 8). As there is no other evidence of a door frame or any indication of a closable door, it seems most likely that this is a joist setting for a suspended wooden floor through the doorway. There is also a central joist hole, 0014, at the base of the infill on the nave side of the door. The wooden lintel which spans the hole appears contemporary with the infill material but the socket below is set into original fabric and predates the closing off of the door.

The socket on the south side of the door opening has been infilled with mortared small rounded pebbles, 0016, and the mortar is similar to that used in the blocking of the door so the two events are possibly related. Sealed beneath the rebuilt section and overlying the floor boards of the tower room is a layer of daub and chopped straw (Fig. 9d). This seals the gap between the edge of the floor and the wall. It projects up to 80mm into the room and with a diminishing thickness 250mm back into the alcove of the door. At its thickest the layer is 50mm deep but its internal edge has been truncated, and the full extent and as to whether it extended around the whole floor is unknown. The surviving extent of the material follows closely the depth of the infilled socket and its relationship with the original fabric of the building is uncertain.

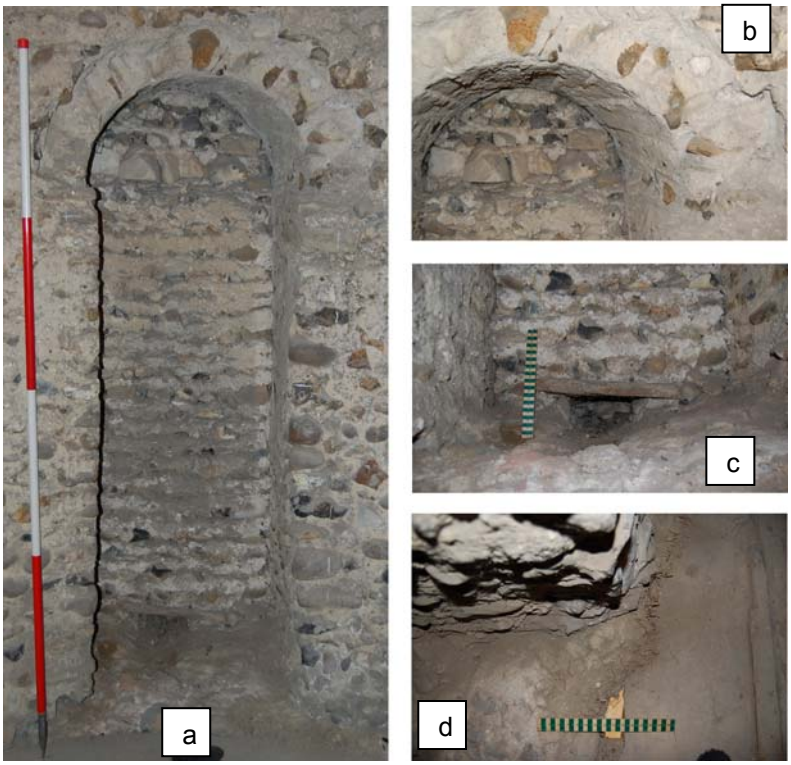


Figure 9. Door details

There are three rows of putlogs each with six holes. Most are identifiable as a small area of patching, applied since the post-medieval period but where they had not been subject to a secondary repair, the dimensions of the original putlog forms a regular hole 150mm x 200mm hole. After the scaffold was struck the holes were blocked with mortared flint but a small wooden lintel, which bridged the top of the hole, was left in place. There is no evidence that the surface of the walls was ever rendered and it seems that the appearance of the walls as they are today, with the flint coursing partially exposed, is what was intended. The wall appears to have been finished with a very thick secondary pointing which was smoothed using a float; this has obscured much of the face of the flints and softens out the unevenness in the wall. The pointing runs over the infill of the putlogs indicating that it was applied after the scaffold was removed.

Windows (Figs. 8 and 10)

The windows of the tower room are typically Norman; single light slits with round headed arches and wide splaying reveals and stepped sloping sills. Externally the windows measure 0.83 x 0.16m but open out to 1.4m x 0.7m on the inside of the tower. The exterior of the windows are formed in freestone but as with the door the internal edge of the embrasure and the face of the arch over the opening are

formed from large flint cobbles, 0020. Within the reveal the mortar beds have been smoothed over with a float, similar to the treatment of the walls, but are otherwise unfinished. In each of the windows the front sills have been raised with an infill of bonded flint, 0021, to create a flat ledge at the front of the reveal. Originally the sill at the edge of the reveal would have been 250mm lower and the drop in level between the sill height of the exterior window and the edge of the reveal was achieved by three sloping steps 0022 (Figs 8 and 10e).

Impressions of the timber centering, 0023 used to create the arches are visible at the top of the reveals (Figs. 10b and c) and, remarkably, part of this formwork has been left in place in the north window to give a unique insight as to how the Norman mason worked. At the head of the window, there is a lump of poorly mixed mortar and chalk, 0024, which was held up on a platform of narrow wooden slats that bridged across the width of the reveal (Fig 10d). Two of the slats remain in place whilst the impression of others along the line of the arch springing point show that this temporary platform extended right to the front of the reveal. The mortar lump was fashioned into semi-circular tapering block (half a longitudinally divided cone) which formed the basic shape of the arch and provided support for the timber centering. The longitudinal slats were laid over the mortar, whilst it was still wet, to form a pattern for the underside of the arch and it also created a barrier between the mortar mould and the bedding mortar of the flintwork above to prevent the two from sticking together. The fact that they *have* become bonded demonstrates how quickly the masons worked as the mortar of the formwork clearly had no time to go off. Trapped between the two mortars the broken off ends of the radiating slats remain *in situ*.

Sockets (0025) 70mm deep for a 30mm x 30mm timber, were recorded at the springing point at each side of the arch, at the front edge of the reveal. These would have engaged a cross-bar spanning the entrance to the window and would have supported the centering. It seems unlikely that the mortar mould would have extended to the front of the reveal as the mass of material required to fill the front of the opening, would have weighed too much for the small gauge timbers from which the form work was made. It seems more likely that the front of the centering

was made of an open frame and the impression of a third socket, 0026, for a longitudinal timber running front-to-back was recorded in the front of lump of mortar, 0024.

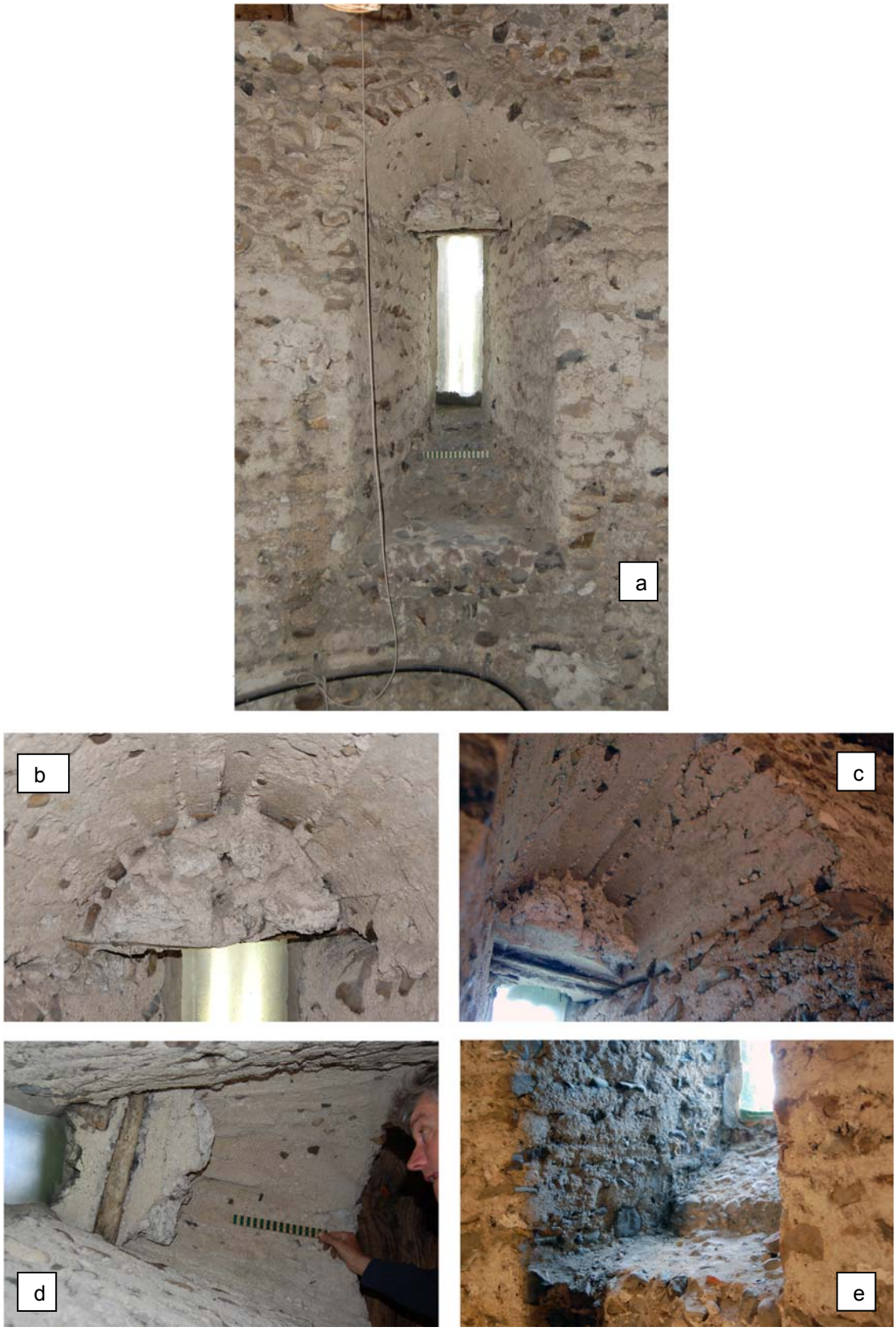


Figure 10. Window details

On the south and west facing windows there are cracks running from the outer edge of the wall to the inner on the centre-line of the arch; the west window has been repaired with an ill-matched grey cement.

The floor/ceiling

The original floor was supported on four parallel joists that ran north–south spanning the tower and three of these (labelled A, B and C on Fig. 11) remain in place. One of the central joists has been removed, which was probably to create space for the large bells that were introduced into the tower and raised through the floor. Most of the floor boards are thought to be secondary but an original board (D) still survives.

Timbers A, B and D had been previously sampled for dendrochronology (Bridge 2004), which failed to produce an absolute date, following which the samples were radiocarbon dated. Analysis of these results suggested that the timbers were felled in cal AD1145-1205 (82% probability – Bayliss et al. 2006)

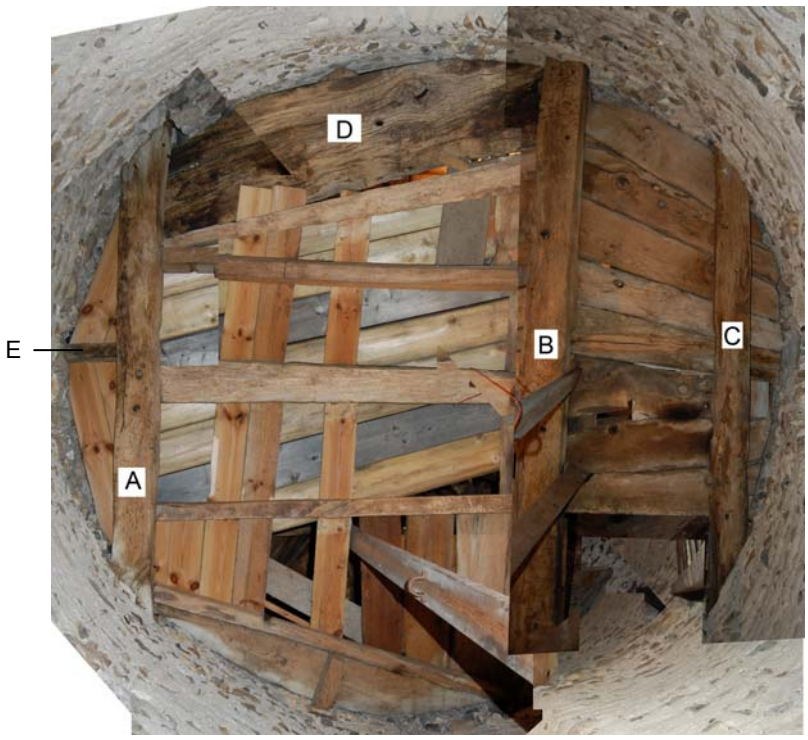


Figure 11. Former ringing chamber floor from below

Second floor (Ringing chamber)

The second floor room is less lofty that the tower room below with a ceiling height of just over 2m and its original function is believed to have been the ringing chamber (Fig. 12). The curious surface finish to the wall, created by thick horizontal mortar beds is similar to the room below, but the effect here is more pronounced. The mortar has the appearance of having been squeezed out from between the flint, much as the jam from an over-filled sandwich, and then flattened off with some form of float. The float has been worked horizontally as there is no evidence that the mortar has been dragged up or down the wall by vertical strokes; the mortar has however started to drop, in places forming a slight overhang. On the east side of the tower there is a small area where the full pointing style does not exist. Here larger flint cobbles have been used and the pointing around the flints is deeply recessed and it is also at this point that the line of the wall strays outside the arc of the circle described by the rest of the tower and becomes ovoid slightly in plan. This may suggest that the excess mortar has been struck with a large bladed tool curved in the same radius as the tower which missed this eccentric part of the tower.

Windows

The room was originally lit by four circular windows located 1.4m from the floor on each of the compass points. Three of these have now been blocked with flint, and the remaining north window has been infilled partly from the base to create a level sill, leaving a D-shaped opening (Fig 12a). The window shapes were formed around a tapering cylinder woven in basketwork and the impression of slender round wood withies were recorded in the reveal of the remaining open window (Fig 12b). The edge of the embrasure is treated the same on both the outside and the interior of the church. To the mid point of the window there is no framing of the window and the flint courses simply run up to the edge of the embrasure. The windows seem to fit very neatly into the run of the flints without the need to adjust the spacing or size which suggests that the laying of the courses started at the windows. Above the midpoint, the window is framed with large, elongated flints laid in a radial pattern around the edge of the embrasure. The windows tops are level with the uppermost row of putlogs and show that unlike the windows in the room below, where the construction of the side and the arches were divided into separate lifts, the circular windows were completed in a single season of work.

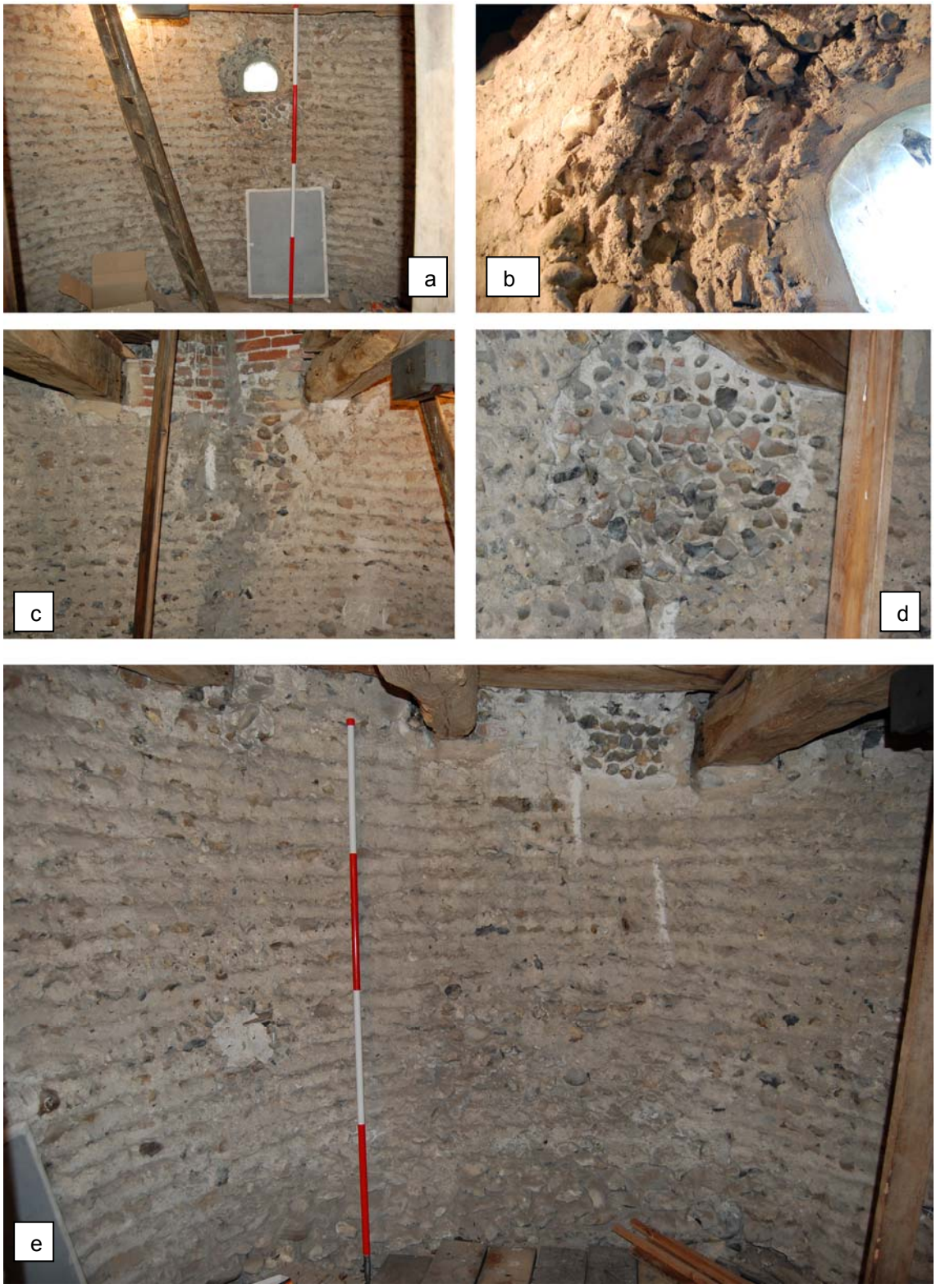


Figure 12. Former ringing chamber; second floor

The floor for the belfry above sits on four, approximately square-sectioned, beams aligned E-W across the tower. The two central beams are parallel and set 0.9m apart, with the inner face of one having been cut away to allow the bells to be hoisted between them. None of the timbers are in their original settings and the timber ends are all located in remodelled or secondary sockets. On the west side

of the tower a section of the inner face of the wall has been reconstructed in brick creating a bearing point for the ceiling joists and the timbers supporting the bellframe (Fig. 12c). The bricks within the reconstructed section measure 9″x4½″x2⅛″ and date from 16th or 17th centuries. On the east side of the tower the new sockets have been cut into the Norman flintwork and some of these settings are edged with 2” thick bricks. The floor seems to have been lowered and now impinges on the windows; the timber ends of the central joists are very close to the edge of the east and west embrasures and would have created a weak structure and this proximity may indicate that the re-setting of the ceiling beams either post-dated or was contemporary with the window’s blocking in. It is also notable that the current position of the floor does not fit with the building lift intervals.

The blinding of the windows and lowering of the floor seems to have lessened the practicality of this space, reducing its function to no more than a landing between the tower room below and the bells above.

In a later repair the southern timber was been shortened, presumably to remove rotting wood, and as a consequence it was no longer able to span the tower. This was overcome by re-angling the timber and creating a new socket in the side of the south window. The former setting for the timber can be seen to the north of the timber end as an open hole.

The beams support very large floor boards 600mm wide and 70mm thick. The boards have been pierced to allow the bell ropes to pass through and in addition to this there are small diameter peg-holes; these are now redundant but two contain the remains of pegs. The peg-holes do not relate to the current floor supports and their function is unknown; the floor boards are loose and not pegged down. There is a stepped change in the thickness of the walls at the level of the belfry floor, creating a 150mm wide ledge around the inside of the tower. Curiously it has not been used to support the floor and the floor boards are set inside the ledge so that the surface of the boards is flush with it (Fig.13 b and c).

Figure 13. Alteration to the belfry floor.

Belfry

The top of the Norman tower, as defined by the upper limit of the coursed flintwork can be seen on both internal (Fig. 15) and external faces and runs level with the arch springing points of the belfry windows. This section of the belfry was achieved in precisely two of the 0.9m lifts suggesting that it is a finished build height rather than a truncation level. The top half of the belfry and the parapet are part of a later medieval addition to the tower. The extension of the tower and creation of the lofty belfry was probably completed to accommodate the first incarnation of the current wooden bellframe as both are broadly contemporary and date from the latter part of the 15th century (Joyce, 2007).

Since its installation the bellframe has been modified and partly rebuilt to hold an increasing number of bells from the original four to five, and latterly, six bells (Joyce 2007). The bellframe has not only been partly rebuilt, slightly increasing its size, but the foundation timbers on which it sits have been either replaced or re-set and the interior of the belfry has been remodelled extensively in order to accommodate these changes (Fig 14a).

In order to fit the square (now former) bellframe into the circle of the tower, the bellframe was aligned so that its corners sat within the recesses of the belfry

windows. The bell frame was suspended above the belfry floor and rested on three great foundation timbers which ran obliquely to the frame. The ends of the south westernmost timber extended into the window recess but the others rested on the ledge around the inside of the tower formed by the change in wall thickness. Spacers below the foundation beams meant that they were suspended a few centimetres above the belfry floor boards.

As part of the alterations and the repairs to the bellframe the window sills have been roughly lowered to drop the bellframe to the requisite height and the splays of the window reveals chopped back, to open them out and enable the frame to fit (Fig 14c). The cutting away of the wall face has been most severe on the south and west sides and to a lesser extent the north belfry window. The east opening has been left relatively unscathed and best displays the shape of the medieval openings although the sill height has been lowered. The original curve of the interior wall can only be seen below bell frame level but even here masonry has been chopped out to facilitate the replacement and re-setting of the floor joists below (Fig 14c).

Figure 14. Re-modelled belfry windows and remains of Norman openings

Centred below the east window are the remains of a previous opening (Fig 13b), which has been infilled with flint but the vertical sides of a flint-edged embrasure are still apparent. The opening is 0.51m wide and the sill is close to floor level and matches the depth of the blocked opening below the belfry windows on the exterior of the church. The external width of the embrasure is wider than the internal one in a reverse of the splay which characterises church windows, and the sides of the openings radiate out from the inner wall.

There are paired sockets in the wall between each of the belfry windows (Fig.15.); these would have supported the ends of beams arranged to form a square frame that spanned the width of the tower. They are set in the medieval flintwork at the junction with the Norman fabric and are larger than the putlogs used to support the scaffolding. Some possibly contain the remains of timber, suggesting that they were cut off, but the holes have been rendered over and are difficult to determine. Their location at the junction of the two phases of build might suggest they are part of the Norman roof but the pattern is unlike the arrangement of joists that support the floors or the current roof so this uncertain. Alternatively they are part of the original bell hanging or mechanism by which the later phase was built.

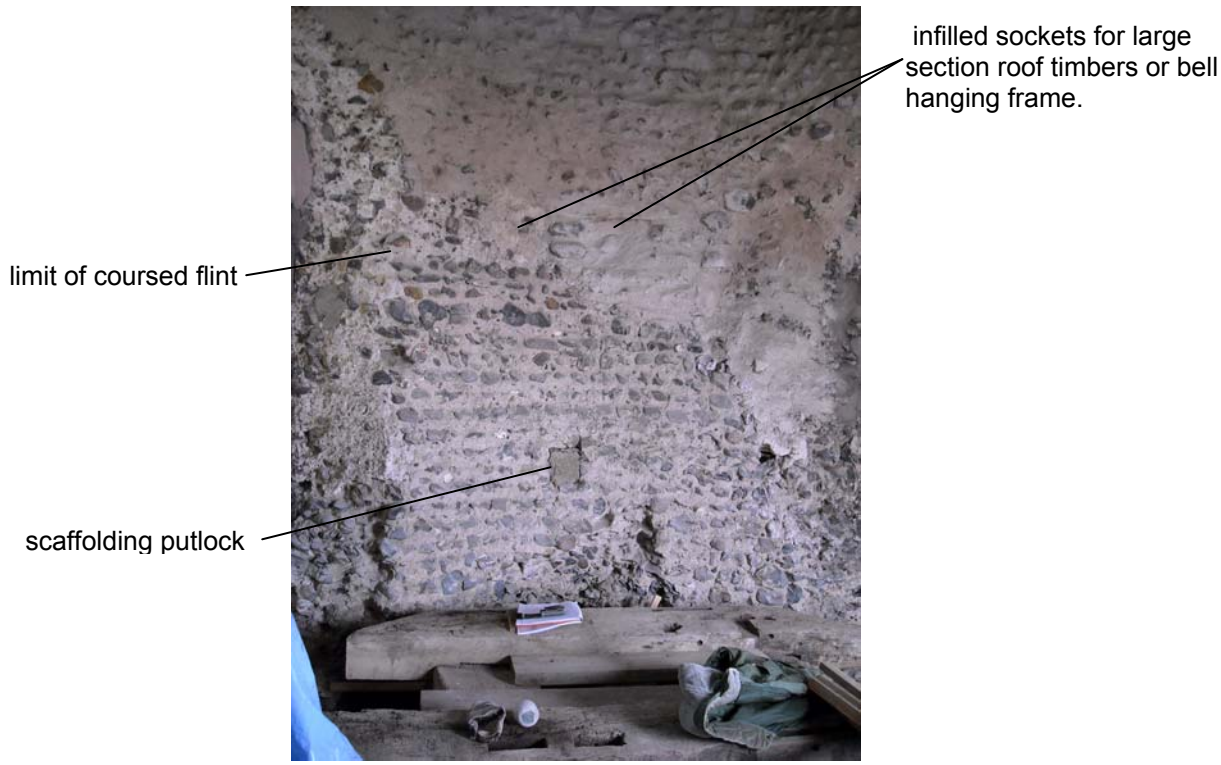


Figure15. Interior of the belfry after the removal of the bell frame, showing the extent of the coursed flintwork suggesting the top of the Norman tower.

6. Finds

Introduction

An ancient and tattered leather shoe and a polishing stone were discovered, separately, by contractors when the belfry was removed. The date of the shoe suggests that these items may have lain hidden since the bellframe was installed. There is a tradition of secreting shoes in the voids and hidden cavities of buildings, part of a folk superstition in which ritual objects were deposited to bring good luck and trap unwanted spirits. The condition of the shoe, which had gone beyond its useful life, suggests that it may have been one such offering and implies that the workmen were perhaps covering all of the bases by placing this in a building that was already well safeguarded. The shoe was sent for specialist analysis and a full report is included below.

The leather shoe by Quita Mould (Figure 16)

Description

A complete shoe for the left foot was found behind a bell-frame in the tower of Wissett Church, Suffolk. Shoes for the left foot were frequently selected for concealment. The high-throated slip-on shoe is of welted construction. The shoe, of cattle hide, has a decorative horizontal slash across the vamp and had once been a fashionable style but had been very heavily worn and repaired before it was finally concealed within the tower. The sole is worn through at the tread and two small repairs are present on the left side held in place by small wooden pegs, other peg holes present indicate the former position of additional repair pieces that have since been lost. The toe of the vamp has a small area sliced off and stitching indicates that a toe cap had been added as a repair originally. The centre of the throat is folded over and the quarters are flattened down at centre back probably the result of having been worn on a foot slightly too large for it toward the end of its life in the manner of a mule. While estimates of shoe size are made from the insole length which cannot be accurately measured here, the sole length indicates the shoe to be no larger than adult size 1(33), a size worn by a woman or an adolescent.

The grain surface of the leather shows no obvious grain pattern being either heavily worn or obscured so that identification was not possible by this method and has been made from the thickness of the leather. The shoe sole and repairs

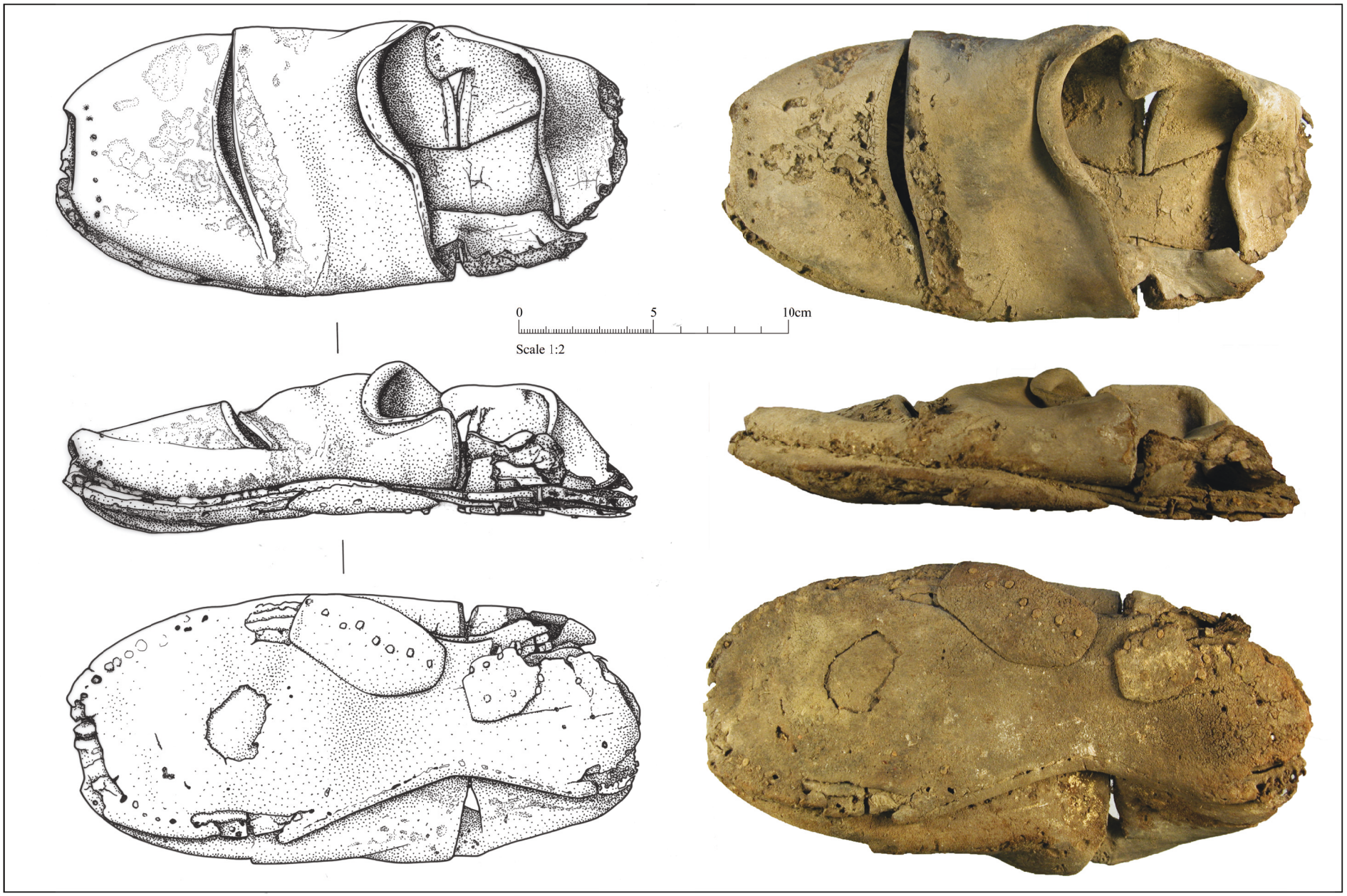


Figure 16. 16th Century shoe

are assumed to be of cattle hide. The thread has not been identified but may be assumed to be a linen thread.

The general construction and style date the shoe to the mid to late 16th century. The slip-on style, the tabbed one-piece quarters and the slashing can be seen on shoes from the Mary Rose sunk in Portsmouth Harbour in July 1545 (Type 2.1 Evans and Mould 2005) while the style and distinctive tabbed quarters are also present on a shoe from a shipwreck in the Wadden Sea dating around 1590 (Goubitz 1985). The narrow waist and round seat of the insole of the shoe from Wissett Church help to refine this dating and suggest it dates to the later 16th century. The extensive wear and repair indicate the shoe had a very long life and it may not have been finally placed in the tower until around the end of the century.

Polishing stone

The stone is an object for polishing or grinding but its specific use is uncertain. It is an elongated rounded flint pebble, about the size of a large potato (100mm x 65mm), the surface of which has been pecked to give it a grainy finish. One end of the stone has been polished flat and smooth by grinding it on a flat surface. Linear ridges suggested a backwards and forwards motion, rather than a circular action. The stone is probably a *muller* for grinding pigments, or for polishing stone or perhaps most likely, polishing plaster. A fine white powder is ingrained in the surface of the stone as if it has been held by a hand coated in plaster dust.

7. Discussion

The tower is a fine example of the Norman round tower, which apart from the addition of the belfry is remarkably unaltered and exhibits, within its fabric, insights into how the tower and the windows were constructed. The survey recorded clearly identifiable phases and build lines within the fabric of the church which illustrate the stages in which the nave and the tower were raised.

The evidence strongly suggests that the tower and the early build of the nave were constructed simultaneously and the increments by which the church was raised within a building season are common to both. Mortlock suggests that the existing church may have Saxon origins but the stonework of the tower, the first floor

windows and the nave doors are contemporary with the original construction of the church and their architectural style is characteristically Norman, suggesting a late 11th-to mid 12th century date. The radio-carbon dating of second floor timbers places the church towards the end of this period with a calibrated date of AD 1145-1205 (82% probability); and indicates that the floor is a survivor of the original build. The tower was raised in a series of annual lifts. The height that could be achieved in a single season of work was limited by the length of time the lime mortar took to go off, as a flint wall that is still green can only safely be sustained to a certain height. In addition progress was also constrained, because of the slow drying time, by a building season that was restricted to the frost-free months.

At Wissett the tower was raised in increments of 0.9m, and a scaffold stage was attached to the tower at each lift. The scaffolding was supported by timbers inserted through the wall and it is thought that the masons, standing on the scaffold supported on timbers projecting from the base of the previous seasons work, started building from waist height. A row of putlog holes were built into the wall at the start of each lift which would allow a full year for the mortar of the wall to harden before the timbers were inserted into the putlogs thus preventing them from levering off the new work.

The tower is clearly divided into twelve building lifts and it is tempting to speculate that the tower took 12 years to complete. The tower fabric however suggests that the construction was phased, each phase being one storey, and implies that there was a cessation of work at the end of each phase. The interval before work recommenced is of course unknown but evidence from Mettingham Church's round tower suggests that the towers may have been temporarily roofed once the first floor room was completed to allow the tower to function (Gill, 2008) and this is likely to have been the case here too.

The church generally underwent a transformation during the 15th century with the enlargement of the nave, rebuilding of the chancel and addition of the south porch. The building was updated to the perpendicular style and made loftier with the raising of the nave height and addition of the large windows. During this period the belfry was added raising the height of the tower, and it is interesting to note that

the increase in height is in exact proportion to the increased height of the nave, so the relationship between the two was maintained.

The spiral stair was also added around this time and the door through the gable of the nave closed. Up until this point the only access to the upper floor of the tower would have been through the gable, presumably via a ladder and the addition of the stair may signal a change from the original use of the tower and its tower room.

Tower rooms are a common feature of early churches and can been found in most of the Saxo-Norman churches in the region. It is believed that the room would have been the quarters of the incumbent priest and through the door, a view of the altar would allow him to make his regular devotions throughout the strict cycle of the 24 hour religious day. It was well lit with three large windows, compared with the other spaces and this would have allowed light for study - and with the ladder drawn up, a hermitage. The evidence shows that the tower room's original floor was level with the eaves height which places the room wholly above the nave and within its roof space. Although still connected to the nave the siting of the room just here rather than lower in the tower appears to be a deliberate separation of the more prosaic parts of the priest's existence from his religious duties.

The Norman belfry was shorter than the current 15th century one and the top of the Norman belfry and tower ran at the level of the arches of the existing belfry windows. The fact that this aligns with an exact build lift interval and the presence of possible roof joists also at this level strongly implies that this is at, or close to, the finished height and not a truncation level. The original belfry windows were internally narrower than today's and opened out, like the bell of a trumpet, to the exterior of the church. The openings were slightly lower in the wall and extended to the belfry floor; the height of the openings and the treatments of their heads is unknown, but a rounded flint arch in similar to the window is most likely, but are limited to the known height of the former tower. Evidence indicates that a square timber frame was built into the top of, and spanning, the tower and this is probably the structural base for the roof. The most effective roof form would be pitched, both for weather protection and for increasing the volume of the belfry, and certainly the arrangement of the timbers is completely different from that

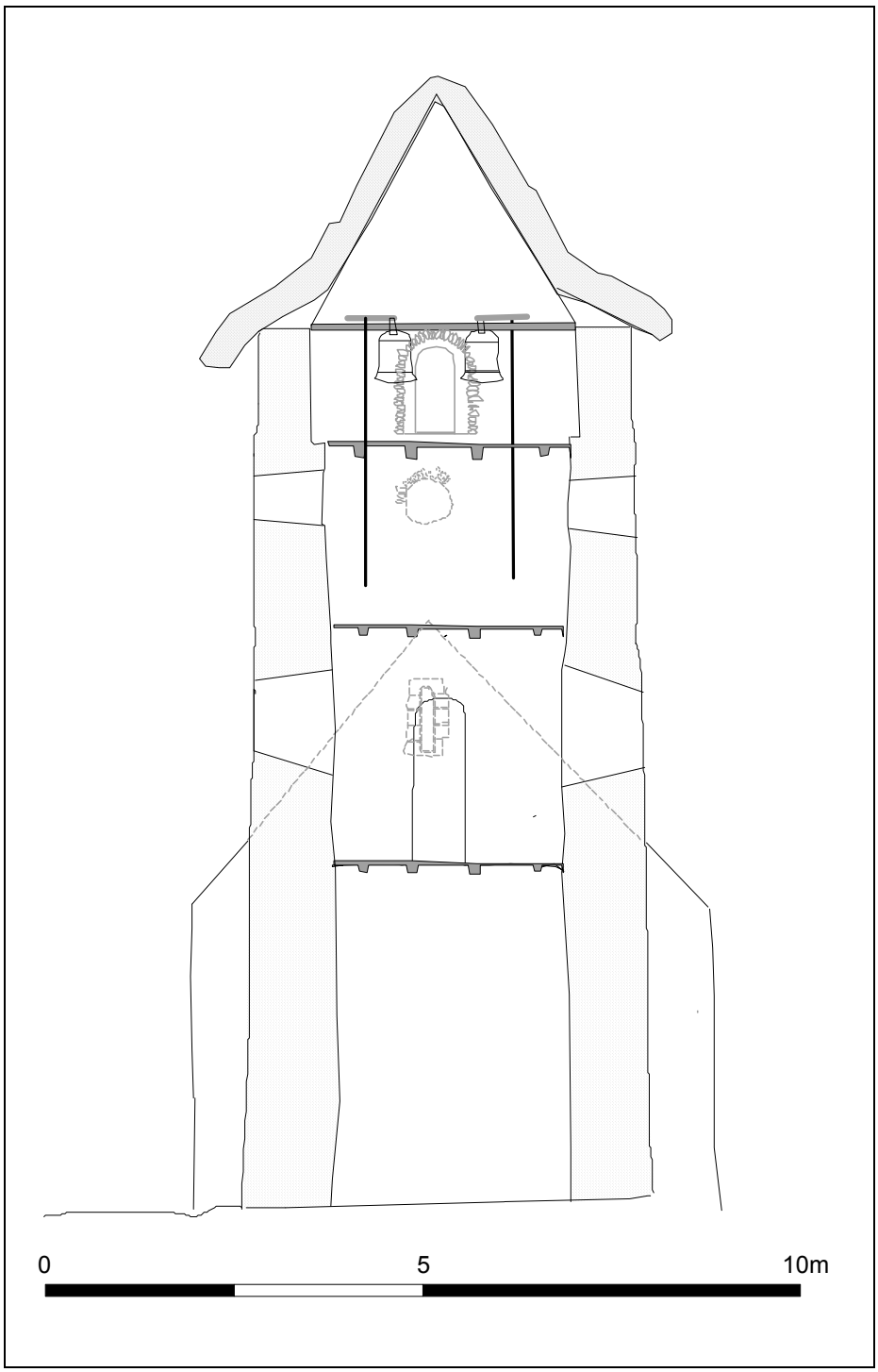


Figure 17. Reconstruction of the Norman tower showing the possible location of the bells and second floor ringing chamber. (after Everson and Stocker, 2006)

supporting the floors, so as to suggest that the tower did not have a flat roof. The frame may have also, or alternatively, served as a hanging for the bells. The earliest bell frames designed to ring in the full circle date from about the 14th century, and require space to rotate above their pivot axis. Prior to this the bells would have simply swung below their suspension point, which would have required the bell(s) to be hung from a higher point, and, at Wissett, they were

probably rung from the chamber below. The drawing (Fig. 17, after Everson and Stocker 2006) is shown with two bells but the position of the ringing chamber above the priest's quarters, may suggest that the bells were rung by the priest and therefore, perhaps, that a single bell is more likely.

8. Conclusion

The survey has indentified and recorded a sequence of construction which suggests that the original nave and tower were built in the period around the middle of the 12th century, in three closely spaced phases. The church continued to be developed and enlarged throughout the 14th - 16th centuries to arrive at its present form. The fitting of the bell-frame probably in the second half of the 15th century prompted the remodelling of the belfry to the form we see today.

9. Archive deposition

Paper and photographic archive: SCCAS Bury St Edmunds. Archive store
Digital archive T:arc\archive fieldprojects\Wissett\WSS012
The shoe has been returned to Roy Stoddard, for the parish council to hold.

10. List of contributors and acknowledgements

The fieldwork was carried out by David Gill and Jonathan van Jennians from Suffolk County Council Archaeological Service, Field Team. The post-excavation work on the shoe was managed by Richenda Goffin and the specialist report carried out by Quita Mould. The illustration of the shoe was by Sue Holden and the photography by Gemma Adams. The production of site plans and elevations for the report was carried out by Crane Begg and David Gill. The report was checked by Richenda Goffin.

The Archaeological Service is grateful to Roy Stoddard for his assistance and patience throughout the project, and English Heritage and others who have donated to fund the work.

11. Bibliography

Bayliss, A., Ramsey, C.B., Hamilton, D., van der Plicht, J., 2006. *Church of St Andrew, Wissett, Suffolk. Radiocarbon Wiggle-Matching of the Second Floor of the Bell Tower.* English Heritage, Research Department Report Series 32/2006. Unpublished.

Bridge, M., 2004 *Tree-ring Analysis of Timbers from the Tower, St Andrew's Church, Wissett, Suffolk.* English Heritage.

Evans, and Mould, Q. (2005) 'Footwear'. In Gardiner, J. with Allen, Michael J. (ed.) *Before the Mast. Life and Death Aboard the Mary Rose*. Portsmouth: The Mary Rose Trust Ltd.

Everson, P., and Stocker, D. 2006 'The Common Steeple? Church, Liturgy and Settlement in Early Medieval Lincolnshire' in C.P.Lewis (ed) *Anglo-Norman Studies XXVIII, Proceedings of the battle Conference, 2005.* The Boydell Press.

Gill, D 2008. The Church of All Saints, Mettingham, MTT 044. Building Survey Report. SCCAS Report no. 2008/193. Unpublished

Goubitz, O. (1985) *Modeschoenen uit een Waddenwrak*. Westerheem 34, 223-228

Mortlock, D. P. 2009. *The Guide to Suffolk Churches*. The Lutterworth Press

Nick Joyce Architects LLP 2007. *Report on the Bell Frame at St Andrew's Church, Wissett.* Unpublished

Appendix 1. Catalogue description of shoe by Quita Mould

Complete high-throated, slip-on shoe of welted construction for the left foot.

Methodology

All measurements are in millimetres (mm), + indicates a measurement of an incomplete item. Shoe sizing has been calculated according to the modern English Shoe-Size scale, continental sizing is provided in brackets.
Leather species are identified by hair follicle pattern using low powered magnification.

Sole with oval/round toe now worn away, natural tread, medium/wide waist and seat. Grain/flesh seam around the edge, stitch length 6mm. The tread is worn through at the centre, at each edge and around the edge of the seat. A repair patch is present along the left side of the sole at the waist and lower tread and a separate patch fragment survives on the left side of the seat, both held in place with small wooden pegs. Peg holes present around the edge of the tread and across the seat indicate that other pegged sole repairs had been attached originally. Sole length 220mm, width tread 95mm, waist 53mm, seat 56+mm. The back part of the insole is visible with a narrow waist (width 20mm) and a medium, round seat with an edge/flesh seam, stitch length 6mm with thread surviving. The welt is visible around the seat and lower waist area protruding some 10mm out of the seam.

Vamp with round/oval toe worn away along the lasting margin and with a slice of the toe area removed. A line of worn grain/flesh stitching present indicates that a toe cap was originally sewn to it as a repair, but is now missing. The vamp has a high, straight throat ending in butted edge/flesh side seams 40mm high, stitch length 3mm. Worn stitching is visible along the throat edge. A large horizontal decorative slash is present running across the vamp from one side to the other roughly above the great toe joint. No stitching is visible at the cut edge suggesting that it is a decorative slash rather than having had a length of decorative piping inserted originally. The one-piece quarters has a straight cut top edge extending at each end into a small tab stitched to the inside of the vamp above the butted side seams. The quarters are broken along the lasting margin on the left side and around the seat. Quarters height c 50mm. There is no heel stiffener. Small

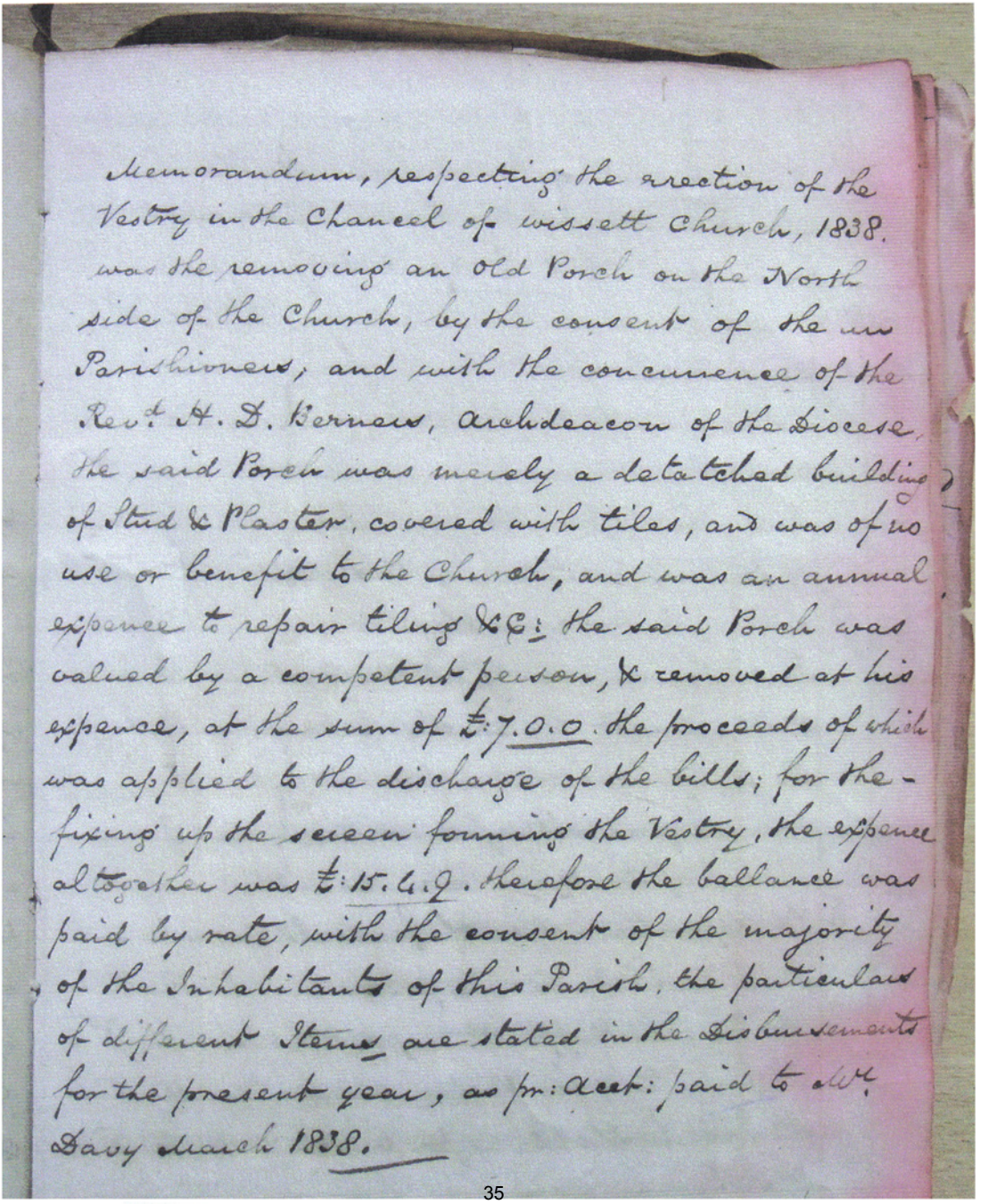
fragments of a woven textile, now golden brown in colour, likely to come from an insock are present inside the vamp.

The shoe is dry. The upper face of the vamp and quarters are pitted and pocked from microbial and pest action. The entire shoe is covered with much soil/dirt and no areas of grain pattern are visible. The upper appears to be heavily worn cattle hide. While it is possible that the upper is flesh side out examination of the leather on the interior of the shoe make this unlikely. The leather is brown cattle hide, the vamp 3.71mm, quarters 4.16mm thick.

In addition to the small pieces of woven textile already noted the vamp is now contains what appears to be a loose, random assortment of straw, grass, moss, small chips of wood, mortar and sand grains. It does not appear to have been deliberately stuffed with this material and it is more likely to be an accumulation of material from the surrounding environment.

Appendix 2

Page from Churchwardens Book, 1798 – 1868 proving removal of wooden porch from the north door of Wissett Church.



Memorandum, respecting the erection of the Vestry in the Chancel of wissett Church, 1838. was the removing an old Porch on the North side of the Church, by the consent of the inn Parishioners, and with the concurrence of the Revd. A. D. Berners, Archdeacon of the Diocese, the said Porch was merely a detatched building of Stud & Plaster, covered with tiles, and was of no use or benefit to the Church, and was an annual expence to repair tiling &c: the said Porch was valued by a competent person, & removed at his expence, at the sum of £: 7.0.0. the proceeds of which was applied to the discharge of the bills; for the fixing up the screen forming the Vestry, the expence altogether was £: 15. 4. 9. therefore the ballance was paid by rate, with the consent of the majority of the Inhabitants of this Parish. the particulars of different Items are stated in the Disbursements for the present year, as pr: Acct: paid to Mr. Davy March 1838.

A transcription of the whole book is in Wissett church on the bier for all to see.

Transcribed by Jenny Ball.

The Disbursements of John Button Churchwarden of the Parish of Wissett from April 1837 to April 1838

1837		£	s	d
April 13th	Journey to Yoxford and Presentments		12	-
	Paid Apparitor two notices for Generals		2	-
	Paid Revd E.C.Wells as pr bill for Books and			
	Parchment for Registers		6	11
June	Paid the Apparitor for Proclamation for the Queen &c		1	-
	Pens Ink and Paper, use of the church		2	0
	Paid Revd E.C.Wells as pr bill for books for Sunday			
	School		6	11
Sept	Pd Apparitor notice for Generals		1	-
October 5th	Paid F.Fisk as pr bill	2	-	-
14th	Paid Anthy Stannard as pr bill	2	16	-
1838 Jan 5th	Pd R.Kneevit for 6½ days work cleaning Paths and			
	round the Church		9	9
	Paid Thos Branch as pr bill for repairing stonework			
	to the North door of the Church	1	5	-
	Bread and Wine for the Sacraments		10	6
	Paid Joseph Berry, years salary	1	10	-
	Ditto as pr bill		15	11
	Paid Anthy Stannard as per bill	2	10	-
	Paid Wm Chappell as pr bill		14	5½
	Do Richd Barber as pr Do		1	1
	Do Chas Garrett as pr Do		2	9
	D° Rev Wm Hall[12], books for Sunday School		3	2
	Paid J Oldrin as pr bill	1	9	6
	D° Geo. Algar, Constable court fees		5	10
	Pd Geo Hufflett, as per bill		2	-
	D° Thos Self, Constable, for journey to Halesworth			
	with Assessors list for 1827		2	6
March 1838	Pd Wm Davy as pr Acct fixing up Vestry	8	4	9
	Paid F Fisk as pr bill for ditto		16	6
	Ditto F. Butcher for use of tilt[13]		12	-
	£	26	3	6½

[12] William Hall. Curate
[13] tarpaulin