Architectural Inscriptions: New Discoveries in East Anglia

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Architectural design inscriptions from the Middle Ages are rare survivals in England. Whilst the country may contain some of the finest monuments to ecclesiastical architecture in Western Europe, this lack of information concerning the design process may be regarded as a significant vacuum in our understanding of medieval architectural processes and construction. In early 2010 a project began to undertake the first large-scale and systematic survey of early graffiti inscriptions in England. The Norfolk Medieval Graffiti Survey has, to date, surveyed over two hundred of the county's 650 medieval churches, recording many thousands of graffiti inscriptions in the process (WS1). In addition to the recording of more mundane graffiti inscriptions, the survey's close study of all surfaces within the churches, including stonework, surviving plaster surfaces and woodwork, has resulted in the discovery of a large number of previously unrecorded architectural inscriptions – more than doubling the number of extant examples previously known in England. Many of these inscriptions appear to relate to alterations to the church fabric, in particular the creation of windows and tracery work. Others, however, relate to the design and construction of church fixtures and fittings, such as the monumental rood screens that still dominate many East Anglian churches. This article documents the new discoveries and makes them available for further study and analysis. While some analysis and interpretation of the techniques used to create the designs is presented, it is clear that further in-depth scrutiny would be worthwhile.

Previously recorded inscriptions

Of the architectural inscriptions recorded in England to date it can reasonably be argued that they fall into two very clear and distinct categories: large scale and small scale. Before the Norfolk Medieval Graffiti Survey began its systematic survey of Norfolk's churches the number of architectural inscriptions of both types known to have survived in England was relatively low.

Large-scale architectural inscriptions

The first category, and undoubtedly the best known, is the large scale architectural inscription. Often created at actual size, and used as an outline from which to make the wooden templates from which the actual stones were fashioned, these large scale inscriptions have attracted much interest from scholars. They were often created on specially prepared floor surfaces, known as tracing floors, in areas specifically put aside for the use of the master mason and his assistants. Several of these tracing floors survive to this day and the records suggest that many other examples once existed, albeit often only as temporary structures (Pacey 2007, 37–45). The tracing floors themselves appear to have been commonly constructed from timber floorboards, which were then treated with a fine layer of gypsum plaster to create a smooth surface upon which the master mason could lay out his designs. As well as providing a smooth and even surface the gypsum plaster could be refreshed or replaced at regular intervals, allowing the same floor surface to be re-used many times (Rodwell 2012, 223).

Very occasionally these large scale architectural designs, often referred to as *'Epures'*, are to be found located on wall surfaces. Although clearly not as practical as a tracing floor, where templates could be laid directly onto the floor surface, these inscriptions may have been created on the walls simply due to a lack of available space in which to set up a tracing floor.

The large scale inscriptions, or *Epures*, have received the largest amount of scholarly attention and, as a result, they have been identified at a number of locations. Most notably two examples of medieval tracing floors survive, at York Minster and Wells Cathedral, with both showing multiple designs and signs consistent with re-use over a number of centuries (Harvey 1968, 81–6, Holton, 2006, 1597–96, Pacey 2007, 53–58). A number of these outline designs have actually been identified with existing architectural features within the buildings themselves, most notably the designs for the south choir aisle windows at York Minster dating from the 1360s (Pacey 2007, 54), but many more remain as fragmentary sections of unidentifiable designs.

Surviving large scale architectural designs on wall surfaces are a little better represented than surviving tracing floors, with examples known from a number of medieval and post-medieval contexts. The earliest known example was discovered at Byland Abbey in the North Riding of Yorkshire which appears to show part of the detail for the design of a rose window. Another incised design discovered nearby, located on a floor slab, appears to show a fragment of a full sized design for the same window, dating from soon after 1200 (Harrison 1987, 134–151).

Other full sized medieval architectural designs have been recorded at Christchurch Priory, Hampshire, showing a window design from the late 13th century (Crook 2001, 92–132), and at Ashwell church in Hertfordshire (Sherlock 1978). Ashwell church is notable for the amount and quality of the graffiti present within the building, examples of which include an early representation of 'old' St Pauls cathedral and text inscriptions referring to the arrival of the Black Death in England. However, among the Latin inscriptions and devotional texts appears to be the design for a lancet window with a pointed and cusped head, created at full size and including a number of setting out lines. Other markings within the church include a series of large circles, or fragments of circles, that Pacey suggests can only have been made by the large compasses or dividers of the master mason, indicating that a temporary tracing floor may have been located nearby, most probably during the rebuilding of the church in the 1360s (Pacey 2007, 40). A further set of designs inscribed into wall plaster were recorded by GG Coulton at Castle Acre Priory (Norf) in 1881. The designs had come to light after severe frosts had delaminated the overlying layers of plaster to reveal the designs beneath. However, subsequent frost damaged the newly revealed plaster layer and only a few lines were visible by 1913 (Coulton 1928, 178–9). Recent close inspection of the remaining plaster surface indicates that some of those few lines are still visible following a further century of weathering. Unfortunately Coulton did not record, and it is no longer possible to determine, whether the design was laid out at full size or not.

One other set of inscribed designs, located in the Galilee porch of Ely Cathedral, are also worthy of note (Pacey 2007, 33–4; and below). While not created at full scale, the designs were created by a master mason in the same manner and using the same tools and techniques as those used for the full scale designs. A number of post-medieval examples have also been recorded, indicating that the practice of laying out designs on walls continued unabated well into the 16th century, the most notable examples being at Old Basing church in Hampshire (Crook 2001, 92–132) and at Acton Court, near Bristol (Bell and Rodwell 2004), the early Tudor home of the courtier Nicholas Poyntz.

Small scale inscriptions

The second category is more diverse in its content than the first, being all other architectural inscriptions not produced at actual size. These can range from the fragmentary outline of a window design scratched into the pier of a church, to a highly elaborate and fully annotated working drawing for the construction of a rood screen or arcade. What they share, for the most part, is that they were created using a pair of compasses and a straight edge, suggesting that they were the work of professional craftsmen rather than being simply the doodled drawings of the congregation. While they may, in many cases, be incomplete and unworkable outlines of ideas, they are the product of professional knowledge and insight.

Surviving small scale designs are far more numerous than the full sized designs. In part this is likely to be the result of the fact that a small and discrete design is more likely to survive the passage of the centuries, and numerous church re-buildings, re-ordering and restorations, than an inscription that occupies a large

part of a floor or wall surface. By comparison, they are more diverse in terms of quality of execution than the large scale design drawings. This diversity may be the result of individual circumstance or, more likely, reflect the fact that the smaller scale designs were probably created to act as conceptual visualisations rather than finished architectural plans. In addition, a number of previously recorded small scale designs appear to have been the subject of subsequent interventions that embellished the original designs, making them more difficult to interpret in purely architectural terms. Designs for fixtures and fittings within the church, such as sections of rood screens, are also more likely to survive, often being inscribed onto a discrete area of the fixture itself; therefore, if the item itself survives, then so too does the original design inscription.

Putting aside the elaborate window tracery designs found on a number of East Anglian fonts, such as Honington (Suff), North Lopham (Norf) and South Lopham (Norf) (Pevsner and Radcliffe 1974, 277; Pevsner and Wilson 1999, 571–2 and 663–4), the smaller scale architectural designs rarely show completed and finalised window tracery designs. Those recorded at Lincoln cathedral appear to show only certain geometric elements for the 13th-century large round window known today as the 'Bishops Eye' rather than any completed design (Alexander 1996, 219–236). Likewise, the piece of stone discovered in 1869 during demolition work at St John's College, Cambridge, appears to show only part of the upper section of an elaborate tracery window design (illustrated in Hislop 2000, 22). However, enough of the design survives to allow full reconstruction of the finished piece, suggesting it is the design for the easternmost window in St John's College chapel; the building in which it was discovered (Alexander and Binski 1987, 405–6). The ability to be able to relate these two sets of designs to actual surviving or known architectural features is a rarity. In the case of all eight other surviving small scale designs previously recorded it is impossible to categorically state that they are related to existing or known architectural features.

All eight of the other small scale architectural designs previously recorded take the same form, in that they are designs for tracery windows, or sections thereof, inscribed into the fabric of parish churches, the vast majority in East Anglia. The most recently discovered was recorded in 1996 in the church of the Holy Trinity, Dartford, Kent, where a design for a late 13th- or early 14-century traceried window was discovered on a piece of re-used stone in a rubble constructed wall (Bailey 1997, 46–7). Typically the design showed only the geometric upper sections of the window, which looked to be of four lights, laid out using compasses or dividers and a straight-edge ie the work of a professional mason. The stone upon which the inscription was discovered is only 400mm by 200mm which, albeit small, appears a fairly typical size for the majority of these small scale architectural inscriptions. Bailey suggests that the design might relate to the long since demolished east window of the church, although there appears little solid evidence to support this theory. Technically similarly constructed window tracery designs have been recorded at Gamlingay (Cambs), Thurlow Magna (Suff), Whittlesford (Cambs), Barrington (Cambs) and Offley (Herts) (Pritchard 1967).

The remaining two small scale window tracery inscriptions are both to be found in All Saints church, Leighton Buzzard (Beds) (Pacey 2007, 39). The first is of a circular design with twelve spokes radiating out from a central circle to a narrow circular rim. The individual segments are then in-filled with compass drawn designs that are reminiscent of window tracery designs. The tracery within the segments, whilst having the appearance of typical window tracery, appears to be simply a bare outline of what might have been intended rather than the fully formulated design, suggesting that the piece was more of a technical exercise than the preliminary plans for an actual window.

The second of the Leighton Buzzard designs is perhaps one of the most complete and technically accomplished of all the previously known small scale architectural designs. Unusually the design appears to show a complete window, rather than simply the more usual traceried upper section alone. The design was created using compasses or dividers and a straight edge, and shows a central upper cinquefoil above a pair of matched quatrefoils, all of which surmount what initially appears to be a complex eight light window. However, close inspection of the lower lights of the windows reveals that it was only the principal mullions that were laid out using a straight edge, with the secondary mullions added freehand, perhaps suggesting that the original design was for a four light window rather than eight. Having stated that, the lines of the secondary mullions are filled with multiple layers of limewash, much the same as the rest of the design, suggesting that the alterations to the original design may well have taken place at an early date and most certainly prior to the original limewashing of the church in the 16th century.

The new discoveries

The surveys undertaken by the Norfolk Medieval Graffiti Survey have identified a large number of architectural inscriptions, both large scale and small scale, as well as a significant number of architectural designs located on church fixtures and fittings. Although the survey of Norfolk is, at the time of writing, only a third complete the number of these architectural designs recorded has almost doubled the number of previously recorded inscriptions in England.

Large-scale architectural designs

Amongst the earliest discoveries made by the survey were a series of large-scale architectural designs located on the walls of Binham Priory in North Norfolk (Champion 2013, 6–21). Although the fragmented remains of five separate inscriptions were identified, only four were in a condition that allowed a full measured survey to be undertaken (Figs 1, 3, 4 and 5). The inscriptions had originally been created on a fine layer of lime plaster that had been applied to the surface of the stonework. This plaster surface has, for the most part, now been lost. The inscriptions are therefore only visible where the compass point has penetrated the plaster to such an extent as to mark the stone beneath. As a result, although it was possible to identify the fact that architectural inscriptions had once been present, in several cases it was possible to identify and record only the briefest of fragments.

Analysis of the inscriptions that did survive in any detail suggests that they were related to the construction of the west front of the priory, which, according to the chronicler Matthew Paris, took place under the administration of Richard de Parco in the years prior to 1244 (Louard 1872–83, 90; Smith and London 2001, 92). In terms of architectural history the inscriptions are of some significance. The west front of Binham priory, and in particular the great west window, is considered to be one of the earliest examples of Gothic 'bar' tracery to have been created in England, pre-dating both Westminster Abbey and the Angel Choir window at Lincoln cathedral by a significant number of years (Draper 2006, 90; Russell 1986–7, 96–7). However, the window itself failed in the late 18th century and was bricked up, leaving only two highly contradictory early engravings that purport to show its early form. As a result it has long been the centre of a debate as to whether the window was originally of four or eight lights, each of which

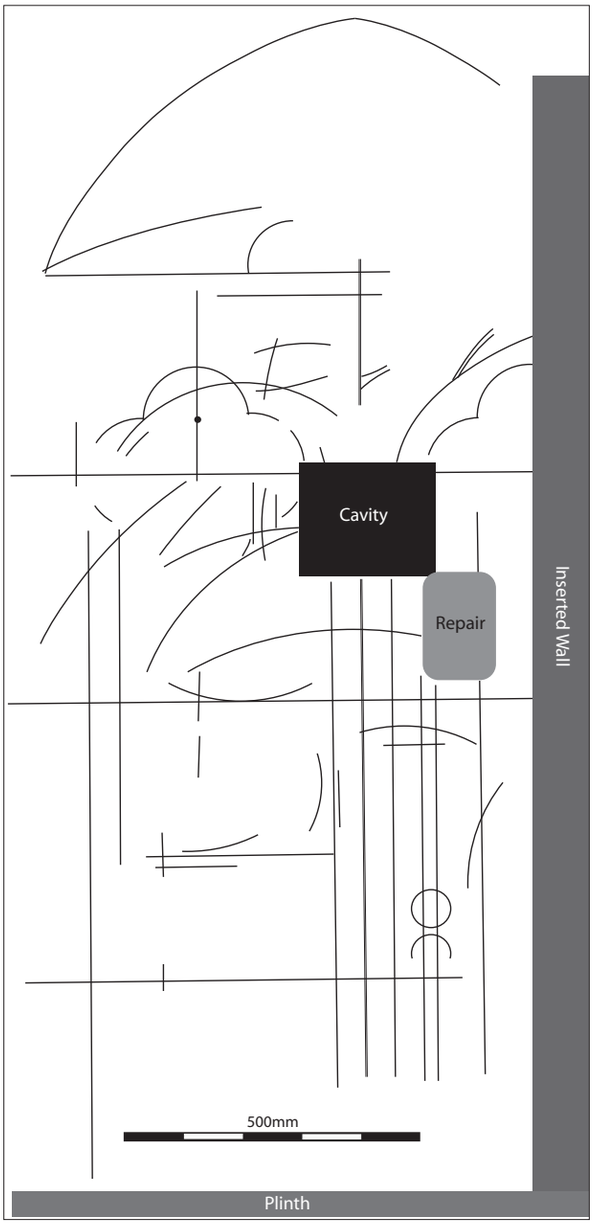

Fig 1
Large scale architectural design from Binham Priory. A composite of multiple designs originally scored into a thin plaster skim, little of which survives, with the design only surviving where the mason scored deep enough to mark the stones beneath (Author)

is supported by one of the early engravings (Thurlby 1991, 155–65). While this may seem minor, it is highly significant in the development of Gothic architecture in England. If the window was originally of four lights it can be seen to have been an evolutionary stepping stone towards the perfection later found at sites such as Westminster and Lincoln. However, if the window were of eight lights it would be rather a revolutionary leap

Fig 2
Tentative reconstruction of the original eight light west window at Binham priory as it may have looked prior to its failure in the 18th century (Author)

forward. Although both theories have had a number of supporters, in recent decades the eight light theory has come to fall in to disfavour, Malcolm Thurlby, for instance, describing it as the *'eight light myth'* (1991, 160). While giving no definitive answer, the architectural inscriptions recorded at Binham do appear to support the eight light theory (Fig 2) suggesting that the Binham west front was of a far more advanced construction than previously believed (Champion 2013, 6–21).

The architectural designs at Binham are unusual in a number of respects, which perhaps adds to their archaeological and architectural value. The designs do not fit clearly into either the full scale nor the small scale categories. While the Binham designs were created on a large scale – the largest is 2.4m in height (Fig 1) – they were clearly not created at actual size. In addition, the designs are clearly distorted, in some cases foreshortened, and are missing a number of key elements that would be crucial to the creation of the final building. As they are partially overlaid with elements from other designs, it would appear that these inscriptions do not represent a final design, but rather an intermediate stage that involved working out the fundamental principles behind the project. In short, they have more in common with an engineer's outline schematics than with an architect's finished plans and must, as such, be considered to be 'working drawings'. This intermediate stage of the design process, whilst discussed as a theoretical concept by Pacey (2007, 62–3), appears to have left little in the way of tangible evidence.

The Binham inscriptions are undoubtedly of significance and interest in relation to the development of Gothic architecture in England. However, perhaps the most intriguing aspect of the five large scale architectural designs recorded at Binham is that the individual who created them may also be the same individual who created another series of designs located within the galilee porch at Ely cathedral. The architectural inscriptions are located on the south wall of the interior of the porch and, according to

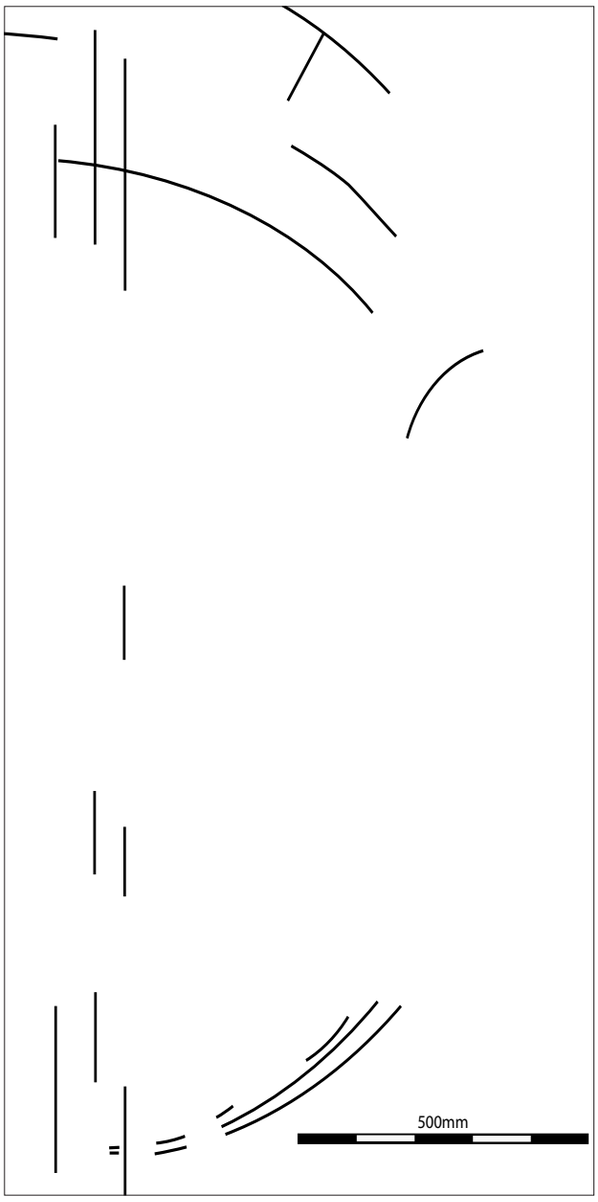

Fig 3
Large scale architectural inscription on the rear of the west front at Binham Priory. The smallest of the circles shown is within 20mm of the inner diameter of the sexfoils still present in the west window, suggesting a close relationship between the design and the finished work (Author)

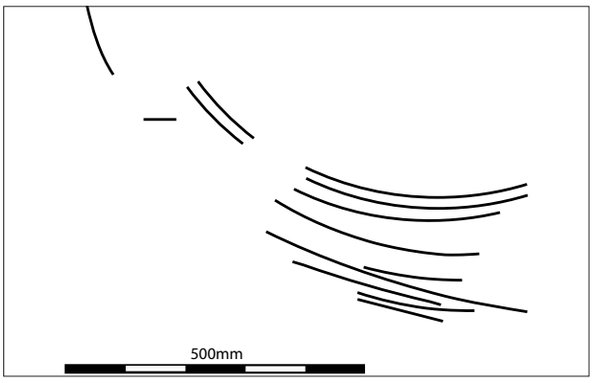

Fig 4
Fragmented remains of large scale circles cut into the south arcade piers of Binham priory. The plaster skim into which the design was originally cut is only present at the base of the pier where the design survives (Author)

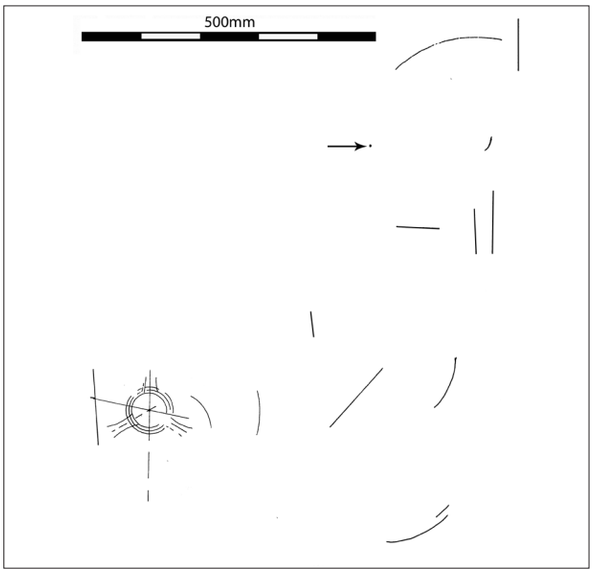

Fig 5
Fragmented large scale architectural design from Binham priory located opposite Fig 1 and now partly obscured by a modern interpretation board – ironically highlighting the relationship between the Binham window and those at Westminster Abbey. The arrow marks a surviving compass hole (Author)

Pacey appear to show, in part, the '*preliminary design for windows inserted into the older wall of the south transept around 1250*' (2007, 38). Other architectural designs on the same wall show a large series of graduated circles, base lines and centre lines. There are also a number of similar architectural inscriptions located on the north wall. Although these were noted by Pacey during his initial visits to the site, lack of time meant that they were not fully surveyed and recorded and, as a result, have not yet been published.

The similarities between the Binham inscriptions and those recorded at Ely are striking in a number of ways. Those at Binham were created in relation to the rebuilding of the west front, most probably at some

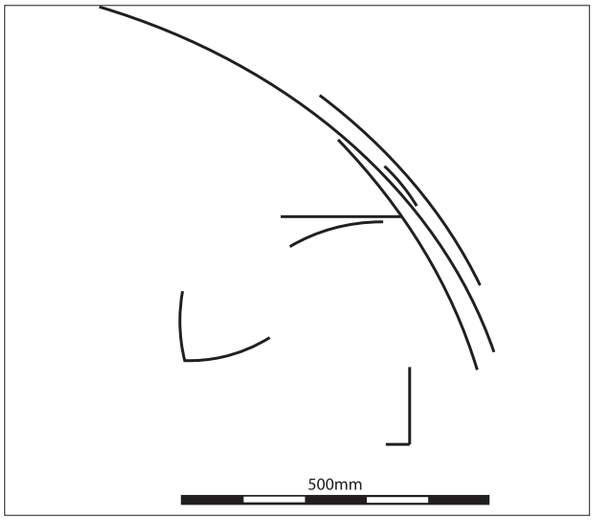

Fig 6
Large scale architectural inscription inscribed across a 14th century wall painting of St Christopher at Swannington, Norfolk. Although little survives of the whole inscription it would appear to relate to a window tracery design (Author)

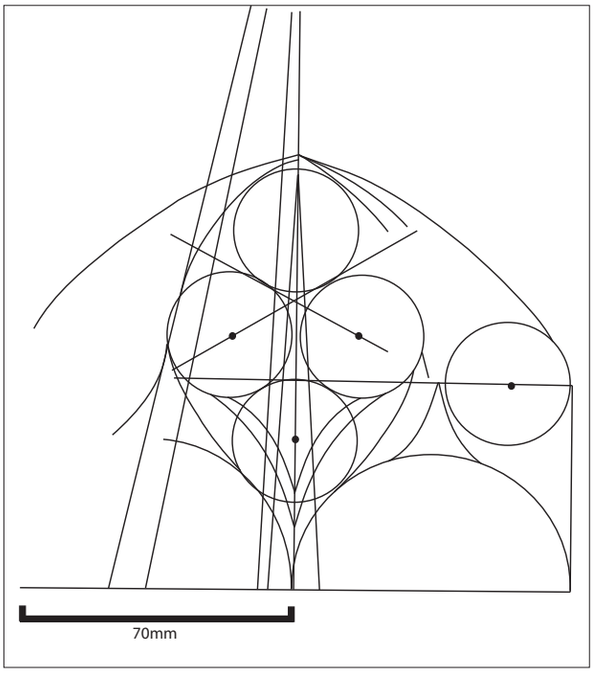

Fig 7
Small scale architectural design from the south arcade of Weston Longville church. Although located almost 3m up on the south arcade the design was undoubtedly created in situ, with the termini point for the setting out lines being located on the block of stone above that on which the design was created (Author)

point in the decade prior to 1244, whilst those at Ely were created at some point shortly after, but most likely around 1250; making them chronologically as well as geographically extremely close. In addition, both sets of inscriptions were, quite unusually, created on a vertical surface rather than on the horizontal surface of a traditional tracing floor, such as those seen at Wells Cathedral and York Minster. In terms of construction the two inscriptions showed even more marked similarities. Both were originally inscribed into a thin plaster skim across the surface of the stonework, marking the stone beneath only where the compass cut deeply through the layer of plaster. Both sets of inscriptions also contain a rather puzzling feature. At both Binham and Ely the architect has created a series of large-scale graduated curves, or parts of circles, that do not appear related directly to any other part of the architectural design. Those at Binham may well relate to the scaling of the quatrefoil in the west window but the similar curves and arcs at Ely serve no obvious purpose. Indeed, Pacey goes as far as to suggest that they were the result of the compasses being tried out (Pacey 2007, 39). Lastly, and perhaps most tellingly, both sets of designs were laid out in an identical manner, upon a horizontal baseline and a double-strike centre line. This double-strike centre line, although highly practical in terms of navigating your way across the wall surface, has not yet been observed elsewhere in England. The identity of the master-mason responsible for these inscriptions, and even his nationality, remain unrecorded.

The only other large scale architectural inscription recorded by the Norfolk survey to date is located in St Margaret's church, Swannington (Fig 6). The church itself contains a very large quantity of early graffiti inscribed into the stonework of the tower base interior, many of which are clearly pre-Reformation in date. In addition, the church also contains an extremely large wall painting of St Christopher, dating from the 14th century, located on the north face of the south arcade ie in the south aisle. The image is located on a wide stretch of medieval plaster and appears surrounded by a number of graffiti inscriptions, including names and sacred monograms that may well have been devotional in nature, attracted there by the presence of the saint. Unusually, it is across this medieval plaster surface, and cutting through the pigment of the St Christopher image, that the architectural inscription is located. The inscription itself has been badly damaged in the past, leaving only fragments of the right hand side of the design. However, enough survives to suggest that it was originally related to a tracery window design, created

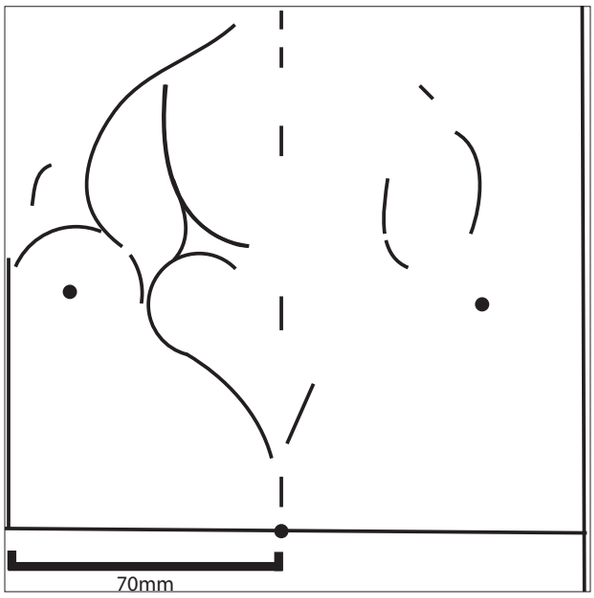

Fig 8
Small scale architectural design from the south arcade of Weston Longville church. Although less complete than the previously recorded inscription the design would appear to relate to an existing window located on the south side of the chancel (Author)

with a large pair of compasses/dividers and a straight edge. The choice of location is one of the most puzzling aspects of the inscription. Cutting across the image of St Christopher, it suggests either a highly pragmatic approach to the design process, with the mason using any available surface regardless of its content, or that, at the time the design was created, the image was no longer visible. As the most likely date for the creation of the St Christopher image is around the beginning of the 14th century (Pevsner and Wilson 1997, 684–96), when the south aisle was constructed, it is possible that it was subsequently covered over, leaving the mason free to use the surface for design purposes, before the image was again uncovered in the 19th century. As so little of the actual design survives it is impossible to say how soon after the St Christopher it was created.

Small scale inscriptions on walls

Freehand sketches of architectural features, such as tracery windows, towers and even whole churches, have been relatively common finds during the initial stages of the Norfolk survey. However, this paper confines itself to dealing only with those inscriptions created with dividers/compasses and straight edges ie probably the work of professional craftsmen. To date, five complete, or almost complete, small scale

Fig 9
Curvilinear tracery window from the south side of the chancel at Weston Longville, apparently related to one of the small scale architectural designs recorded on the south arcade of the nave (Photo: author)

architectural inscriptions have been recorded on stonework in the county's churches, all of which appear to be designs related to windows or window tracery. At least two other inscriptions have been located in such a degraded and fragmented state as to make recording, or definite identification of the subject matter, impossible.

The two most detailed of these small scale architectural inscriptions (one previously published, Champion 2012, 383–6) are located in All Saints' church, Weston Longville, perhaps best known for its superb surviving medieval wall paintings and its association with the Georgian diarist Parson Woodforde (Figs 7 and 8; Pevsner and Wilson 1992, 766–8). Both inscriptions are on a very small scale, each being only 140mm across, and were incised directly into the stonework of the south arcade. The most complete of the inscriptions (Fig 7) is located approximately 3.0m above floor level on the second pier from the west end of the church and appears to show a complete schematic for the creation of the upper sections of a tracery window. The inscription also includes full setting out lines, which terminate

at a focal point on the block above that upon which the inscription is was created, indicating that, despite its unusual location, the design was executed *in situ*. Although the design is rudimentary, and appears not to relate to any existing tracery design in the church, Pacey (pers comm) has postulated that it is in itself not meant to represent a finished window design. Rather the inscription was designed to operate as a working schematic from which the design of a curvilinear tracery window could be derived. Given the high quality and diversity of the tracery windows at Weston Longville, particularly those on the south side of the chancel, such an interpretation is appealing.

The second inscription at Weston Longville is located only 1.5m above the floor level on the third pier from the west end of the south arcade, and appears far less complete than the first (Fig 8). This may, in part, be due to its location, at a height and position that would leave it susceptible to abrasion and wear. Again set out along a clear straight edge drawn base-line, and framed with vertical lines on either side, the design initially appears less complex than the first inscription. However, the inscription does contain many elements of a complete curvilinear tracery window design. What is more, the outline design appears to contain significant elements that can be related to an existing window within the church, namely the most easterly of the windows located on the south side of the chancel (Fig 9). This three light window, described by Mortlock and Roberts as *'exceptionally pretty'* (1985, 144–5), contains some of the finest small scale curvilinear tracery to be found in Norfolk. If the second inscription is directly related to the construction of the chancel window then it is possible to date it to the middle decades of the 14th century. Although it is tempting to see the two inscriptions as stages of a design process that resulted in the creation of the final window, particularly given Pacey's view that the first inscription was meant to function simply as a design schematic, no direct geometric relationship between the two inscriptions can be established. It must, therefore, be assumed that if the first inscription is indeed a design schematic, then it relates to a window that was never created, or one that has been subsequently replaced.

The church of St Andrew, Scole, also contains two small scale architectural inscriptions (Figs 10 and 11). However, where the Weston Longville examples are clearly defined on surfaces relatively free of other graffiti, the examples from Scole are located amongst a jumble of unrelated graffiti inscriptions, leaving them damaged and degraded in several areas. The

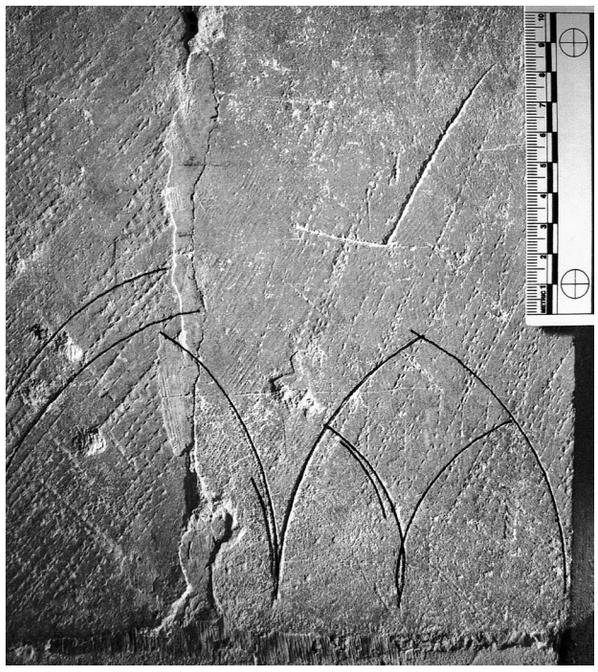

Fig 10
Simple compass drawn architectural design, apparently depicting a two or four light window, from Scole church. The design is crudely constructed, albeit with compasses or dividers, and cannot be directly related to any surviving windows in the church (Photo: author)

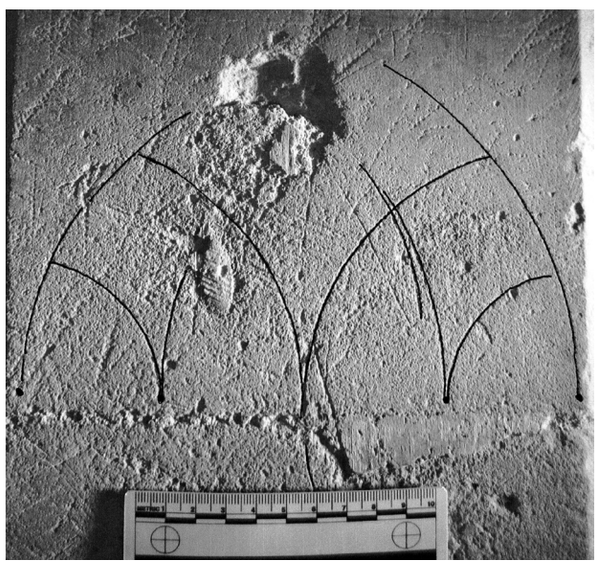

Fig 11
Compass drawn architectural design from Scole, Norfolk. A slightly more elaborate construction that Fig 8, although still crudely constructed and using the mortar line between stone blocks as an apparent base-line, again suggesting it was created in situ (Photo: author)

two inscriptions were both created using compasses/dividers, the centre holes of which are apparent in several places, and appear to use the joint between the stones of the pier upon which they were created as their own baseline. At least one of the arcs continues beyond the joint and onto the stone below, suggesting that they were created *in situ*. Although both show very similar designs for the upper sections of simple intersecting 'Y' tracery windows they show marked differences in the way in which they have been constructed. The first (Fig 10) contains a number of apparent mistakes, such as setting the whole design within a semi-circle, and with the intersections of the tracery at uneven distances. In addition, the presence of additional arcs and curves alongside the main elements of the design suggests that a certain amount of trial and error was involved in its layout. The second inscription (Fig 11) appears to be a slight geometric advance upon the first. The tracery is shown beneath a compass drawn pointed arch. Beneath the arch the simple 'Y' tracery is executed in a more confident style, albeit with at least one mistake still present where the designer has made an initial failed attempt at an arc which was subsequently corrected, and shows a simplified schematic for a complete upper section of a tracery window. Although simple intersecting 'Y' tracery is still present in the church windows, most notably at the eastern end of the south aisle, neither of the designs appears directly related to any of the windows themselves. All the early intersecting 'Y' tracery windows that survive are of two or three lights, whereas both inscriptions appear to relate to four light designs.

The final of the small scale architectural inscriptions recorded to date by the Norfolk survey is located in St Margaret's church, Swannington, and it is perhaps the most unusual of all the design inscriptions recorded to date (Fig 12). Located on a medieval plaster surface, beneath the surviving St Christopher painting across whose surface the large scale architectural design was inscribed, it appears to show an architectural feature that is perhaps a late medieval window. However, the inscription is ambiguous in several ways. The whole surface beneath the St Christopher painting has been subjected to several very thick layers of limewash, obscuring much of the detail. In addition, the design itself, although deeply incised, is of an uncertain construction technique. Several of the straight lines look to have been laid out with a straight-edge but others, perhaps because of the thickness of the overlying limewash, appear as though they may have been created freehand. In addition, while the inscription

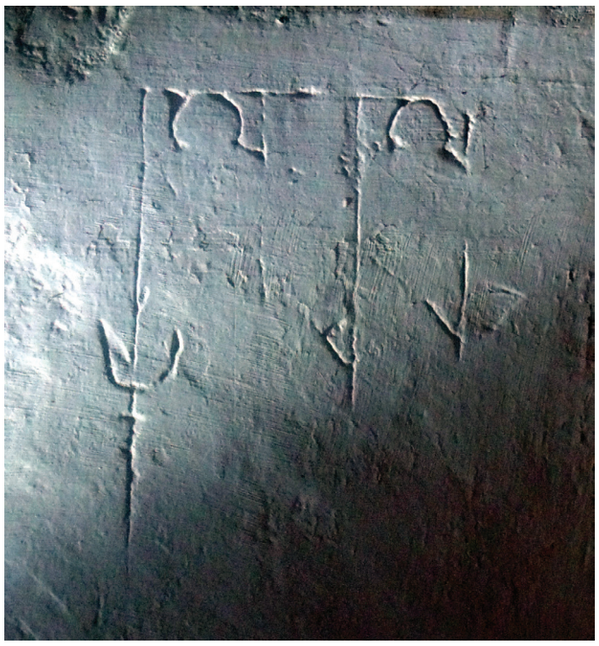

Fig 12
Small scale architectural design from Swannington church, Norfolk. Located beneath the large scale architectural design and medieval wall painting, the design is heavily covered by multiple layers of limewash, but appears to show an architectural design from the late middle ages (Photo: author)

has the general appearance of a design related to a late 15th-century window it might instead be related to the dado section of a timber screen or bench end. It is clear than the lines continue beneath the limewash but, at this time, removal is not possible.

Designs on timber

The most surprising aspect of the architectural inscriptions discovered to date by the survey is the number that have been recorded on the rear of rood screens, parclose screens and medieval bench ends. The rood screens of East Anglia have been particularly well studied (eg Cotton 1987, Duffy 1997, Haselock and Hurst 2012) for several centuries, with large scale conservation based surveys having being undertaken in very recent years, including that of the Cambridge based Hamilton Kerr institute funded by the Leverhulme Trust (Curteis and Wrapson 2013), and the discovery of previously unrecorded architectural inscriptions on the rear of such screens would appear unlikely. However, the survey has already recorded over half a dozen such inscriptions, none of which appear to have been previously noted, ranging from the very

simple to the highly complex. In a few cases the designs on the rear of the rood screens appear to relate to the construction of the screen itself, most particularly the upper sections and tracery work, whilst others appear to have been used as a mason's drawing board for the design of nearby windows or decorative work. These timber inscriptions are more difficult to record than those on stonework, since each one has to be measured and drawn, rather than traced. However, the timber has also preserved far more detail in terms of design and construction than survives on the majority of the stone inscribed examples.

The inscriptions also shed light upon the processes involved in the construction of certain rood screens. The fact that the rear of the main panels was being used to design the upper section of the screen suggests that, in at least a number of cases, the construction process was far more fluid than originally thought. In the case of more elaborate screens it has been suggested that they were created off-site, in the workshops of the master craftsmen, only to be transported in sections to the church for installation (Haselock and Hurst 2012, 8–10). This idea is supported by the number of examples of rood screen panels that show inscribed numbers on the rear, suggesting a pre-agreed construction order. Is it possible that, in a number of cases, this may only have applied to the highly decorative lower panels? The presence of design drawings on the rear of the lower panels, apparently executed *in situ* since they cross boards, suggest that even in the case of a number of elaborate and well known screens the upper sections were designed and constructed on site. While it can be argued that these designs were nothing more than an *aide memoire* to be used during the final construction process, such an *aide memoire* would not need all the elaborate geometric construction detail present in the inscriptions. It is therefore likely that these designs are a result of the actual design process.

At Ringland (Fig 13) and Marsham (Fig 14), the examples did not appear to be elaborate and detailed enough for them to be considered full working drawings. The example recorded at the church of the Holy Cross, Caston crosses at least four of the wooden boards that make up the lower section of the rood screen, indicating that it was created *in situ*, and shows a complex design of compass drawn circles and straight lines (Fig 15). Apparently laid out on a basic, albeit undefined, grid system, the inscription seems to show the design for an elaborate tracery pattern that most probably formed the, now lost, upper section

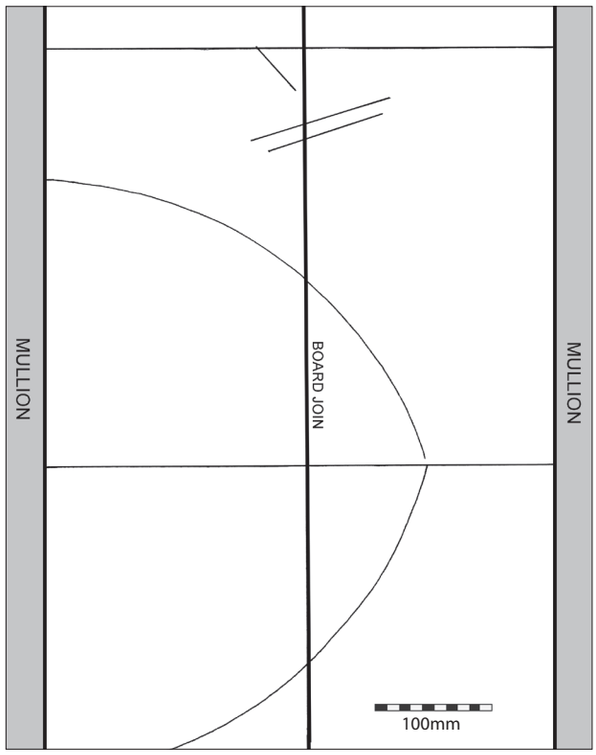

Fig 13
Simple architectural design located on the rear of the rood screen at Ringland, Norfolk. Crossing boards, and with a still clearly visible centre line, the design was undoubtedly executed in situ, although it is unclear as to what it related (Author)

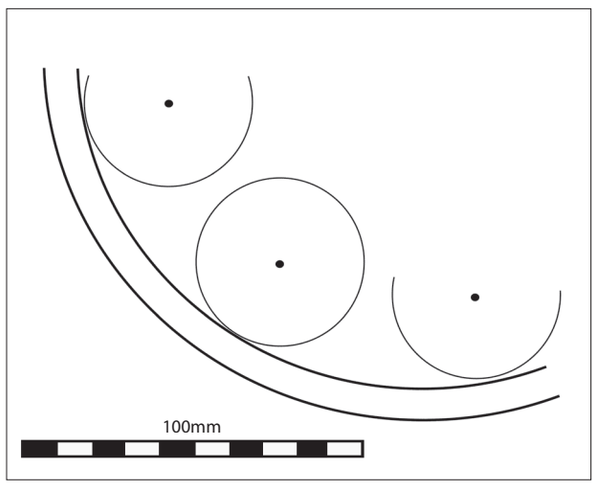

Fig 14
Compass drawn design located on the rear of the rood screen, Marsham, Norfolk (Author)

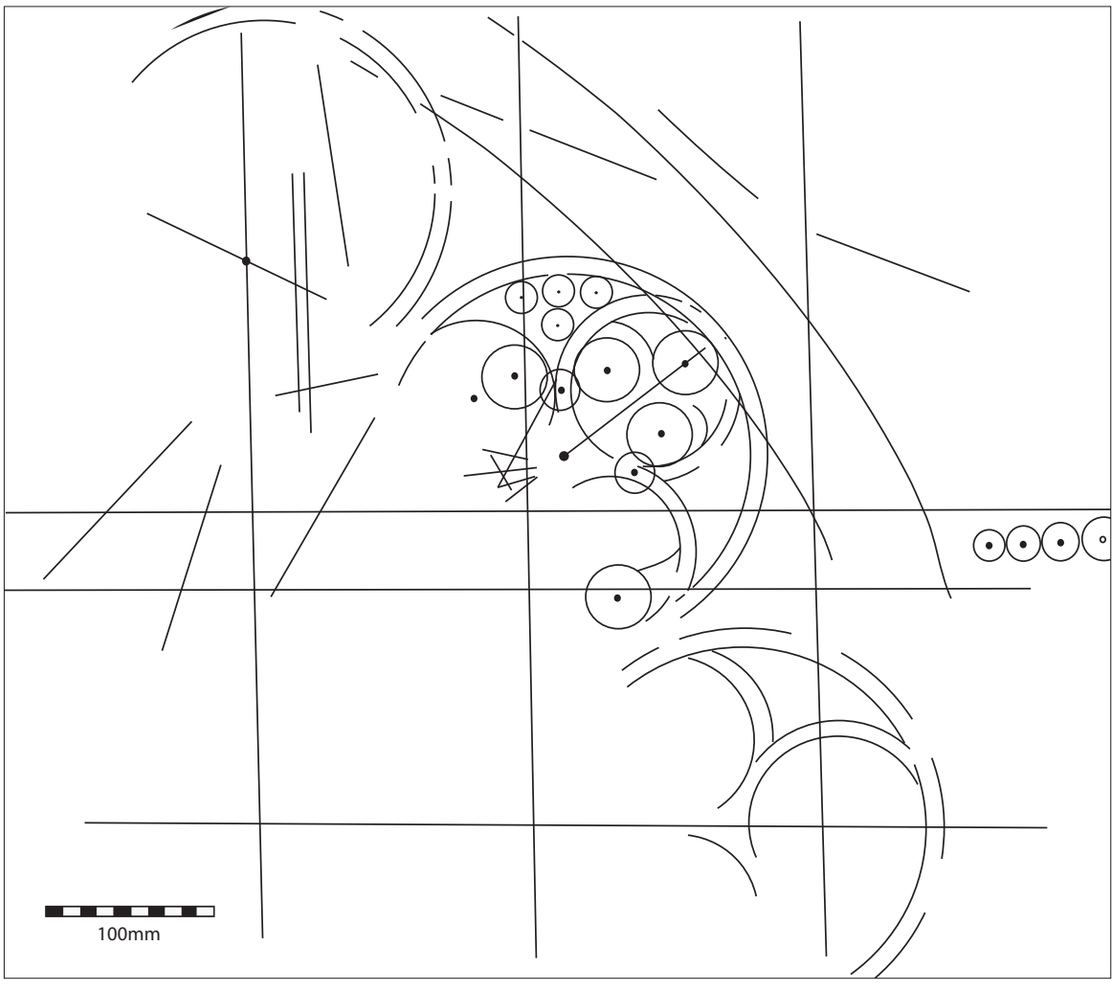

Fig 15
Elaborate architectural design located on the rear of the rood screen, Caston, Norfolk. The design is most likely to relate to the now missing upper section of the rood screen itself and was clearly created in situ and laid out on a basic grid pattern (Author)

of the rood screen itself. Although the design is today incomplete it clearly demonstrates many of the geometrical construction techniques used in such work and, even lacking much of the inscription, the overall design can still be extrapolated from the remaining information.

A second example, from the Parclose screen at Holy Trinity, Blythburgh (Suff), provides even more detailed information concerning the late medieval design process (Fig 16). Most of the central rood screen is today a modern reconstruction, with much repair and restoration having taken place in the last century. However, the surviving aisle screens, created as part of the whole scheme, suggest that the original screen assemblage was of a very high quality, with an ornate tracery upper section. On the rear of the aisle screen, again crossing boards and indicating it was created *in situ*, is a highly detailed schematic that appears to be the original design for the upper sections of the rood and aisle screens. The most detailed of all the designs so far surveyed, the inscription appears complete in almost every respect. It includes all the setting out lines, base lines and centre line, augmented by a series of compass drawn circles that, between them, build together a highly complex tracery design. Laid at an angle, rather than the vertical, the design was clearly the result of advanced knowledge of geometric techniques on the part of the craftsman who created it.

It is apparent that a number of other rood screens were used in a similar manner as those at Blythburgh and Caston, as an architectural drawing board, but for a number of reasons only a few fragments of the original design survive. At SS Peter and Paul, East Harling, a magnificent canopied screen, considered

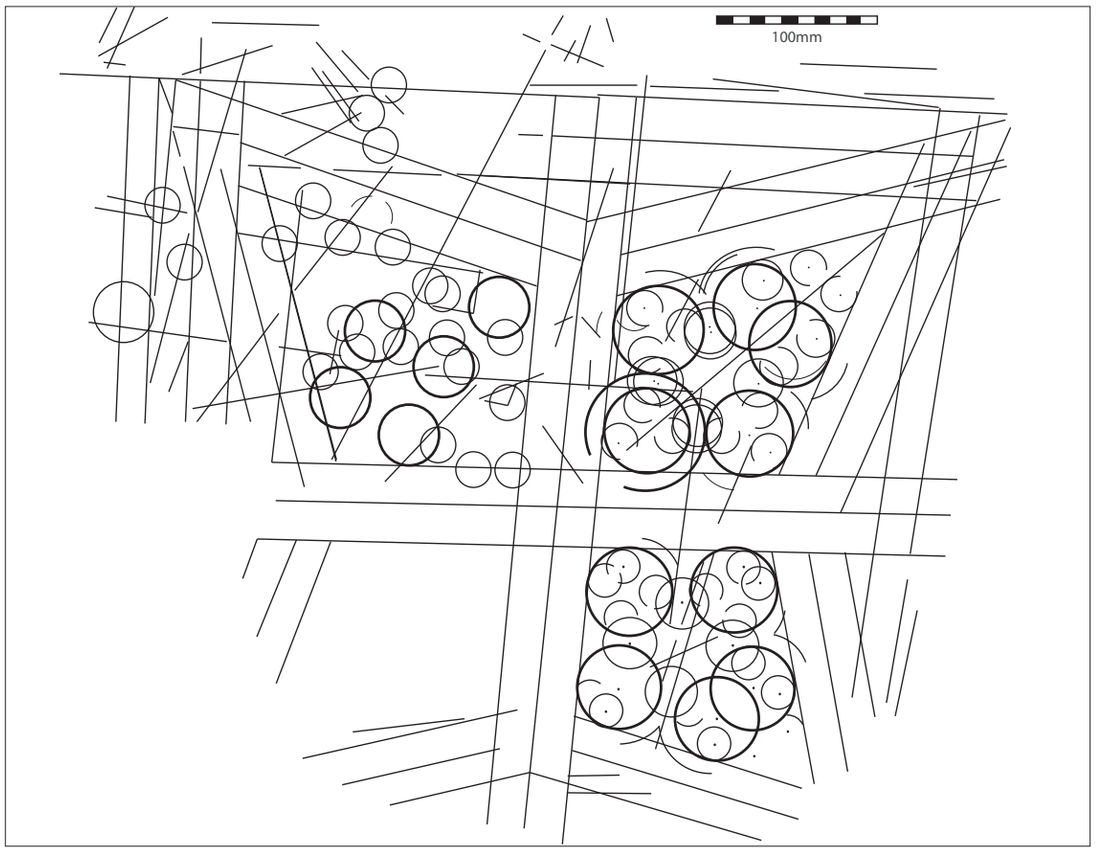

Fig 16
Elaborate architectural design located on the rear of the parclose screen, Blythburgh, Suffolk. The highly complex geometric design was created in situ and relates to the construction of the upper section of the rood and parclose screens. The detail contained in the inscription allows for an almost complete recreation of the design process to take place (Author)

one of the finest examples of its type in East Anglia, now partitions off the lady chapel from the rest of the south aisle. Most probably originally constructed as a rood screen, it is believed that it was brought to the church in the 16th century after the dissolution of Rushford collegiate church (Tricker 2012), and altered and truncated to act as a north–south screen across the aisle. The rear of the screen shows evidence of having been used as an architectural drawing board on at least one occasion, with large arches and setting out lines still visible (Fig 17). However, the design appears to be fragmented and incomplete with many lines faded and damaged, perhaps the result of a re-working of the timber surface at the time of the screen's relocation and alteration.

Also within East Harling church is a rare example of what is believed to be a 14th-century screen, now acting as a parclose screen dividing the lady chapel from the nave of the church. The screen itself is largely

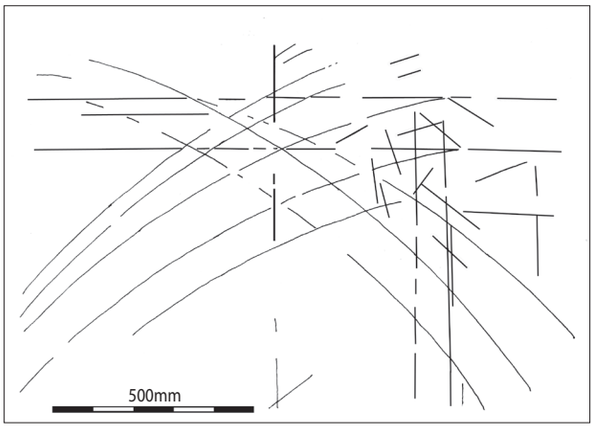

Fig 17
Large scale architectural design located on the rear of the south aisle screen, East Harling, Norfolk. The design was laid out on a simplified grid pattern and was created in situ, although it is unclear as to what, if any, architectural feature in the church it relates (Author)

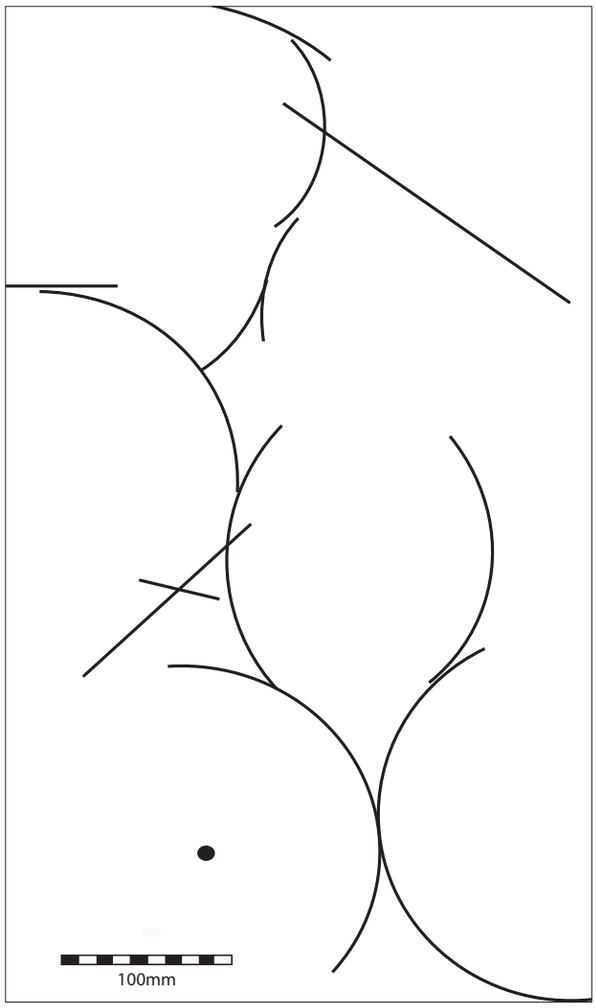

Fig 18
Compass drawn possible architectural design located on a bench end, Gateley, Norfolk. Although only fragmentary, the inscription would appear to relate to an unidentified curvilinear window tracery design (Author)

complete, displaying three light openings below tracery trefoils, and with much original pigment still to be observed. The rear of the screen is heavily covered with all manner of inscriptions, most of which are typical of such inscriptions found elsewhere in East Anglian churches. However, amongst this mass of inscriptions it is clear that this surface too was at some point used as an architectural drawing board, with compass drawn designs and arches clearly present. However, the rear of the screen has acquired at least one heavy coating of pigment at some point in the past, leaving all the inscriptions, including the architectural designs, as almost un-recordable indents in the painted surface.

The use of timberwork within the church as an architectural drawing board was by no means confined to the rear of rood screens. At St Helen's church, Gateley, despite the presence of an elaborate surviving rood screen, the craftsman chose instead to use the flat surface of a bench end as a drawing surface (Fig 18). Limited by the width of the timberwork the craftsman used the surface to map out, using compasses and a straight edge, a probable section of curvilinear window tracery. Although several of the setting out lines are clearly visible, as well as the pin holes that mark the point at which the compass was inserted into the timber, the design is by no means complete and suggests that the inscription was a working drawing, designed to work through a potential idea or problem, rather than a fully formed design. Similarly, at St Catherine's church, Ludham, the flat front of the timber choir stalls have been made use of as an architectural drawing board. Although now nearly obliterated by years of extensive polishing, enough of the design survives to show that it originally consisted of setting out lines, compass drawn circles and arches. However, the traces are now so faint as to make it impossible to understand whether the original design related to plans for timberwork or stonework.

Conclusions

The architectural inscriptions discovered to date by the Norfolk Medieval Graffiti Survey have significantly enlarged the number of examples of medieval architectural design drawings known to survive in England. The designs themselves have the potential to increase our understanding of the medieval design process and, in particular, the intermediate 'working out' process between concept and finished design. All of the individual inscriptions, such as those from Binham and Weston Longville, have the potential to add to our understanding of specific buildings or architectural features. They also contribute to building a corpus of material that will generate a deeper understanding and appreciation of the work of the medieval craftsman. In addition, the architectural inscriptions located on the timber structures within churches, such as the rood screens at Caston and Blythburgh, suggest a rather pragmatic approach to the design process, with the craftsman using any suitable surface that came to hand as a drawing board. These particular inscriptions sometimes contain enough detailed information to be able to follow and replicate the medieval design

process. With the inscriptions in this paper having all been located in less than two hundred and fifty churches, and with Norfolk and Suffolk still having between eight and nine hundred churches left to survey, it is likely that this corpus of material is set to be further greatly enlarged in the coming few years.

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Acknowledgements

The graffiti surveys currently being undertaken in several counties across England would not be possible without the enthusiastic and tireless involvement of the survey volunteers, to all of whom is due an enormous debt of gratitude and thanks. In particular those team leaders, Colin Howey, Paul Judkins, Pat May and Terry Eglington, who have inspired others to follow their lead into chilly and sometimes inhospitable parish churches at all times of year. The project also owes thanks to all the rectors, vicars, churchwardens and parishioners who have made our survey teams so welcome in their churches. A number of academics have been generous enough to make observations upon the survey findings, and the input of Arnold Pacey, Dr Jenny Alexander, Richard Hewlings and Professor Sandy Heslop has been very gratefully received. The surveys have also received the generous and enthusiastic support of a number of local history and archaeological groups, most particularly the Binham Local History Group, the St Benet's Project and the Waveney Valley Community Archaeology Group. Particular thanks are due to the Dean and Chapter of Norwich Cathedral.

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