

THE TWELFTH-CENTURY AISLED HALL OF LEICESTER CASTLE: A RE-ASSESSMENT

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A recent programme of research, accompanied by archaeological excavation and dendrochronology, has confirmed the Great Hall of Leicester Castle as the earliest known standing aisled hall in Britain, now tree-ring dated to 1137–62. It was built for Earl Robert II of Leicester, one of the greatest magnates of the period, probably in the 1150s when he was at the height of his powers. The form of the main twelfth-century roof structure, with timber arcades and a former clerestorey, was established in previous work of the 1980s. The current study has added detailed analysis of the external masonry walls, including the uncovering of two service doorways. Archaeological excavation established that the aisle posts were originally earth-fast. Drawing on earlier documentary study, a revised reconstruction of the original building form is proposed, relating the upper roof structure to the original masonry walls, aisles and floor level. Evidence indicates that a small service building was attached to the north gable, with a detached chamber block located to the south. The relationship of Leicester to other early aisled halls is also explored.

INTRODUCTION

The Great Hall of Leicester Castle is a remarkable survivor. Of the rest of the extensive castle buildings, which reached their heyday under John of Gaunt in the late fourteenth century, little remains except for parts of two gatehouses. The Great Hall itself underwent major alteration in the early sixteenth century, was entirely re-fronted in the 1690s, subdivided internally in 1821, and further altered and extended in 1858. Yet despite all this, it retains the still-legible structure of an impressive mid-twelfth-century aisled hall, now established as the earliest surviving building of this type in England.

The current study draws on a considerable range of previous work. The documentary history of Leicester Castle was the subject of a detailed study by Levi Fox, published in 1942.¹ The date of the Great Hall's roof structure was the focus of some debate, with an early attempt at radiocarbon dating in the 1960s accompanied by measured survey, led by Walter Horn.² A major repair programme in 1985–86 allowed full high-level access, when Dr Richard Buckley of Leicestershire Archaeological Unit (LAU) commissioned a detailed measured survey from a local architect, Nick Klee, together with tree-ring dating. Taking advantage of this access, a new analysis of the building by Dr Nat Alcock concluded that the original twelfth-century aisled hall was of taller, clerestoried form, but the whole upper roof had

¹ Fox 1942.

² Horn 1970.

been replaced in the early sixteenth century, leaving only the truncated aisle posts and masonry walls.³ Between 1986 and 1997, several pieces of archaeological excavation and recording work were undertaken by LAU and later University of Leicester Archaeological Services (ULAS), as summarised by Dr Richard Buckley in 2015.⁴ The details of all these previous studies are considered further below.

The opportunity for this new investigation and analysis arose out of the programme of refurbishment works to the Great Hall in 2016–17, which has now become the Business School for De Montfort University. The works required the removal of most of the later flooring of the northern court room, with a watching brief and further excavation by ULAS.⁵ A post hole for one of the original earth-fast aisle posts was discovered, together with various earlier floor levels. Two medieval doorways in the north gable, covered up since the early nineteenth century, were also revealed. The author visited the work in progress on the kind invitation of Dr Richard Buckley, and was subsequently drawn into a wider study. This included a further programme of tree-ring dating, for which funding was generously provided by Leicestershire Archaeological and Historical Society.

Leicester Castle was established on the south-west side of the historic town, next to the River Soar (Fig. 1). The motte survives as a prominent earthwork, although its top was truncated around 1800. The Great Hall is set against the west side of the castle's inner bailey (now Castle Yard), to the north of the Norman motte (Fig. 2). Between the Great Hall and the motte lies the stone-vaulted building known as John of Gaunt's Cellar, surviving largely below ground. The Castle Yard is entered through a late-medieval gatehouse to the north-east, although the original gateway into the bailey must have been further to the north-east. The gatehouse forms part of a range of buildings known as Castle House, largely timber-framed but with a later brick-built block at the north end. The large Norman church of St Mary de Castro, set originally within the inner bailey, takes up the east side of Castle Yard. After the foundation of the Newarke in the fourteenth century, a second access was created into the inner bailey from the south, where the ruined Turret Gateway of 1422–23 still stands.

HISTORICAL BACKGROUND

The motte and bailey castle at Leicester was established soon after 1066, and was granted by William I to Hugh de Grentemesnil.⁶ The castle passed to Robert de Beaumont in the early twelfth century, who became the first Earl of Leicester and is said to have established the collegiate chapel of St Mary de Castro around 1107, within the castle bailey. After his death in 1118, the castle and earldom passed to his son Robert, also known as 'le Bossu' (the hunchback). Aged only 14 at his father's death, he founded Leicester Abbey in 1143, which absorbed the college of St Mary de Castro. The large surviving church contains substantial masonry of the

³ Alcock and Buckley 1987.

⁴ Buckley 2015, 219–22.

⁵ Baker 2018.

⁶ This section is based on VCH Leicester 1958, 1–8; and Fox 1942.

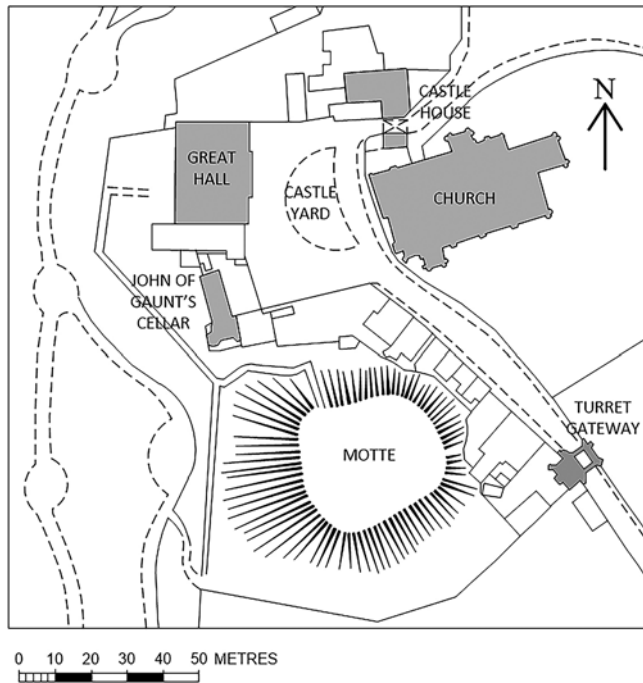


Fig. 1. Leicester Castle: site plan. Surviving medieval buildings are shown shaded. *Drawing R Ovens, after Finn and Buckley 1996.*



Fig. 2. Leicester Castle Hall from the east, with the new façade of c.1695. John of Gaunt's Cellar lies under the flat-roofed buildings to the left. *Image by N Finn.*

early and mid-twelfth century – the work of both earls. The second Earl Robert has generally been held to have been the builder of the castle's Great Hall. The recent dendrochronology (see below) confirms this view, with a felling date of 1137–62 for the arcade posts. Robert supported Stephen in the civil war from 1139, but became eventually a supporter of Henry Plantagenet, serving as Henry II's chief justiciar from around 1155 until his death in 1168. Robert was also probably responsible for the replacement of the timber palisade on the castle bailey rampart with stone walling.

Robert died in 1168. His son, Robert Blanchesmains, inherited, but later joined the rebellion against Henry II in 1173. Although the town of Leicester was captured by royal forces, the castle held out for some weeks. The Pipe Rolls record expenditure on demolition works to both the castle and the town walls in 1175–77,⁷ and masonry thrown down from the castle wall has been found in two excavations of the castle ditch.⁸ The Great Hall itself, however, seems to have survived unscathed.

In the early thirteenth century, the castle and honour of Leicester passed to the de Montforts. Simon de Montfort held it from 1231 until his death at the battle of Evesham in 1265, when it was forfeited to the king. Henry III granted it to his second son, Edmund, with Leicester becoming absorbed subsequently in the honour of Lancaster. In 1273 the castle hall was recorded for the first time as being used for the assize court of the king's justices.⁹ From the early fourteenth century onwards, detailed records begin to survive for works to the castle and its various buildings. Henry of Lancaster succeeded his brother Thomas in 1324 and Leicester Castle was his principal residence, where he received several royal visits. He died at Leicester in 1345, after founding the Newarke hospital that adjoins the castle to the south. His son Henry became Duke of Lancaster and expanded the Newarke, adding a collegiate church before his death in 1361. Leicester was then inherited by John of Gaunt, who became the greatest noble in the land. As the Victoria County History notes: 'It was in his lifetime that Leicester reached the zenith of its magnificence as a ducal dwelling-place. Although he did not live continuously in Leicester it was one of his favourite residences, with both Edward III and Richard II being entertained there on several occasions. The royal visit of 1390 was marked by a particularly sumptuous entertainment, and an elaborate hunting party at which most of the chief magnates of the realm were present.'¹⁰

After Gaunt's death in 1399, his son, Henry Bolingbroke, became king – with Leicester becoming a royal possession. After this, the castle of Leicester was no longer the base of a resident lord, and its importance gradually declined, with only brief royal visits. The accounts, however, indicate that expenditure on the castle continued into the second half of the fifteenth century. In 1426 the castle hall was the setting for the notable Parliament of Bats. The last record of royal occupation is a letter written by Richard III in 1483 'from my castle of Leicester'.¹¹ A survey of 1523 indicates that the castle was by now neglected and stated that 100 oaks should

⁷ Fox 1942, 136.

⁸ Buckley 2015, 222.

⁹ Fox 1942, 138.

¹⁰ VCH Leicester 1958, 6.

¹¹ Fox 1942, 155.

be provided for repairs.¹² By 1539 the castle hall was described as ‘in great dekey’.¹³ ‘In 1633 another survey recommended demolition and sale of various ruined parts of the castle, though Castle House (used by the estate auditors) was to be repaired and the ‘greate Sessions-hall’ retained.’¹⁴ The Great Hall at Leicester owes its survival to on-going use as a court house, in a similar way to the aisled halls of Oakham (Rutland) and Winchester.¹⁵ The whole façade and east side of the building were rebuilt in brick in *c.*1695 (as confirmed by tree-ring dating), and noted as ‘a new pile of building all of brick’ by Celia Fiennes on her travels of 1698.¹⁶ Major alterations were undertaken in 1821, when the Great Hall was subdivided into two separate courts.¹⁷ The aisle posts on both sides were largely removed or concealed, with the western aisle walled off. Fortunately, some fine drawings of the Great Hall were made by the distinguished Leicester architect, Henry Goddard, which show the interior before its grand, open aspect was lost (Fig. 3). In 1858 further alterations were made, including the addition of an extra storey above the western aisle and a new block against the south gable.¹⁸

TREE-RING DATING

A programme of dendrochronology was carried out in the mid-1980s by Dr Gavin Simpson and Robert Howard of Nottingham University Tree-ring Dating Laboratory.¹⁹ Of the original structure, two timbers were sampled: the detached capital from an aisle post; and aisle post *c* on the west side (Figs 4 and 5). Unfortunately, no heartwood/sapwood boundary was detected on either sample, so no clear date could be assigned. The final ring from the capital gave a date of 1122, but with no certainty of how many rings were missing, the published date was simply stated as ‘After 1152’. Extensive sampling from the upper roof structure was more successful, and a date in the early sixteenth century was established. Timbers from the eastern aisle gave a firm felling date of 1695/96.

Further dendrochronology was carried out by Robert Howard in 2017,²⁰ as access was now possible (via an old heating duct) to the foot of western post *f*, which had not been hacked back like the other posts. The remaining top of post *e* on the eastern side was also sampled. Posts *c*, *c'* and *e* were inspected but considered unsuitable for dating, with the other posts not accessible. The original samples from the 1980s were also re-analysed. Post *f* was found to preserve the heart/sapwood boundary, with a last ring of 1122, so was successfully dated to 1137–62. Re-examination of the previous sample from the detached capital also now identified the last ring of 1122 as the heart/sapwood boundary, giving a second timber to confirm the date of 1137–62.

¹² Fox 1942, 162.

¹³ Fox 1942, 163.

¹⁴ Fox 1942, 164–9.

¹⁵ Hill 2013, 212.

¹⁶ Morris 1995, 146.

¹⁷ Thompson 1859, 32; Buckley 1994, 7–8.

¹⁸ Thompson 1859, 32; Buckley 1994, 9.

¹⁹ Laxton *et al.* 1984; Howard *et al.* 1986 and 1988.

²⁰ Arnold and Howard 2017 (unpublished report).



Fig. 3. Henry Goddard's drawing of 1821 of the Great Hall interior, looking south.
Drawing courtesy of A Goddard of Newton Harcourt, Leicestershire.

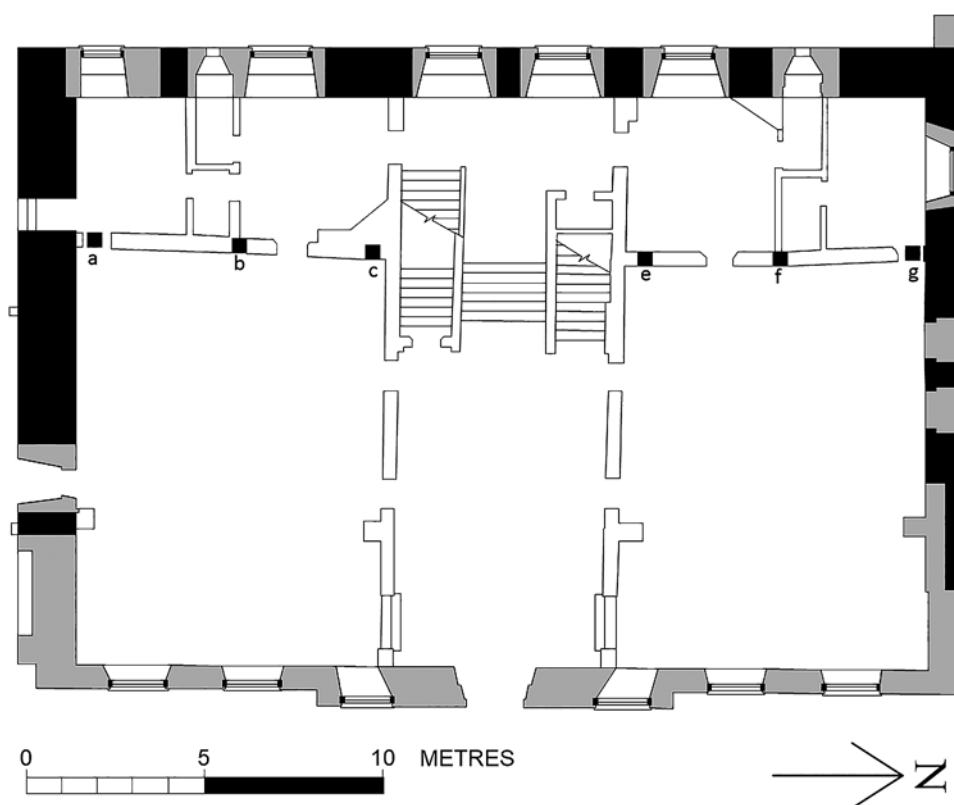


Fig. 4. Leicester Castle Hall: Ground-floor plan, with early walls shaded black.
Drawing N Hill and R Ovens, after N Klee.

An unexpected result was found for post *e'* on the east side, which gave a felling date of 1344–69. Evidently, this aisle post was not original, but had been replaced (at least the upper part) at a later date. The date of the previous samples to the upper roof was confirmed as 1495–1520. The timbers from the eastern aisle had a firm felling date of 1694–95. Two samples retrieved from the Gatehouse during repairs in the 1980s were confirmed to have a felling date range of 1580–1605.

THE TWELFTH-CENTURY HALL

The original Great Hall was of six bays, with stone external walls and aisle arcades of timber. The internal length of the Hall was 23.7m and the width 15.9m.²¹ The alterations of 1821, with subdivision into two court rooms, resulted in the loss of two aisle posts (*d* and *d'*), the removal of the eastern aisle posts except for their upper parts, and the encasing of the western aisle posts within a new dividing wall,

²¹ Dimensions provided by Richard Buckley of ULAS. Excavation (Mackie and Buckley 1994, 124) has shown that the inner face of the rebuilt east wall is set on the original line.

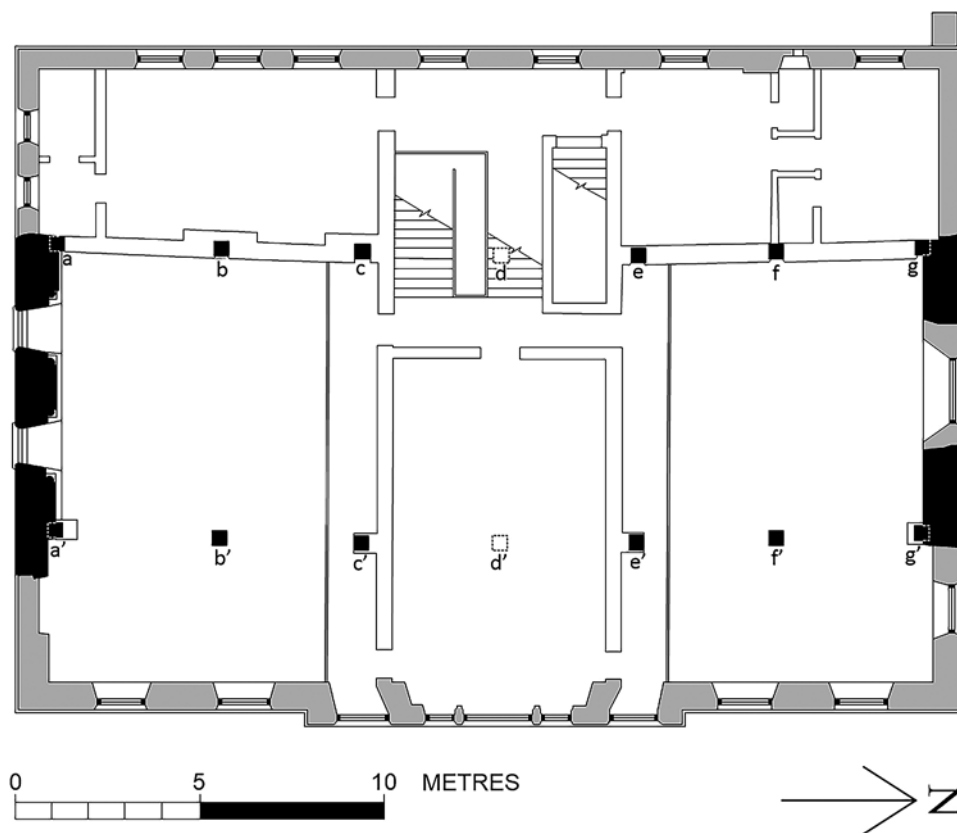


Fig. 5. Leicester Castle Hall: First-floor plan, with early walls shaded black.
Drawing N Hill and R Ovens, after E Born and W Horn.

which included much cutting back²² of their west and east faces (see Figs 4 and 5). The 1821 Goddard drawings show aisle posts *c'* and *d'* as circular and without capitals, so these may have been replaced or altered at an earlier date, perhaps in *c.*1695.

Timber structure

As confirmed by tree-ring dating, only the aisle posts survive from the original roof structure, with the whole of the upper roof replaced in the early sixteenth century. Close observation and analysis of the surviving evidence, however, was able to establish the form of the original roof, as set out by Alcock and Buckley in 1987.²³ The arcade posts rose higher originally, supporting a clerestory above the aisle roofs (Figs 6 and 7). Semi-circular braces rose from scalloped capitals on the posts up to the arcade plates, which were jointed into the aisle posts. Larger transverse

²² Finn and Buckley 1997.

²³ Alcock and Buckley 1987.

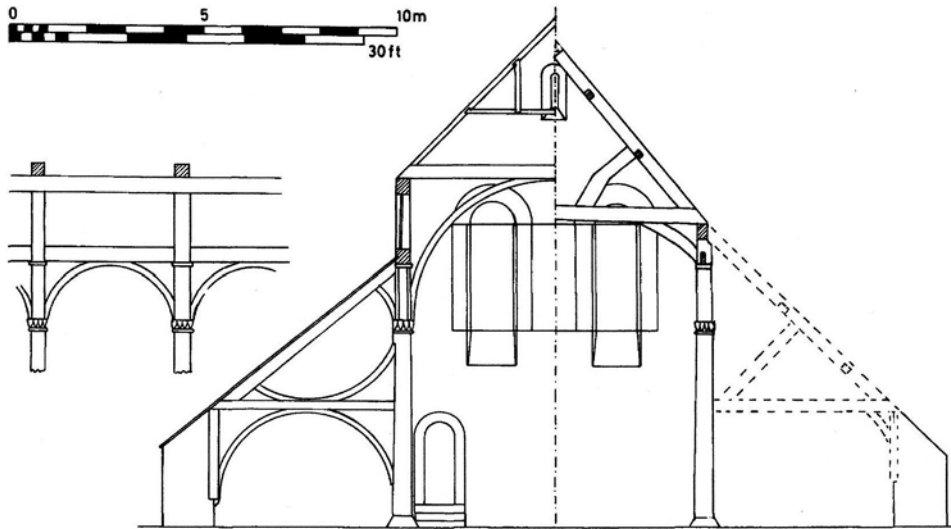


Fig. 6. Alcock's cross-section of 1987: the pre-1821 section to the right and reconstruction as original to the left, with longitudinal section of arcade.
Drawing N Alcock.

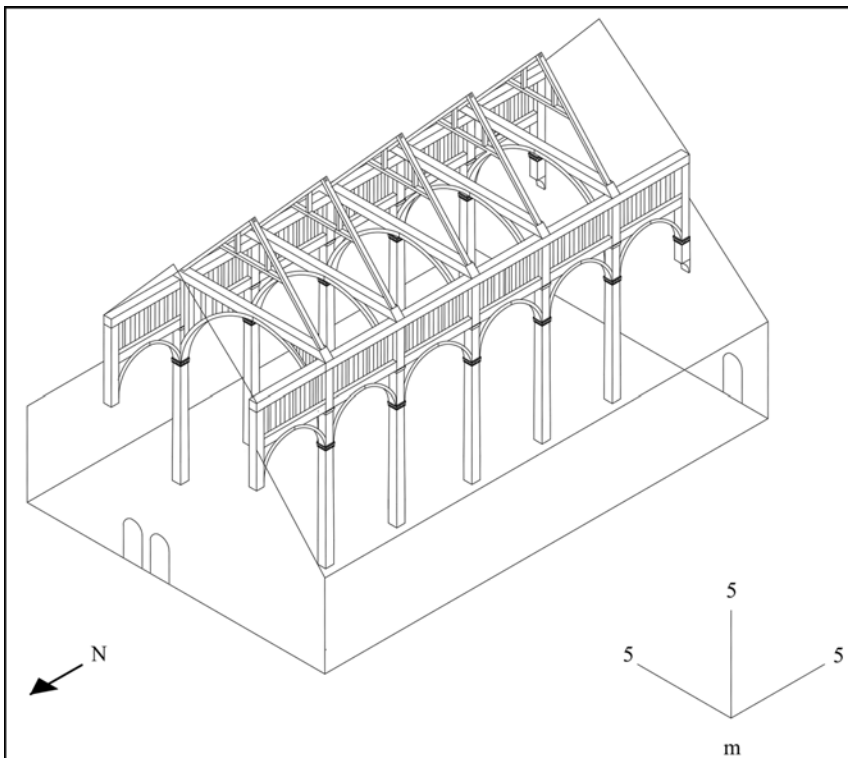


Fig. 7. Isometric reconstruction of the aisled hall with clerestory. *Drawing R Buckley.*

braces also formed great arches across the nave, rising to the tie-beams, set at clerestorey level. Only one of the capitals can be seen *in situ* (to post c), and this has been hacked back, but fortunately one complete capital, probably from post f', survives as a detached object (Figs 8 and 9).²⁴ The truncated post has a narrow ledge just above the scalloped capital, on which the arcade and nave braces were seated. Similar semi-circular braces have been found at the late twelfth-century Hereford Bishop's Palace and Burmington Manor (Warwickshire).²⁵ In these two cases, the arcade braces are half-lapped into the post, with the larger-radius nave brace simply face-pegged. The Leicester capital has two corner cut-outs that might have received half-lapped arcade braces, but it seems more likely that these notches were made later, in association with the inserted gallery floor. The pegs to fix the braces are located at the edge of the current cut-outs, an unlikely position for a half-lap joint. The bottom end of the nave braces was probably fixed with three face pegs, and the arcade braces similarly face-fixed, with two pegs. Presumably there were further face pegs higher up the braces. On the other side from the nave brace, the post has two further peg-holes, so it seems there was also a large face-pegged brace to the aisle. The face-pegging avoided the use of mortice and tenon joints, which had not been generally adopted at this early date, particularly the long, bladed tenons that would have been necessary to secure these curving braces.

At higher level, the surviving posts retain further evidence for the clerestorey. The outer face of some of the eastern posts had downward-sloping grooves to receive a weathering for the aisle roof, as recorded by Klee (Fig. 10), no longer visible. A similar groove for the aisle roof weathering has been found on the clerestorey plate at Hereford Bishop's Palace.²⁶ The north and south sides of the posts also have square-cut grooves to take the plank infill of the clerestorey (Fig. 11). On posts b' and e', there are also sloping grooves of V-section, which Alcock thought were probably to receive timber wattling staves – representing a later repair to the clerestorey boarding.

The cill plates at the base of the clerestorey appear to have been tenoned into the posts, although the detail has been obscured by the insertion of new arcade and nave braces in the early sixteenth century. This point warrants some detailed consideration, as it would represent one of the earliest identified uses of the fully developed mortice and tenon joint.²⁷ Alcock believed that the original mortices for the clerestorey plate survived, as evidenced by the dis-used large peg-holes on the west face of post e', near the foot of the mortices (see Fig. 11). The current arcade braces, inserted in the sixteenth century, re-use the earlier mortices but are fixed with three smaller pegs (as are the sixteenth-century braces to the nave tie-

²⁴ The Goddard drawing and a first-floor beam slot across one side of the capital indicate it was probably either from post e' or f'. As post e' has now been tree-ring dated to 1344–69, the capital probably came from post f'. Posts b' and f' were probably not removed until 1858. The preservation of one capital as a historic artefact may reflect the condition applied by the Duchy of Lancaster on their consent to the 1858 alterations that 'what remains of the ancient style of architecture of the castle should be preserved in any new building' (Buckley 1994, 9).

²⁵ Jones and Smith 1960, fig. 24; Walker and Alcock 2017.

²⁶ Raleigh Radford *et al.* 1973, fig. 36.

²⁷ I am grateful to John Walker for detailed analysis and discussion on this point.



Fig. 8. The detached aisle post capital from the Castle Hall. *Image N Hill.*

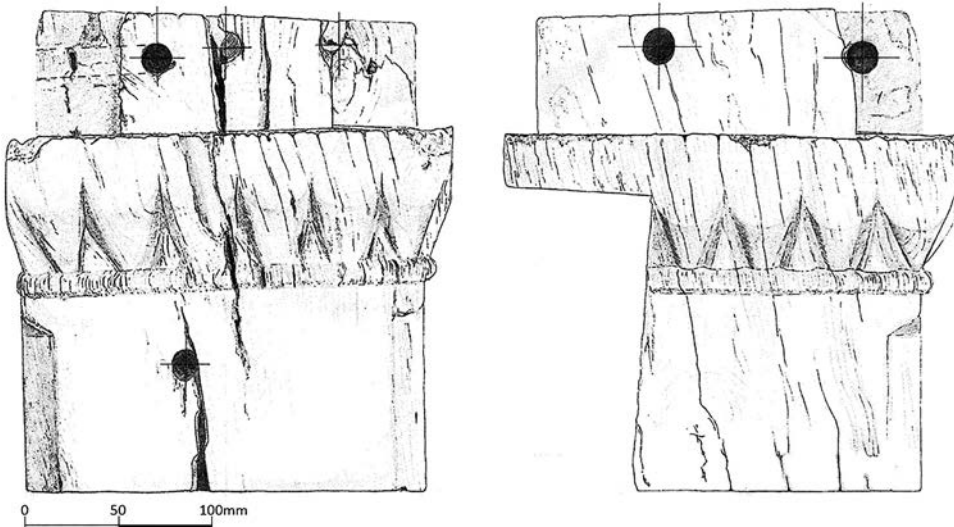


Fig. 9. The west and north faces of the detached capital, with face-pegging for curved nave and arcade braces, and notching for the gallery floor beam and joists. *Drawing N Klee (from ULAS archive).*

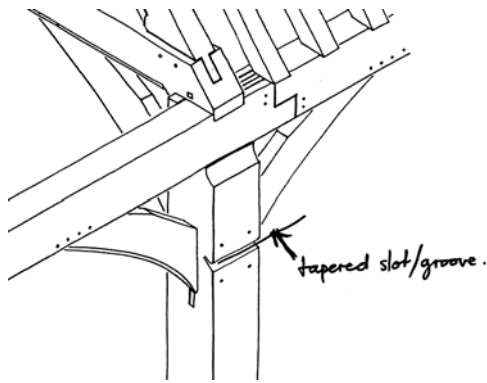


Fig. 10. The groove across the back of the posts, to receive the weathering of the aisle roof. Detail from N Klee drawing No 19 of June 1985, ULAS archive.

would also explain why the slot for the boarding extends down to the base of the clerestory plate mortice.) Klee also noted that the width of the mortices varied, with some only one-third of the thickness of the sixteenth-century arcade braces, and some of full thickness. One would expect newly cut mortices of the sixteenth century to be uniform, so the variation might suggest an early and experimental use of mortice and tenon jointing. Finally, the surviving posts do not have any slot or cut-out of the type necessary to support a lapped joint for the clerestory plate. The evidence does thus point towards a very early use of a mortice and tenon joint (as seen a little later for the aisle post/clerestory plate joint at Hereford Bishop's Palace of 1179).²⁹

Further details of the timber structure can be added in three locations. Firstly, the excavation in 2016–17 in the north court (Fig. 12) revealed an original post hole for the missing eastern aisle post *f'*, indicating that the aisle posts were earth-fast.³⁰ The post hole was around 700–800mm wide and was excavated to a depth of 600mm, although it continued deeper. The upper level of the backfill retained the seating for a former rectangular padstone, clearly inserted when the foot of the earth-fast post was replaced. Pottery fragments associated with the padstone location suggested a date

beam). However, the pattern of these large peg-holes on the other posts, as recorded on Klee's drawings (now inaccessible), is much less clear.²⁸ Post *e'* has also now been tree-ring dated to 1344–69, so the joint details here are not necessarily reliable. The mortices to all visible posts are offset towards the nave, a detail which would be more consistent with insertion of mortices for the braces in the sixteenth century than for the original clerestory plate. However, the original clerestory plate may have been set back in order to allow the plank infill to cover the external face of the plate, avoiding a vulnerable grooved cill detail. (This

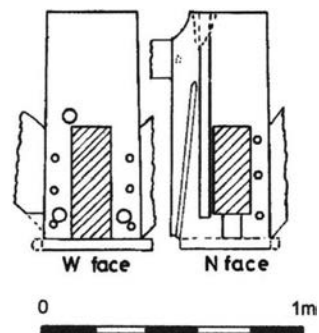


Fig. 11. Alcock's detail drawing of the surviving evidence on post *e'*. The north face shows the vertical slot for clerestory board infill. On the west face, the two large peg-holes at low level are thought to have been for the early mortice and tenon joint to the clerestory plate, though the purpose of the large peg-hole to the upper left is obscure.

²⁸ Klee drawings Nos 9 and 12 of June 1985, in ULAS archive.

²⁹ Raleigh Radford *et al.* 1973, fig. 36; Hewett 1980, fig. 35.

³⁰ Baker 2018.



Fig. 12. The north courtroom as excavated in 2015–16. The post hole of former aisle post *f'* is the large pit in front of the measuring rods, backfilled with packed stones.

Image M Morris.

in the fifteenth to sixteenth century, so the earth-fast posts may have been repaired with padstones at the same time as the rebuilding of the upper roof in *c.*1500.

The foot of post *f* on the west side was discovered in a nineteenth-century heating duct by Neil Finn in 1996.³¹ The base of the post sits on a padstone of Dane Hills sandstone, and has a number of mortices to the visible parts of the south, east and north faces (Figs 13 and 14). As interpreted in 1997, it was thought that this was the original padstone still *in situ*, and the pattern of mortices was associated with an early dais structure. The recent ULAS survey has indicated that the padstone is set above the level of the medieval floor, so cannot be *in situ*. The post base was re-examined closely by the author in 2017 as part of the current study. The padstone is built into the brickwork of 1821, so is probably a re-working of that date. The base of the post is clearly truncated, as it has a peg-hole angled downwards very close to the base at the south-east corner, presumably a secondary feature. The various mortices, the upper ones with *c.*15mm diameter peg-holes, appear of later date and secondary. They probably relate to previous phases of court fittings, which no doubt had raised benches, like the eighteenth-century fittings visible to the southern court on Goddard's drawing of 1821 (see Fig. 3). The most significant feature of the post

³¹ Finn and Buckley 1997; Buckley 2015, 220–1.

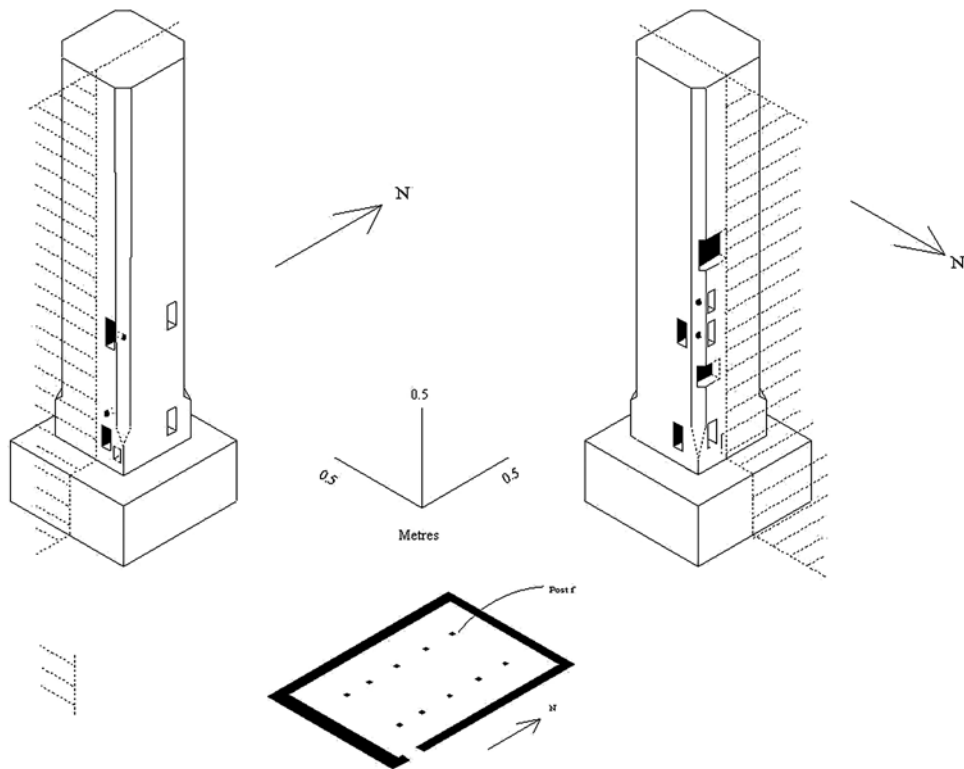


Fig. 13. Measured survey drawing of the foot of aisle post *f* to the Castle Hall. Much of the post is concealed by the inserted brick walling. *Drawing R Buckley.*

base is a slight horizontal step in the timber about 225mm above the padstone (not shown on Fig. 13; see Fig. 14), which runs across the east face and continues around onto the south face (the north face is concealed). Above this line, the face of the post is well-finished, with no obvious axe or saw marks. The lower part of the post is roughly finished, with axing marks. It is evident that the post originally had a projecting base, which has been cut back at a later date. Above this base, the corners of the post are eroded or roughly chamfered, so it is unclear if the corners were originally square or chamfered.

The third detail to add in regard to the timber structure is that of the upper capital, immediately below the braces to the *c.*1500 arcade plate and tie-beam. Previous reports have referred to this feature merely as an abacus (i.e. a plain, projecting moulding). Opening up by Horn in 1962–64 discovered ‘the remains of the Norman abacus’ in three places, to posts *c*, *e* and *e'*.³² Alcock and Buckley noted ‘fragments’ of an abacus visible in the 1980s only to post *e'*.³³ A small area of opening up in 1996 found an ‘offset’ on the south side of post *e*, presumably

³² Horn 1970, 60.

³³ Alcock and Buckley 1987, 79 (note 12).



Fig. 14. Leicester Castle Hall; the foot of aisle post f, sitting on an inserted padstone, with horizontal step where the projecting base has been cut back. *Image N Hill.*

in the location previously noted by Horn.³⁴ In contrast to these descriptions of an abacus, Goddard's watercolour drawings of 1821 (now available with thanks to Mr Anthony Goddard) show clearly a full scalloped capital, of the same type as the capital at lower level (and the surviving detached example). Given the fragmentary state of the 'abacus' in previous reports, and the accuracy of the Goddard drawing on surviving details, there seems no reason to doubt that the original aisle posts had an upper as well as a lower capital.

Masonry

Compared with the timber structure, the masonry of the Great Hall has been less closely analysed previously, and has been a particular focus of the present study. The stone used for dressings and ashlar is the characteristic buff-coloured local sandstone from Dane Hills, quarried on the west side of Leicester and used quite widely on medieval buildings in the town. This stone is employed for all of the early dressings and ashlar to the Great Hall.

THE SOUTH GABLE

The internal face of the south gable has the best surviving original masonry (Fig. 15). The two tall Norman windows have round arched heads surrounded by chevron

³⁴ Finn and Buckley 1996, 4–5.



Fig. 15. The south gable, with fine Norman windows. *Image N Hill.*

mouldings, with shafted jambs. Nichols includes a drawing of these ‘Two windows, or passages, stopt up, within-side of the Castle’ and a very similar drawing appears in Throsby’s history of Leicester of 1791.³⁵ The windows are shown still blocked up in the Goddard drawings of 1821, with additional detailed drawings of the shaft base, capital and chevron mouldings.³⁶ The windows were opened up and restored in 1821–58, but careful examination shows that much of the original twelfth-century masonry remains, with characteristic diagonal axing marks. As the early drawings show, the east window was better preserved than the west one, and it retains its original chevron mouldings, arch voussoirs and slightly splayed jambs, together with both shaft bases and scalloped capitals. The chevron ornament has two rows of roll-moulded lateral chevrons on the face, the chevrons pointing inwards in centripetal form with one chevron per voussoir.³⁷ The shafts themselves have been replaced, apart from one original shaft which survives to the west window, proving that its original form was, unusually, octagonal not circular. The whole arched head and chevron moulding of the west window have been renewed. The external face of the

³⁵ Nichols 1815, Vol. IV Pt I, 72 and Plate XVIII; Throsby 1791, 353 and plate facing p. 37. Nichols’ *History* was published in 1815, but information on Leicester Castle was clearly gathered in the 1790s, with some text repeated from Throsby.

³⁶ Thompson 1859, 52–3 and plate facing p. 50.

³⁷ For terminology, see *The Chevron Guide* on the website of the Corpus of Romanesque Sculpture in Britain and Ireland (www.crsbi.ac.uk).

window was not accessible to inspect, but the remaining jambs have no indication of any transoms or other detail, and the tall proportions suggest the openings would have had no mullions or other subdivision.

A ledge with chamfer and quirk moulding originally ran across the base of the windows, as shown in the early drawings, but this has been cut through for the current splayed cills. Below this point the wall face is plastered, with no further historic detail visible. The impost moulding at the top of the capitals is of similar chamfer and quirk form, and continues across the panel of masonry between the two windows. This narrow panel, with jambs to either side, is completely faced in original neatly cut ashlar blocks. Above the impost moulding, the infill between the window arches is also of ashlar, although rather less regular. All of the remaining walling, to the sides of the window and the upper gable, is of irregularly coursed sandstone rubble, not dressed stone (although Goddard incorrectly shows the whole wall face of ashlar). A little above the current tie-beam level, a course of chamfered ashlar forms a ledge, missing towards the west side. A similar detail occurs externally, with the upper gable built of thinner masonry.³⁸ Set high in the gable was an original narrow lancet window with a round head and splayed reveals, as shown on Horn's survey and the Goddard drawings, but sadly this was lost in the 1960s, when the gable apex was rebuilt in brick.

THE WEST WALL

The exterior west wall has been subject to much alteration but still retains some evidence for the original form of the building (Fig. 16). The wall is part of the original bailey enclosure, with the ground sloping away steeply towards the former line of the River Soar. Although eroded and patched, a well-formed plinth of Dane Hills sandstone ashlar can be traced along the length of the external wall face, set around the level of the current internal floor and 1.5m above ground level. The plinth has three chamfered set-backs, with fairly well-cut courses of ashlar between them, making five courses of Dane Hills stone in total. Below the plinth the walling is generally of uncoursed random rubble, containing a high proportion of later, volcanic rock and much re-faced. Above the plinth the stone walling is also of uncoursed random rubble, largely of volcanic rock with occasional roughly shaped blocks of Dane Hills stone. Like the south gable interior and the exterior face of the north gable (see below), it is clear that the original masonry had dressings of Dane Hills stone, with a main facing of irregular rubble, now much patched and replaced. If the original face had all been built of ashlar, sections of this would have survived, as they do in the dressed stone plinth. No doubt the irregular wall facing was originally rendered, the normal medieval treatment for such stonework.

The well-formed plinth can thus be identified with reasonable confidence as part of the original twelfth-century building. Buttresses at both ends of the west wall appear to be later additions, so it is not possible to judge whether the north-west and south-west corners were formed with quoins, or continued on into the bailey wall. However, as the bailey wall elsewhere was stone-built before 1173 (as noted

³⁸ See section drawing at Horn 1970, fig. 31.

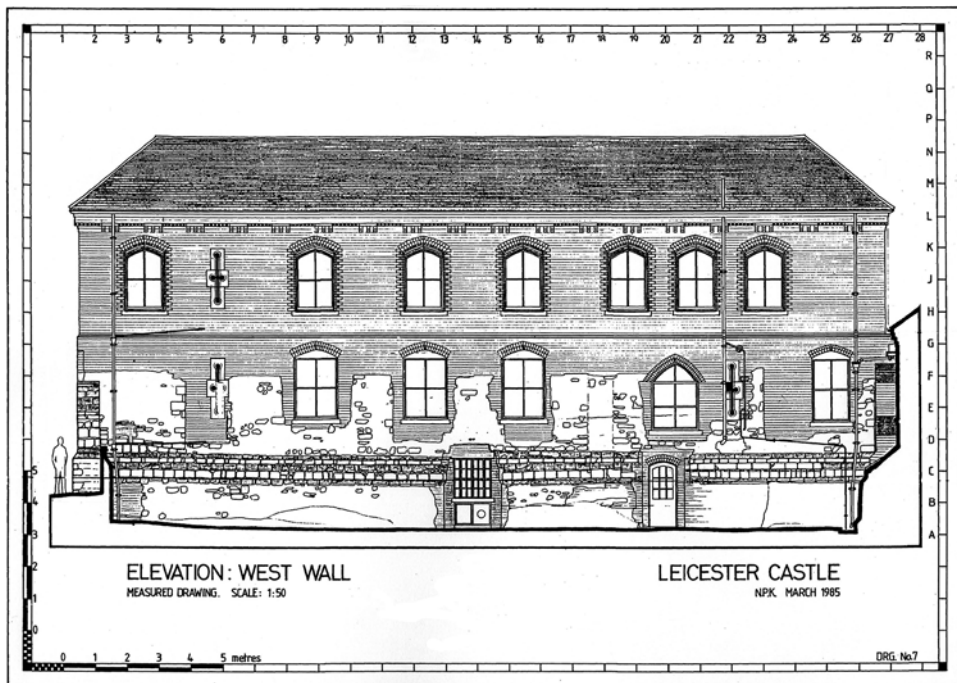


Fig. 16. West elevation survey drawing of 1985, with surviving twelfth-century plinth and nineteenth-century top storey. *Drawing N Klee.*

above), it seems likely the Great Hall was built at the same time as the replacement of the bailey palisade in stone.

The patched west wall stonework rises to a fairly regular level around 2.5m above the top of the plinth, with brickwork above. The nineteenth-century alterations are very evident, with two doorways inserted at basement level and a row of ground-floor windows, all set into brickwork. Irregular vertical joints between the brickwork and masonry, with a few rather poor stone quoins, indicate a pattern of six earlier window openings. The four central windows with current sashes remain roughly in the previous locations, with one earlier opening now blocked at the north end, and the southern window relocated a short distance further south.

The second window from the south end, lower-set and with a pointed brick arch above, is of particular interest. Although the exterior surround is now all of brick, the interior retains a masonry arch with chevron ornament, clearly original twelfth-century fabric, although probably re-set. The arch is pointed, not round-headed like the other early windows, forming a shallow two-centred arch, consisting of two uniform arcs, with a span on the internal face of 1,810mm (Fig. 17). It has a single row of roll-moulded chevrons, lateral on the face, pointing inwards in centripetal form – the same as the chevron of the south gable windows, but with a single row instead of two. There is one chevron per voussoir, with some irregularity in the voussoir width and chevron size. Where the voussoirs meet at the pointed head of



Fig. 17. Window to west elevation with pointed arch and chevron ornament.
Image N Hill.

the arch, the chevron to either side is truncated, probably cut back when re-set.³⁹ At the springing of the arch, the roll moulding is continued down onto the vertical jamb, without the normal impost moulding. Below the arch, the jambs are covered up and the roll moulding continues, but in modern plasterwork. Given the irregularities, and a date which would be unusually early for a window with a pointed arch, it does seem most likely that the chevron arch has been re-set from elsewhere. The chevron arch is shown on the Goddard drawings of 1821 in its current location. Nichols and Throsby (1791) also include drawings of a chevron-arched window opening.⁴⁰ Additional details in Thompson, with drawings by Goddard, show that the moulded wall-plate of the c.1500 aisle roof was still in place directly above the window, indicating that the chevron-arched opening was in this position by the time of the c.1500 reconstruction of the roof.⁴¹

Brickwork blocking around the other five former window openings in the west wall indicates that, before 1821, these also had lower cills, at a similar level to the chevron-arched window. Although the wall facing has been much reworked, it is likely that these areas indicate the approximate locations of five other early windows, as there are no other breaks in the masonry. Only one other early feature can be seen, two vertical straight joints about 800mm apart with later infill stonework, set above the plinth to the north of the chevron-arched window. This odd feature, clearly not associated with a window, seems likely to represent a former buttress, although it was not primary as it did not cut the plinth. Nichols' note to accompany the drawing of the chevron-arched window suggests that other early windows survived, as he says 'there are three' of this sort. Other evidence,

³⁹ Malcolm Thurlby provided valuable advice on this point.

⁴⁰ Nichols 1815, Vol. IV Pt I, 72 and Plate XVIII; Throsby 1791, 353 and plate facing p. 37.

⁴¹ Thompson 1859, 50–2.

however, is rather confusing. Throsby sketched a view of Leicester Castle from the west in 1789, but the detail seems suspect and parts of the building are obscured by trees.⁴² It shows a doorway with a pointed arch towards the south end of the west wall, and two windows with pointed arched heads and a central mullion, with intersecting ‘Y’ tracery in the head. A central mullion or tracery to the chevron-arched window seems most unlikely, as the detailed internal views of the window in both Throsby and Nichols show it with small glazing panes and no subdivision.⁴³ Nichols includes the same drawing, but also two others, noting that ‘some alterations have taken place’ since the time of the 1789 drawing.⁴⁴ Both these drawings show five windows in the west wall with flat heads, the southern one set at a lower level, and a range of three separately roofed blocks to the south (Fig. 18). A drawing by John Flower (or more probably his daughter Elizabeth) shows two windows towards the south end of the wall, but the rest is obscured by trees, and the date is probably after 1821.⁴⁵ Conflicting evidence comes from Thompson in 1859, who wrote that the west side had ‘six windows, corresponding to the six bays inside, between the columns. Outside, the openings seem to have had semi-circular heads – inside, they were pointed, and ornamented by the zig-



Fig. 18. Leicester Castle: Detail of a view of 1796 from the west, in Nichols' *History of Leicestershire*, Vol. I, Pt II, Pl. XXIV (opposite p.303).

⁴² Throsby 1791, 353 and plate facing.

⁴³ Nichols 1815, Vol. IV Pt I, 72 and Plate XVIII; Throsby 1791, 353 and plate facing p.37.

⁴⁴ Nichols 1815, Vol I, Pt II, Plate XXIV and Vol. IV Pt 1, 72.

⁴⁵ I am grateful to Neil Finn for bringing this drawing to my attention. The original is held at the Record Office for Leicestershire, Leicester and Rutland (ROLLR) collection L914.2: John Flower Pencil Sketches and Water Colours (Leicestershire), Vol. 1, p. 4, no. 19. It is published in Elliott 1999, 138.

zag moulding.⁴⁶ In comparison with the remaining physical evidence, the various drawings seem unreliable in detail, except for Goddard's interior views.

Unless the chevron-arched window is original, the nature of the twelfth-century windows in the west wall is thus uncertain. It seems likely that there were six original openings, to suit the six aisled bays,⁴⁷ with the chevron arch a later insertion. All six windows may have had chevron arches, with three surviving into the late eighteenth century. One window was retained in its original, lower-set position during the alterations of the nineteenth century, preserving the original chevron ornament, but the others were raised and altered.

The wholesale re-use of Norman masonry, as seen in the chevron arch, is unusual. One would expect significant building work from the thirteenth to the earlier fifteenth centuries, while the castle was in active use, to be built in the style of the period, rather than making use of earlier fabric. So the insertion of the chevron arch was probably made as part of the major reconstruction of the roof around 1500, when the wider castle site was in decline. A similar development has been suggested at Oakham Castle, with a large round-arched twelfth-century window inserted into the gable of the castle hall, robbed from another castle building when the castle became ruinous in the late fifteenth to early sixteenth century.⁴⁸ If it formed a semi-circular arch, the radius indicates that it would have had an original span of over 3m, a very substantial feature. It seems likely that such an arch would come from elsewhere in the castle; for example an impressive main doorway to the Great Hall, or an arch from the chamber block or chapel. It is also possible, although less likely, that the original form of the arch was segmental, which would give a narrower span.

THE NORTH GABLE

Of the original masonry, it remains to examine the north gable wall. The exterior face of this wall faces into the private garden of Castle House (Fig. 19). It has a number of early masonry features that have received little previous comment, as it is less readily accessible, although Nick Klee produced a measured survey drawing in the 1980s (Fig. 20). Inside, the building works of 2016–17 enabled previously hidden features to be seen, including two blocked medieval doorways.⁴⁹ The eastern part of the wall was largely rebuilt in brickwork in *c.*1695, and the upper gable has been replaced, with parts of the western side also re-worked in brick. Nonetheless, a large area of the earlier walling remains.

The exterior face of the wall shows the same make-up as noted to the west and south walls, with early features of dressed Dane Hills sandstone, and the main facing of irregular, uncoursed rubble. Here, the rubble facing is largely of sandstone, with a much lower proportion of later, volcanic rock than the west elevation, although including some quite recent replacement. A feature of particular significance runs across the upper part of the wall: a horizontal weathering course of Dane Hills stone. This is clearly an original feature, eroded in places, but projecting around 120mm,

⁴⁶ Thompson 1859, 52.

⁴⁷ A survey of 1578 notes that repairs are needed to six windows in the hall, although these may have been to the east wall rather than the west (Fox 1942, 164).

⁴⁸ Hill 2013, 213.

⁴⁹ Baker 2018.



Fig. 19. The north gable. Note the projecting stone weathering to either side of the large window, indicating that an original building abutted against this wall. *Image N Hill.*

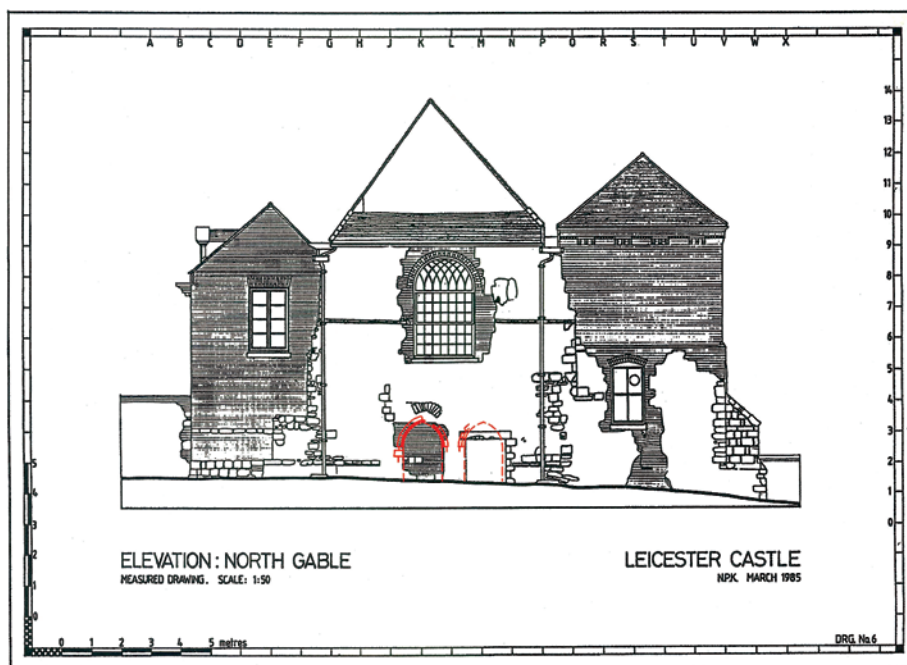


Fig. 20. North gable survey elevation drawing of 1985, with the internal profile of the two blocked doorways added. *Drawing N Klee, with addition by Mathew Morris (ULAS).*

with a flat soffit, vertical front nose of *c.*70mm and a chamfered top. Unlike the offset ledge noted to the exterior south gable, this feature is not related to a change in wall thickness, as the wall face above is aligned with that below. It must have been built to serve some purpose, and the most likely explanation is that it was a weathering to protect the junction of an abutting roof. A similar weathering can be seen high on the west gable of Winchester Castle hall (1222–35), where an original chamber block abutted at the upper end of the hall. The weathering presumably extended across the central section of the wall, where a large arch-top window has been inserted. This would leave space for only a single high-set window, in contrast to the two tall windows in the south gable.

Around 500mm above ground level on the eastern side, another chamfered string course of Dane Hills sandstone runs across the wall. Much eroded, it was around 190mm deep and projected around 70mm, with a chamfered top surface. One would expect this to be a plinth, with a wall thickening below, but the wall faces above and below are in line, not stepped. The string course is interrupted by the two central doorways, but continues onwards a distance of 1,700mm past the west door jamb. Here, on the same line as the termination of the string course, two blocks of Dane Hills stone project 150–200mm from the wall face. The wall above and to the west of these two blocks has no other associated features, with later patching at the lower level. It is difficult to explain these two projecting blocks as anything other than an original masonry projection, especially as their east faces are aligned one above the other. A wall rather than a buttress seems likely, as there is no break in the string course for a matching buttress on the east side, and the upper weathering continues past the wall line. An attached building thus seems probable, although the string course at the base is an odd feature, and not something one would normally expect to encounter inside a building.

In the centre of the wall, the square stone jambs of the two blocked doorway openings are visible, only 670mm apart. The east doorway has a pointed relieving arch over it, matching the arched head of the doorway inside. The west door head has been lowered, with an inserted oak lintel. The two doorways are shown on the Goddard plan included in Thompson's account of 1859, together with a detail of their internal moulding.⁵⁰ Thompson notes the two doorways as 'now concealed'. Inside, as revealed in 2016–17, the two doorways (Fig. 21) had two-centred arched heads with a cavetto and roll moulding, and a hacked-back hood mould.⁵¹ One visible stone of the west doorway showed that the mouldings originally continued down the jambs, although these had been replaced elsewhere with square blocks. The original door openings were 1,080mm wide between the jambs. A key detail noted was a door rebate set to the rear of the moulded surround, indicating that the doors opened outwards (as also confirmed by the 1,300mm door width between the external jambs, giving a 110mm rebate width). The two doorways were clearly therefore not external, but opened into an attached building.

The details of the two doorways indicate they are certainly not original. The form and mouldings suggest a date in the fourteenth century. Between the two doorways,

⁵⁰ Thompson 1859, 52 and plate facing p. 50.

⁵¹ Baker 2018.



Fig. 21. One of the blocked doorways in the north gable, as uncovered in 2016.
Image N Hill.

large rather irregular blocks of Dane Hills stone were clearly the result of re-facing when the doorways were inserted. To the east of the doorways a good area of facing was revealed with big, but rather irregular Dane Hills blocks, some with diagonal axing marks of twelfth-century type. However, this may well also be a later re-facing with re-used stone, as a re-used axed block was found in the doorway infill. There is thus no proof as to whether there were doorways here originally, although this seems likely, given the evidence externally for an original attached building.

A small-scale trial excavation was undertaken outside the north gable in 1986, to see if any attached buildings could be found. Various post-medieval deposits and features were recorded, but there was no evidence for ancillary buildings. Around 3.4m away from the north gable wall, the natural ground was observed to fall away steeply.⁵²

The evidence from the north gable wall is thus not fully coherent. The two surviving doorways opening outwards must, however, be seen as the definitive piece of positive evidence. This proves there must have been two separate spaces in an attached structure. Although the doorways are of around fourteenth century date, the original weathering at high level strongly suggests an attached building existed from the beginning, with a lean-to roof. The two projecting stones suggest an

⁵² Buckley 1987; plan and further mention in Baker 2018, 24–5.

external wall of masonry rather than timber, although the partition between the two doorways (set only 670mm apart) must have been of timber. The absence of evidence found in excavation is puzzling, particularly if the building had masonry walls, but the existence of the two doors must be considered to outweigh the negative below-ground evidence. The original plan form is discussed further below.

Reconstruction of the original form

CROSS-SECTION

A reconstruction of the original cross-section of the hall has been produced, drawing largely on Alcock and Buckley's version of 1987 but with some revision, in particular for the aisles. The starting point is a reconstruction of the cross-section, as it was after the replacement of the roof in *c.*1500 and the reconstruction of the east aisle in *c.*1695, but before the alterations of 1821 (Fig. 22). The central nave section, still existing, is based on the Horn survey of the 1960s. The aisle post and aisle are based on Klee's survey information of 1985–86 and site measurement, together with the evidence of the Goddard drawings of 1821. The height of the west aisle can be accurately estimated, as the chevron-arched window head, re-set in *c.*1500, still survives, and it had the moulded aisle wall-plate a short distance above it. The aisle roof of *c.*1500 had half-trusses with each tie-beam supported by a wall-post on

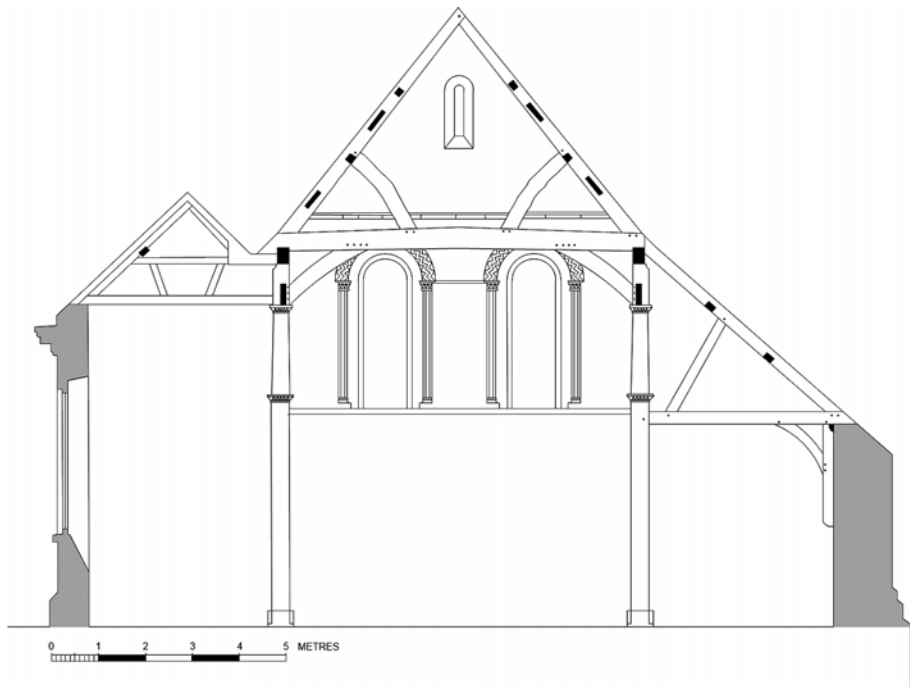


Fig. 22. Cross-section with the nave and west aisle roofs reconstructed as in *c.*1500, before the alterations of 1821. The east aisle was rebuilt in *c.*1695.
Drawing N Hill and R Ovens.

a corbel, with an arch-brace. It had two sets of tenoned purlins, and the common rafters sat directly on the moulded wall-plate. Horn's survey shows the nave roof pitch at 51°, and the aisle roof as reconstructed has a pitch of 41°. The nineteenth-century Flower drawing shows a similar easing of the roof pitch over the aisle.⁵³

The reconstruction of the twelfth-century cross-section (Fig. 23) follows Alcock and Buckley for the form of the main upper roof (see Fig. 6), with an assumed pitch of 45°, a notch-lapped collar and queen struts (based on the upper roof of the hall of the Knights Templar at Temple Balsall, 1176-1221d).⁵⁴ The transverse arch-braces are shown as lap-jointed to the tie-beam, as at Hereford Bishop's Palace and Burmington Manor. Scalloped capitals are shown at both higher and lower levels, as in the Goddard drawings. A short brace is shown rising from the lower capital of the post to the aisle rafter, in accordance with the peg-hole evidence noted in the surviving capital. A lap-jointed aisle-tie is shown providing necessary bracing to the aisle post, although any evidence for this joint has been lost.⁵⁵ The posts are drawn with a thicker section at the base, at the height of the hacked-off timber to post f, and the feet continue as earth-fast. Excavation of the north court found various early floor levels, associated with pottery of the twelfth to fourteenth century, at 61.51m above Ordnance Datum (aOD), 61.37m aOD and 61.15m aOD.⁵⁶ The original floor level has been drawn at 61.25m aOD, 400mm below the modern floor level shown by Horn. This seems a reasonable approximation, as it allows an adequate height for the two blocked doorways, with *c.*1,350mm to the door arch springing. If the floor were set any higher, it would distinctly compromise this pair of doorways. The overall height of the aisle posts from floor level to the base of the clerestorey plate would have been *c.*8.8m. The ledge in the south gable where the wall reduces in thickness (visible in Fig. 22), is at a similar level to the tie-beam, as noted by Alcock and Buckley.

For the aisles, a different configuration is shown from that of Alcock and Buckley. The groove in the back of the aisle posts, noted by Alcock and Buckley, and recorded by Klee (see Fig. 10), indicates the height at which the aisle roof abutted the main structure. The aisle roof has been drawn at an angle of 40°, resulting in an external wall height around 3m above internal floor level. The original roof covering was probably of timber shingles, as repaired in 1313-14, and replaced in 1377-78 with Swithland slates.⁵⁷ The traditional pitch for such roofs, especially Swithland, is at least 40°, and usually more, so it is unlikely that the aisle walls were any taller. The eaves detail as drawn shows the typical arrangement found in early stone buildings with common-rafter roofs. Such buildings had flat wall-tops to receive the roof timbers, usually with an inner and outer wall-plate. Vertical ashlar pieces of timber were used to connect the rafter to the sole piece and inner wall-plate. The upper part of the inside wall face was thus of timber, not stone (unlike the structure as rebuilt in *c.*1500). With the lower medieval floor level, there is space

⁵³ Elliot 1999, 138.

⁵⁴ Alcock 1982 and Bridge 1993.

⁵⁵ See Finn and Buckley 1996, 13.

⁵⁶ Baker 2018.

⁵⁷ Fox 1942, 139 and 143.

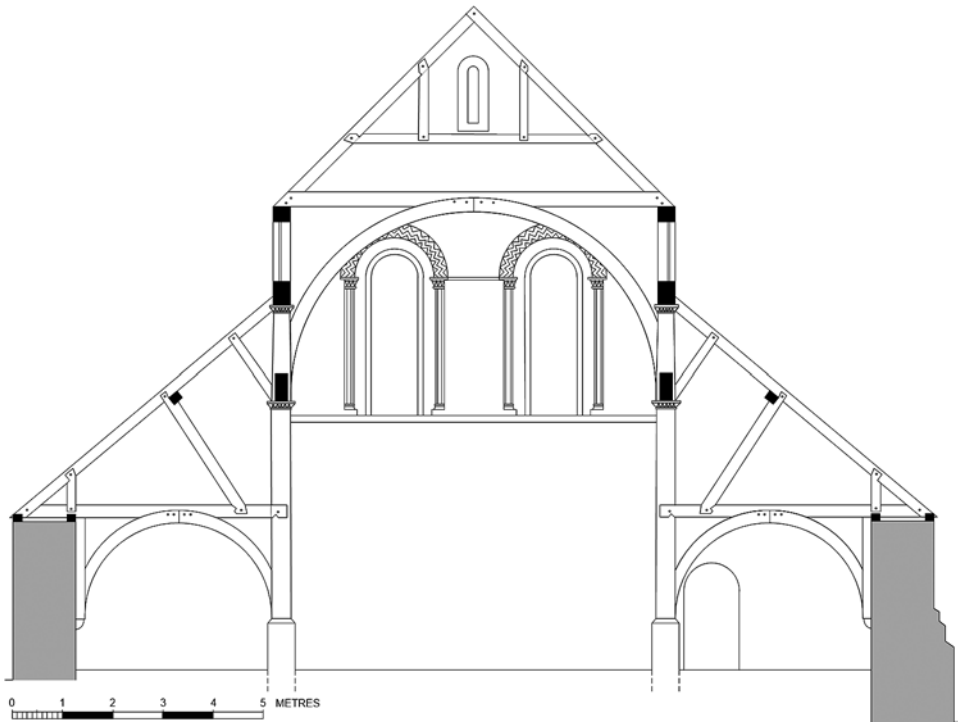


Fig. 23. Cross-section reconstructed as originally in the mid-twelfth century.
Drawing N Hill and R Ovens.

below the aisle tie for a set of semi-circular timber arch-braces, similar to the lost braces at Hereford Bishop's Palace.

One detail in the aisle roof reconstruction calls for particular comment. Unlike early main-span roof structures, the early lean-to roofs over aisles have been little studied, although they have often not survived. The aisles at Leicester are very wide, with an original span of around 3.9m from the outer face of the aisle post to the stone wall. In halls with narrower aisles, like Oakham Castle (aisle width 2.8m), Farnham Castle, Surrey (2.6m) or Hereford Bishop's Palace (3.1m),⁵⁸ the common rafters of these early roofs could manage a simple span between the aisle arcade and the outer wall, without additional support. However, at Leicester, with an aisle roof pitch of 40°, the common rafters have a clear-span length of c.5.1m. This is a much longer unsupported span than is normally found in common-rafter roofs, and would have needed either rafters of unusually large size or set close together. Given the arcade configuration, a strut rising from the aisle post would provide support to only one common rafter per bay, with no struts possible to the rest of the rafters. It is interesting to note that all three of the early lean-to roofs, illustrated in Hewett's *English Cathedral and Monastic Carpentry*, incorporate struts to carry purlins,

⁵⁸ Hill 2013; VCH 1905, 600; Raleigh Radford *et al.* 1973, 84.

which in turn support the common rafters.⁵⁹ The reconstruction drawing therefore shows a purlin, supported by a strut rising from the aisle tie-beam. This would be a very early date for a side purlin roof, but it seems a more likely solution than outside rafters. The clasped purlin lean-to roof of the nave triforium at Wells Cathedral was presumably built around the same time as the nave roof, now tree-ring dated to 1212–14.⁶⁰ It seems likely that other very large early halls with aisles of a similar width to Leicester, such as Clarendon Palace (c.1180), Lincoln Bishop's Palace (early thirteenth century) and the Archbishop's Palace, Canterbury (c.1220), also had side purlins to support the common rafters over the aisles.⁶¹

The work involved in the reconstruction of the roof around 1500 was very substantial. The whole of the earlier roof was demolished, including cutting off the tops of the aisle posts, and the removal of the clerestorey, arcade plate and arcade braces. The aisle roof and aisle tie were also removed, the external stone side walls raised in height by around 1m and new windows inserted, including the re-setting of the Norman chevron arches. The existing aisle posts at each end against the gable walls were also inserted at this time, as they have characteristic jowled heads and post 'a' has a last ring date of 1473.⁶² In the original structure, there were probably no aisle posts at the ends, as the arcade plate would have been supported by the stone gable as found elsewhere (see Fig. 7). The central sections of the stone gables were retained, but the aisle gables had to be raised. Of the original building, only the main sections of the four external walls were left standing, with the aisle posts truncated. As established in the excavations of 2016–17, the original aisle posts were earth-fast and padstones were probably inserted in the reconstruction of c.1500, unless this had already become necessary due to timber decay. Given the scale of the intervention, it seems very likely that the ten aisle posts were in fact taken down, new joints were cut to receive the replacement roof, and the whole structure was re-erected. It is then possible that, besides being truncated at the top, the aisle posts were reduced in length at the bottom and the whole building was taller. If the aisle walls, with the chevron-arched window head, represent the original aisle wall height, the overall structure would have been around 1m taller, with aisle posts around 10m tall. This would give the building an overall proportion closer to that of Hereford Bishop's Palace, where the reconstruction indicates that the aisle posts were about 10.5m tall (see Fig. 26).

LOCATION OF THE HIGH AND LOW ENDS OF THE HALL

The evidence revealed of the two doorways in the centre of the north gable raises an important issue about the orientation of the Great Hall. In his major study of the castle in 1942, Fox adopted the position, drawing on his detailed study of the documentary evidence, that the 'low' end of the hall, with its adjoining service buildings, was to the south, with the upper end and chambers to the north. Ever since, this has been the received view.⁶³ However, a pair of doorways set closely

⁵⁹ Hewett 1985, 85–8.

⁶⁰ Hewett 1985, 85; Miles and Worthington 1998.

⁶¹ James and Robinson 1988, 91–3; Faulkner 1974; Rady *et al.* 1991.

⁶² Arnold and Howard 2017.

⁶³ Buckley 2015, 219–22.

together in the centre of the end wall of a medieval hall strongly suggests a service end.

The south gable of the Great Hall currently contains two doorways (see Fig. 4), one in the west aisle and the other in the south-east corner of the nave. Any historic evidence around the doorway in the west aisle is concealed, but this doorway is indicated consistently on the two 1790s drawings in Nichols (see Fig. 18), and the early nineteenth-century Flower drawing.⁶⁴ A door in the end gable of an aisle is the normal location for a door leading from the upper end of an early hall towards the principal chamber, as seen, for example, at the castle halls of Oakham (1180s) and Winchester (1222–35), and the bishop's hall at Auckland Castle, County Durham (c.1190).⁶⁵ The doorway in the south-east corner of the nave is in Norman style, but entirely Victorian, inserted when the southern block was added in 1858.⁶⁶ The rest of the south wall is covered by plaster, so no historic evidence is now visible. However, a local architect and archaeologist, T. H. Fosbrooke, recorded further evidence relating to the south wall of the nave in the 1920s: 'On the south wall, now hidden by the woodwork of the jury box etc, are two doorways and remains of others which led to the kitchen, pantry and buttery, but they have been so mutilated by modern alteration as to be little more than mere suggestions.'⁶⁷ Fosbrooke also produced a sketch in 1917 showing his conception of the original appearance of the interior of the hall, which included a pair of round-headed doorways in the centre of the south gable.⁶⁸ Without any other details, and if the remaining evidence was indeed 'mere suggestions', it is difficult to conclude that these were original twelfth-century doorways. Given the extensive development of ancillary buildings at both the high and low ends of the hall in the following centuries (see below), the variety of doorways noted by Fosbrooke could be later insertions.

The rebuilding of the east wall in c.1695 has removed any traces of an original entrance doorway. However, an excavation outside the south end of the east wall in 1994 found evidence of an added building, with remains of a mortar floor and fragments of an insubstantial stone foundation at right angles to the east wall.⁶⁹ As the wall was on a similar alignment to aisle post b' and the southern bay of the hall, this was interpreted as a timber-framed porch, and taken as confirmation that the entrance doorway was to the south-east. The discovery was linked to a documentary reference of 1377–78 given by Fox, for the erection of a wooden chamber or porch.⁷⁰ Although the archaeological evidence for a timber-framed addition appears sound, no dateable material was found and the addition may have been some other building, rather than a porch. Later disruption had removed any evidence for a south wall to the postulated porch, and a similar area of mortar floor, possibly linked to the first discovery, was found in the excavations of 2016–17,

⁶⁴ Nichols 1815, Vol. I Pt II, Plate XXIV; Elliot 1999, 138.

⁶⁵ Hill 2013, 202–3.

⁶⁶ Buckley 1994, 9.

⁶⁷ See Buckley 1994, 3, referring to Fosbrooke 1930. Richard Buckley kindly provided a transcription of Fosbrooke's note, which he made in the late 1990s.

⁶⁸ Buckley 1994, Illus. 6.

⁶⁹ Mackie 1994; Mackie and Buckley 1995 (with reconstructed plan of c.1410, showing porch).

⁷⁰ Fox 1942, 143.

about 5m to the south of the south-east corner of the Great Hall and immediately to the east of the Victorian brick extension.⁷¹

Another relevant detail was noted by Alcock and Buckley in the original timber roof structure. They recorded a groove to take planking infill in the spandrel above the main transverse arch, but to post *f'* only. They inferred that this was to distinguish the truss at the high end of the hall. However, as no comparable for such a feature is known, it is equally likely that this special treatment would be accorded to the truss over the entrance bay, in a similar manner to the spere trusses found in rather later halls.

The final piece of physical evidence comes from the stone building located a short distance away from the south gable of the main hall. It is now known as John of Gaunt's Cellar, although the name is of relatively recent origin; and in his atmospheric description in 1859, Thompson refers to it as the 'Old Dungeon'.⁷² It has steps leading down to a vaulted undercroft, and Fox thought the building formed part of the services, to the south of the hall: 'It was in connection with the kitchen block that the finely-constructed cellar ... was used. It doubtless formed a basement underneath, or beyond, the kitchen and its offices ...'⁷³ A detailed study of its surviving fabric was made in 1992–93, which confirmed that the building was of two phases.⁷⁴ The first phase, of which only the lower west, east and south walls survived, was 5.53m wide and around 10m long internally. In the second phase, the building was extended around 5.5m further north, the upper walling replaced, and a fine stone vault added. The south wall was refaced externally and two turrets were added, the south-west one containing a spiral stair. Duchy of Lancaster records (not covered in Fox's account) indicate that the second phase of this work was carried out between 1400 and 1409, when a building – variously described as a 'tower' or 'chamber' – was built 'over the wine-cellar' at a cost of over £500.⁷⁵

Buckley notes that the alignment of the undercroft wall respects the line of the castle bailey, and that excavations have indicated that the bailey ditch was partially filled by the end of the twelfth century and probably filled in completely by the mid-thirteenth century. So a building here could well be contemporary with the Great Hall.⁷⁶ However, the Phase 1 walling (visible only internally) is of neatly-cut ashlar blocks of Dane Hills sandstone. As noted above, the masonry of the Great Hall uses ashlar in a very limited way, with all of the general facing, both inside and outside, of rubble stone. It therefore seems very unlikely that a small undercroft structure of contemporary date would have had internal walling of ashlar. The existing building is probably not therefore original, and instead forms part of the fourteenth-century works – although it could well represent a re-working of an earlier building on the same footprint.

Fox's assumption that an undercroft of this type would necessarily be connected with service buildings is also far from certain. John of Gaunt's Cellar would be

⁷¹ Baker 2018.

⁷² Thompson 1859, 44–9.

⁷³ Fox 1942, 147.

⁷⁴ Buckley 1993; Buckley 1994.

⁷⁵ Colvin 1963, 703.

⁷⁶ Buckley 1994, 11.

unlikely as an undercroft to the main kitchen, as medieval kitchens are generally set at ground level, and a larger kitchen would be needed to accompany the extensive Great Hall.⁷⁷ By the late fourteenth century, the castle had a much larger building, later known as John of Gaunt's kitchen (see below). The undercroft might have served as a cellar accompanying other buildings near the service end of the hall. However, it could equally well have formed an undercroft below a high-end chamber. Detached chamber blocks over undercrofts, located beyond the high end of the hall, have been established as a standard early building type by John Blair, and he cites Leicester as a likely example of a chamber block aligned with the high end of the hall.⁷⁸ The early fifteenth-century reference to use as a wine cellar is also more consistent with a location at the high end. Girouard notes that in medieval households wine was reserved for the tables at the high end of the hall, and so was usually kept (with the valuable silver plate) in a cellar behind or close to the dais.⁷⁹

Turning to the documentary evidence, Fox gives extensive references from the fourteenth and fifteenth centuries for a series of chambers at the high end of the hall and service accommodation at the low end. However, they give no clear information on where the high or low ends were located. In the earliest references, of 1313–14, the following chambers are noted: a *longa camera*, a *plata camera* (Fox translates this as a 'flat chamber', but it is more likely that it was a room for storing silver plate), a *camera garderobe* and also a chapel.⁸⁰ Service rooms noted were: a *coquina* (kitchen), a *boterleria* (buttery) and a *granarium* (granary). In 1377–78, under John of Gaunt, more extensive accommodation is noted.⁸¹ There was a principal chamber at the end of the hall (*magna camera ad finem aule*); also a chapel, a dancing-chamber, a *countasse* ('countess') chamber, and a chamber used by Lady Katherine and Richard de Beverley. Service rooms included a kitchen with a louvre for the fireplace, a pantry, a bake-house, a scullery, a larder, an ewery, a saucery, a spicery and a chandlery. These extensive service rooms would presumably be grouped together at the low end of the hall. References in 1433 and 1444 indicate that the chapel and the three other chambers were located together,⁸² so they must have been adjacent to the great chamber at the high end. In 1444–45 boards were bought *pro quodam oriall' ad finem aule iuxta cameram principis inde reparandi*.⁸³ Such an 'oriel at the end of the hall next to the principal chamber' was not a bay window, but a sort of vestibule or covered entrance, often timber-framed and forming a covered landing at the head of an external staircase.⁸⁴ This confirms that the principal chamber stood separately from the hall and was approached by an external stair, probably with a pentice-type roof – a typical arrangement for a hall and chamber block of the twelfth to early thirteenth century, before the two buildings became fully integrated.

⁷⁷ Wood 1965, 247–57; Brears 2008, 173–201.

⁷⁸ Blair 1993, 6 and 9.

⁷⁹ Girouard 1978, 34–6.

⁸⁰ Fox 1942, 139–40.

⁸¹ Fox 1942, 143–9.

⁸² Fox 1942, 145.

⁸³ Fox 1942, 143.

⁸⁴ See Salzman 1952, 94–5 and Wood 1965, 99.

Further clues to the location of the services and chambers are contained in later documents of the sixteenth and seventeenth centuries. A survey of 1539 has a brief description of the castle buildings that were ‘buylded about a square court parte tymber and part stone’.⁸⁵ It continues: ‘There ys a great large ruynouse hall after the old building with postes in the mydyst of the house, in great dekey. And at the upper end of the same stayrres leydyng to two large chaumbers with chimneys of stone and covered with leyd ...’ This further confirms the arrangement at the high end, with stairs leading from the hall to a chamber block. Another survey was undertaken in 1633, which distinguishes between different sections of the buildings.⁸⁶ The ‘ruynous parts’ of the castle were to be demolished and sold off, while the ‘Castle-house’ was to be repaired and retained. The Great Hall, called the ‘Sessions hall’, was excluded from the survey. The ‘Castle-house’, used by the estate auditors, can be clearly identified as the existing Castle House, to the north-east of the Great Hall, beside the main gate. A key piece of information is that the ‘great kitchen, called *John of Gaunt’s kitchen*’, is included amongst the other Castle House buildings scheduled for repair, and is described as ‘belonging to the Castle house’. In contrast to this, the ‘ruinous peeces’ of the castle to be demolished are described as ‘standing at the South end of the said Sessions hall’, with a specific provision that demolition works must ‘intermeddle not with the vault there, nor the staires leading unto it’. This evidence clearly points to the location of the kitchen as being to the north-east of the Great Hall, and the other service buildings must also have been sited to the north. The ruined buildings at the south end, above John of Gaunt’s Cellar, must have been the former suite of chambers, beyond the high end of the hall. The ruined buildings here were quite extensive, with a demolition value of £40.

In 1650 a Parliamentary Survey was undertaken which gives particulars for the intended sale of the castle (except the Sessions Hall).⁸⁷ It is unclear whether the repairs specified in 1633 had been carried out, but the ruinous parts above John of Gaunt’s Cellar had evidently been demolished by this time, as only the ‘ruynous vault’ is mentioned. John of Gaunt’s kitchen was still standing, and described as: ‘All that building of rugged stones, antiently called a Kitchen, belonging unto the old castle, consisting of foure squares of buildinge, each square conteyning in length by estimacion 36ft, more or less.’ John of Gaunt’s kitchen was evidently a major building with a 36ft (11m) square plan, with walls 36ft (11m) high. This is a similar size to other great kitchens of the fourteenth century, such as the famous monastic examples at Glastonbury and Durham. Excavation has found that Leicester Abbey also once had a kitchen of similar dimensions.⁸⁸ A recent investigation of Castle House found that the rebuilt cellar of the northern block has a footprint about 11m square on a skewed alignment to the main building. This might have been the site of John of Gaunt’s kitchen,⁸⁹ although a kitchen here would be unusually remote from the hall.

⁸⁵ Fox 1942, 163.

⁸⁶ Nichols IV Pt 1, 70–1.

⁸⁷ Fox 1942, 169–70.

⁸⁸ Buckley 2015, 229–31.

⁸⁹ Hill 2017.

The only historic reference to there being a kitchen or service use at the south end is in Nichols. Writing around 1795, he says: ‘... at the South end, without, there remains a very good cellar, as there did also the old kitchen till about the year 1715, when it was pulled down, and turned into a coach-house.’⁹⁰ The coach house is shown in the Nichols engraving of 1795 (see Fig. 18), a relatively low, single-storeyed building. However, the ‘old kitchen’ in Nichols cannot have been the principal medieval kitchen, as John of Gaunt’s kitchen, securely documented as surviving into the seventeenth century, could not have stood over John of Gaunt’s cellar. If there is any truth in Nichols’ oral tradition (recorded 80 years after the event), the ‘old kitchen’ here must have been a secondary structure, erected over John of Gaunt’s Cellar at some point after 1650, when the cellar was described as a ‘ruynous vault’.

ORIGINAL PLAN

The evidence thus points firmly towards the service end being to the north. The strongest indicator of this remains the pair of doorways in the centre of the north wall. This arrangement of doorways is absolutely typical for the service end of medieval halls, as set out many years ago by Wood.⁹¹ Other early aisled halls, such as those at Oakham, Clarendon, Farnham, Warnford, and the bishop’s palaces at Bishop Auckland and Lincoln, all had paired or triple doorways in the gable wall of the nave. Conversely, the doorway at the high end gable, leading from the hall to the chamber, is always set to one side, to avoid disturbing the high table and dais in the centre. A paired set of doorways in the centre of the high end would be wholly exceptional. The current paired doorways are of course not original, so it might be argued that the service end was originally to the south, and only switched later to the north. However, there is no evidence to support this idea (unless Fosbrooke’s doorways can be rediscovered), and a change-over of high and low ends in a medieval hall would be very unusual.

The original plan is therefore reconstructed with the service end to the north (Fig. 24). A lean-to projection, housing the buttery and pantry, is shown attached to the north gable, its roof fitting underneath the stone weathering noted above (Fig. 25). Evidence for a similar lean-to attachment housing services has recently been assembled for the late twelfth-century Oakham Castle hall.⁹² The projecting stones noted on the north gable suggest that the service building might have had external walls of stone, but as the excavation conducted here did not identify any evidence for foundations, the wall material has been left open.⁹³ The original services building at Oakham is thought to have had timber walls, and excavation has shown that the stone-built hall of Clarendon Palace (Wiltshire) had an original attached timber building for the services.⁹⁴ The ground slopes away to the north, which might explain why, in the 1523 survey, the floors of the buttery and pantry

⁹⁰ Nichols IV Pt 1, 72.

⁹¹ Wood 1965, 124–36.

⁹² Hill 2013.

⁹³ Buckley 1987; Baker 2018.

⁹⁴ James and Robinson 1988, 94.

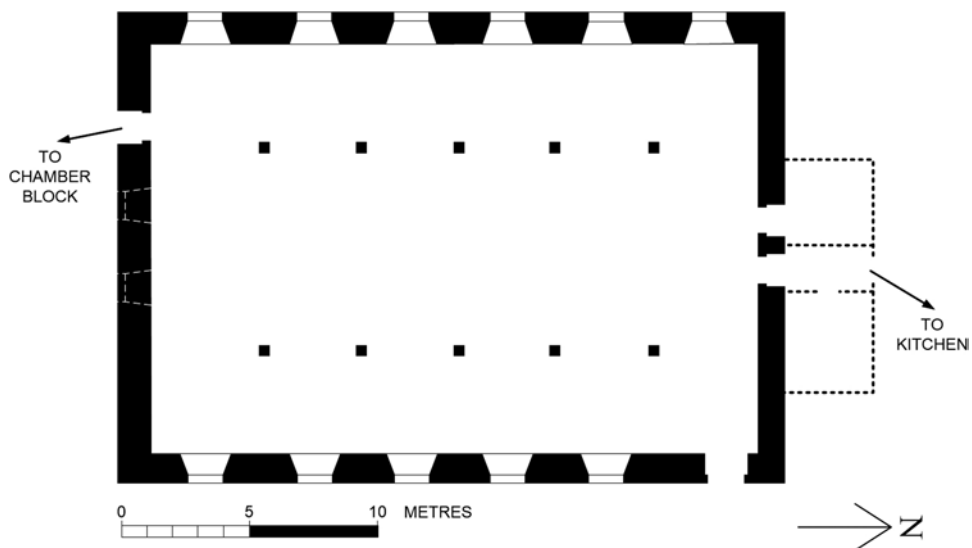


Fig. 24. Ground-floor plan reconstructed as original. *Drawing N Hill and R Ovens.*

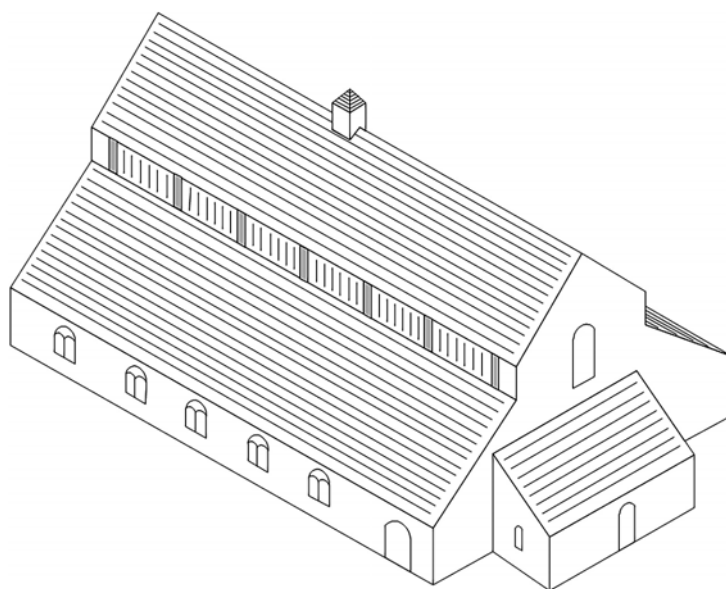


Fig. 25. Reconstruction view of the exterior as original, with lean-to service building attached to the north gable. *Drawing N Hill and R Ovens.*

are noted, very unusually, as being built with ‘great tymbr’, rather than solid.⁹⁵ The original kitchen would have been a sizeable detached stone building to the north-east of the hall, perhaps connected to the service doorways by a pentice. At the

⁹⁵ Fox 1942, 162.

south end, the surviving doorway to the south-west would have led towards the principal chamber. As normal for the period, this would have been located on the first floor of a freestanding chamber block, approached via a timber pentice and stairs. The stone chamber block may well have been built against the bailey wall, occupying part of the footprint of the later John of Gaunt's Cellar. As described in the survey of 1539, the castle was 'buylded about a square court parte tymber and part stone'.⁹⁶ By this time, it seems that the extensive service buildings would have been arranged along the north side of Castle Yard, stretching from the Great Hall to Castle House, with the various chamber buildings located to the south, enclosing the rest of the courtyard.

The entry doorway to the Great Hall is shown at the north end, next to the services, in the typical location for medieval halls. Blair has suggested that in the earliest aisled halls the entrance was near the centre of the side wall, rather than at one end, as seen in the bishops' palaces at Old Sarum and Hereford.⁹⁷ However, an end entry was used before 1140 in the unaisled halls of the East Hall of the bishop's palace at Wolvesey (Winchester, Hampshire) and for the bishop of Salisbury's hall at Sherborne Castle, Dorset.⁹⁸ An end entry was also the normal position in first-floor halls throughout the late eleventh and twelfth centuries,⁹⁹ as seen in Scolland's Hall at Richmond Castle (Yorkshire),¹⁰⁰ and was used in the 1180s in the aisled halls at Clarendon Palace (Wiltshire) and Oakham.¹⁰¹ An end entry has therefore been adopted for Leicester, although there is no definitive evidence.

The hall had excellent lighting, with the clerestory in the roof, the pair of fine surviving windows set high in the south gable, and probably a window set in each bay of the lateral walls. The location of these lateral windows is unclear. They have been drawn in a regular pattern, central to each bay, although the surviving stone jambs (of later date) indicate a less regular spacing. The hall at Oakham Castle retains its full set of original windows, which are set out rather irregularly, instead of at the centre of each bay. It seems likely there was a further window in the north gable, placed above the lean-to roof of the service rooms.

Discussion

The new tree-ring date of 1137–62 confirms the time frame for the construction of the Great Hall. Alcock and Buckley judged the hall to date from 1150–60, and also cited independent advice on the stylistic evidence, suggesting a date of 1140–60.¹⁰² The builder of the hall is also confirmed as the second Earl of Leicester, Robert de Beaumont (1104–68). He had a well-developed interest in building: besides the abbey at Leicester, he founded Garendon Abbey, and the priories at Luffield and Nuneaton. From the 1140s, from his base in Leicester, Earl Robert built up

⁹⁶ Fox 1942, 163.

⁹⁷ Blair 1993, 13–14.

⁹⁸ Biddle 1986 and Wareham 2000; White and Cook 2015.

⁹⁹ Hill and Gardiner 2017 (2).

¹⁰⁰ Hill and Gardiner 2017 (1).

¹⁰¹ James and Robinson 1988; Hill 2013.

¹⁰² Alcock and Buckley 1987, 74. Advice on stylistic dating was received from R. Halsey and J. West.

a powerful network, eclipsing his charismatic elder twin, Waleran.¹⁰³ In 1153 he transferred his loyalty from King Stephen to Duke Henry. Henry restored to Earl Robert his Norman estates and, soon after he became king in 1154, appointed Robert as his chief justiciar. By 1154, Earl Robert had become ‘the most politically influential magnate in England and Normandy’.¹⁰⁴ He acted in effect as vice-regent during Henry’s absences from England. From 1155 until his death in 1168, Earl Robert presided over the biannual sessions of the Exchequer in the great hall at Westminster, and had ‘a wealth quite unrivalled by any other Anglo-Norman magnate’.¹⁰⁵ It seems most likely that Earl Robert built Leicester’s Great Hall in the years after 1150, when he was at the peak of his power, to accompany his pre-eminent position. Perhaps the Great Hall had already been built by 1153, when Earl Robert entertained the future Henry II at Leicester. Although travelling widely in his final years, Earl Robert continued to use Leicester as a base for major courts. In 1159, an impressive list of dignitaries were recorded in attendance, including three bishops and four earls. The Great Hall would have served as an appropriately impressive setting for such events.

The tree-ring dating also confirms Leicester’s Great Hall as the earliest standing aisled hall in Britain. Blair, setting out a range of examples, has recently argued that the aisled hall form was reintroduced into England from the Rhineland towards the end of the tenth century.¹⁰⁶ Aisled halls of the eleventh and earlier twelfth century have been found in excavation, notably the early twelfth-century hall at the royal palace of Cheddar (Somerset),¹⁰⁷ but none with surviving evidence of the superstructure. No evidence survives for aisle posts or arcades at Westminster Hall (London) of *c.*1100 which, it has recently been argued, may always have been unaisled.¹⁰⁸ Aisled halls comparable to Leicester, from the later twelfth and early thirteenth century, are assembled in Table 1. After Leicester, the earliest standing aisled halls are Fyfield Hall (Essex), tree-ring dated to 1167–85 and Hereford Bishop’s Palace, dated to 1179.¹⁰⁹ The hall of the bishops of Winchester at Farnham Castle (Surrey) was previously thought to date from *c.*1150–60, but has now been tree-ring dated to after 1180.¹¹⁰ The stone arcaded hall at Oakham Castle (Rutland) dates from the 1180s and that at Bishop Auckland (County Durham) from around 1190.¹¹¹ The smaller example at Burmington Manor (Warwickshire) has recently been tree-ring dated to 1194/95.¹¹² The excavated aisled hall at the Bishop’s Palace, Old Sarum (Wiltshire) is thought to date from *c.*1160–80, and that at the royal palace of Clarendon (Wiltshire) from *c.*1180.¹¹³ The timber-framed hall of the Knights Templar at Temple Balsall (West Midlands) has been tree-ring dated to 1176–1221, while the ruined hall of King

¹⁰³ Crouch 1986.

¹⁰⁴ Crouch 1986, 79.

¹⁰⁵ Crouch 1986, 57.

¹⁰⁶ Blair 2015, 193–197.

¹⁰⁷ Rahtz 1979.

¹⁰⁸ Harris and Miles 2015.

¹⁰⁹ Walker 1999.

¹¹⁰ *VCH Surrey* 1905, II, 599–605; Wood 1965, 45; Bridge 1996.

¹¹¹ Hill 2013; Cunningham 1990 and Hill 2013, 200–202.

¹¹² Walker and Alcock 2017.

¹¹³ Blair 1993, 13; James and Robinson 1988.

Site	Date	Approximate internal dimensions (m.)	Floor area (m ²)
Leicester Castle	1150–62	15.9 × 23.7	377
Bishop's Palace, Old Sarum, Wiltshire	1160–80	16.5 × 27.4	452
Fyfield Hall, Essex	1167–85	10.5 × 11.6	122
Bishop's Palace, Hereford	1179	15 × 31	465
Clarendon Palace, Wiltshire	c.1180	15.6 × 25.3	395
Oakham Castle, Rutland	1180s	13.2 × 19.9	263
Auckland Castle, Bishop Auckland, County Durham	c.1190	14.6 × 25.8	377
Burmington Manor, Warwickshire	1194	9.3 × 9.1	85
Farnham Castle, Surrey	1180–1210	13.4 × 20.1	269
Temple Balsall, West Midlands	1176–1221	10.3 × 10.1	104
King John's House, Warnford, Hampshire	1180–1210	14.6 × 15.8	231
West Hall, Lincoln Bishop's Palace	Early 13th century	17.7 × 25.6	453
Archbishop's Palace, Canterbury	c.1220	19.5 × 51.2	998
Winchester Castle (Hampshire)	1222–35	17 × 33.9	576
Bishop's Palace, Exeter (Devon)	1224–44	14.8 × 22.8	336

Table 1. Early aisled halls.

John's House, Warnford (Hampshire) is althought to date from c.1180–1210.¹¹⁴ Across the Channel, the earliest standing Anglo-Norman aisled halls, Beaumont-le-Richard (c.1150) and Creully (c.1160–70), are roughly contemporary with Leicester, although both have lost much of their original fabric.¹¹⁵

In terms of total floor area, Leicester is rather smaller than Old Sarum, Hereford and Lincoln,¹¹⁶ similar in size to Clarendon, Bishop Auckland and Exeter,¹¹⁷ and significantly larger than Oakham or Farnham. Of these comparably sized halls, all except Leicester and Oakham were built for bishops or royalty. The smaller halls at Fyfield, Burmington and Temple Balsall are clearly of lesser status, while the rather later halls at Canterbury and Winchester, built for the archbishop and the king, were considerably grander.¹¹⁸

An important finding of the recent work at Leicester is the clear evidence from excavation that the original aisle posts were of earth-fast construction, with the post foot later cut off and a padstone inserted. Earth-fast post holes for aisle posts have been found at a number of early fully excavated sites, where nothing of the building survived above ground.¹¹⁹ Evidence for earth-fast aisle posts within standing buildings, however, is extremely rare, as the opportunity to excavate is very limited. Of the early dated timber-aisled standing buildings in John Walker's national study,

¹¹⁴ Alcock 1982 and Bridge 1993; Wood 1950, 27–9 and Hill 2013, 200–1.

¹¹⁵ Impey 1999, 47.

¹¹⁶ Thompson 1998, 38–41.

¹¹⁷ For Bishop's Palace, Exeter see Wood 1965, 45 and Youngs *et al.* 1987, 121–2.

¹¹⁸ Rady *et al.* 1991; Biddle and Clayre 2006.

¹¹⁹ See Sandall 1986 for a comprehensive list of aisled halls with timber arcades, both standing and lost, as at 1986.

only one, at Fyfield Hall (1167–85d), has been shown to have earth-fast posts.¹²⁰ Where early aisle posts survive, they are now generally seated on padstones – as at Leicester, Hereford and Temple Balsall. At Nevill Holt Hall in Leicestershire, excavation within the late- thirteenth-century hall of base-cruck type found a post hole from the aisled structure, which pre-dated the base cruck.¹²¹ Earth-fast posts have been proposed for an aisled building tree-ring dated to 1237 at Medbourne Manor House (Leicestershire), although no excavation was undertaken.¹²² At Nassington Prebendal Manor (Northamptonshire), post holes for an earlier timber single-aisled hall have been found within the stone-built hall of *c.*1200.¹²³

From the late twelfth century, buildings began to employ timbers set above ground level, a change that formed a key part in the development of fully timber-framed construction.¹²⁴ Leicester shows an interesting stage in this transition. The arcade plates seem to have had fully developed mortice and tenon joints to the aisle posts, which would be a very early use. The round-arched braces, however, both to the arcades and across the nave, have simple face-pegging, a technique criticised by Hewett at Hereford as ‘poor carpentry’, which would have provided little lateral restraint.¹²⁵ The earth-fast posts may well have been seen as essential in providing overall stability for the lofty timber structure. Perhaps equally important, the earth-fast method would have made erection of the building much easier. Each great post could be individually planted in the ground, in a stable and upright position with minimal shoring, while the arcade plates and other members were added, avoiding the need for major propping. In a timber-framed aisled building, sections of the wall, arcade or transverse frames could be erected to provide support to the aisle posts during construction.¹²⁶ A stone-walled aisled building offered less opportunity for such support. Also, as Smith has noted, earth-fast aisle posts, set in relatively dry ground to the interior of a building, were not so vulnerable to decay as posts set in external walls.¹²⁷

On the early use of tenon joints at Leicester, it should be noted that these are only necessary for the junction of the arcade plates and aisle posts because of the requirement for the aisle post to continue upwards, to support the clerestorey (as also at Hereford). Where there was no clerestorey, the head of the aisle post could have a lapped joint, with a ledge and upstand to support the arcade plate, as at Temple Balsall, where there may be no accompanying tenon.¹²⁸ Although evidence at Leicester is lacking for the joints to the upper roof and aisle, the reconstruction drawings show that these could all have been formed with the lapped joints typical of the twelfth and earlier thirteenth century. Lap-joint construction was used for the common-rafter roofs of both secular and ecclesiastical buildings, including

¹²⁰ Walker 1999, 27.

¹²¹ Hill 1999; Priest 2000.

¹²² Hill 2001.

¹²³ Foster, Johnstone and Baile 1989; Baile, Gardiner and Hill in preparation.

¹²⁴ Milne 1992, 82; Grenville 1997, 34–7.

¹²⁵ Hewett 1980, 40.

¹²⁶ Hewett 1969, 30, 47 and 122; Bond 1993.

¹²⁷ Smith 1992, 12.

¹²⁸ Alcock 1982, 155; Walker 1999, fig. 17.

cathedrals, until it began to be supplemented with tenoned joints in the late twelfth century.¹²⁹ The particular requirement at Leicester to join the arcade plate to the aisle post at a lower-level seems to have encouraged the adoption of a new technique.

As noted by Alcock and Buckley, the hall at Leicester bears particular comparison with that at Hereford (Fig. 26), especially the timber structure. Both buildings had not only timber posts and longitudinal round-arched arcades, but also great timber arches spanning across the central nave. These transverse arches have to reach to a considerable height, as the original design of both buildings has been deduced to include a clerestory – the only two examples of such a feature yet found in aisled halls. The carpentry details are also similar in both buildings, with the arcade plates tenoned into the posts, but the great arched braces lapped and face-pegged, a rather insecure detail in comparison with the tenoned braces of slightly later work. At Hereford, the spandrels above the arcade braces were originally infilled with plastered panels, a treatment no doubt also applied to the nave and aisle arches. The visual effect was to create a solid arch, which may well have been the case at Leicester for the arcade arches, although (as noted above) it seems only the northern nave arch spandrels were infilled. Only one other example of an aisled hall with semi-circular lapped braces has been found, at Burmington Manor (Fig. 27), tree-ring dated to 1194/95. The round-arched arcade braces of one bay survive here, together with clear evidence for the nave braces, although this smaller hall had no clerestory.¹³⁰

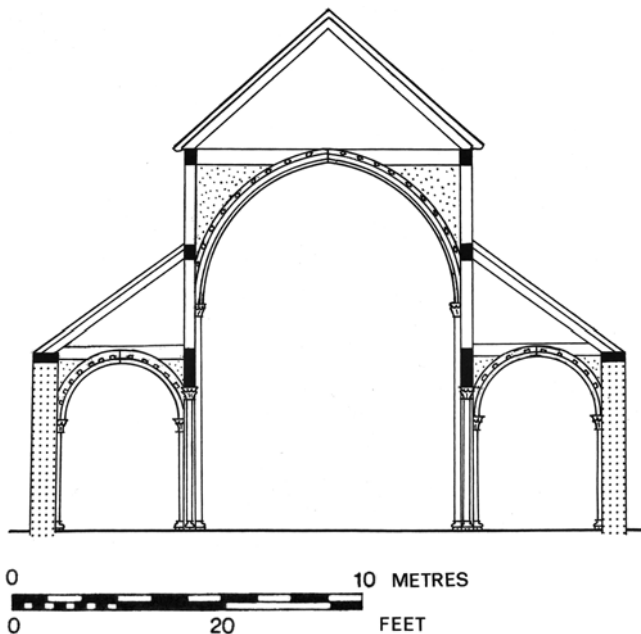


Fig. 26. Hereford Bishop's Palace: cross-section reconstructed as original.
Drawing J Blair 1987.

¹²⁹ Hewett 1985; Meeson 2011, 65–70; Courtenay and Alcock 2015.

¹³⁰ Walker and Alcock 2017.

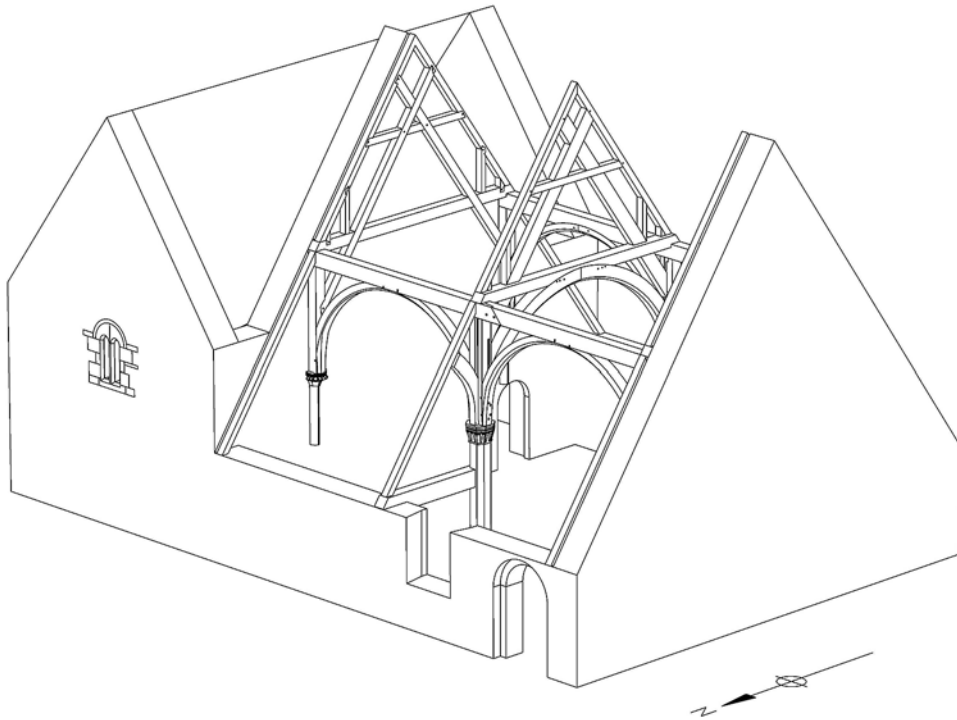


Fig. 27. Burmington Manor, Warwickshire: reconstruction of the original hall of 1194/95, with longitudinal and transverse braces. *Drawing J Walker.*

At Hereford, Blair argued that the wooden structure was ‘a deliberate timber version of contemporary stone halls’.¹³¹ The same concept can be seen also in smaller timber-framed halls (such as Fyfield) of the late twelfth and early thirteenth century, where capitals and round arches were executed in a manner simulating stone.¹³² It has to be said, however, that the design at Hereford in this regard is much more sophisticated than that at Leicester, no doubt reflecting the development from Romanesque to Transitional style in the last quarter of the twelfth century. Hereford has aisle posts with four attached round shafts, cut out of the solid from massive timbers 1.4m square.¹³³ At the top of each shaft is a well-proportioned capital with ornamented trumpet scallops, rising from a round astragal moulding to a square, moulded abacus.¹³⁴ Leicester has, in contrast, slender posts of simple square section and plain, scalloped capitals of short, chunky proportions, with an upper capital placed incongruously below the clerestory plate. The most telling detail is that the capitals and arch-springing at Hereford are set at different heights for the arcade and nave, just like the arcade and transverse vaulting ribs developed by stonemasons

¹³¹ Blair 1987, 63.

¹³² Walker 1999; Smith 1992, 12.

¹³³ Jones and Smith 1960, 70.

¹³⁴ See Jones and Smith 1960, Pl. XIIC.

for major churches. At Leicester, the arcade and nave braces both spring from the same level. To achieve a round arch to the arcades, the posts at Leicester have to be much more closely spaced, as the arcade plate is set much lower than the transverse tie-beam. Thus the aisle posts are only around 3.5m apart, half the distance of the posts at Hereford. The result is an interior rather crowded with columns, and an arcade of awkwardly tall and narrow proportion in comparison with other aisled buildings (compare Figs 28 and 29).

Leicester's plain carpentry was of course, as described above, accompanied by masonry of high quality. The surviving detail of the windows to the south gable is very well executed, with round arches and chevron ornament. The scalloped capitals

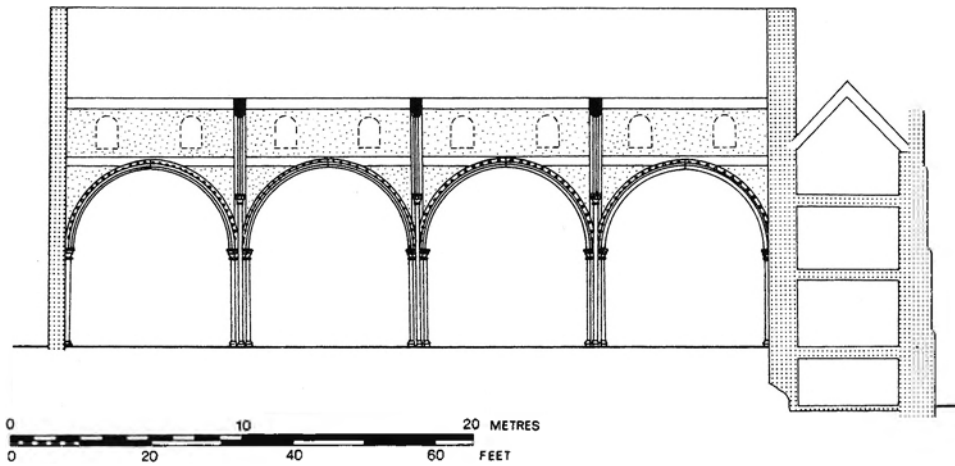


Fig. 28. Hereford Bishop's Palace: long section reconstructed as original.
Drawing J Blair 1987.

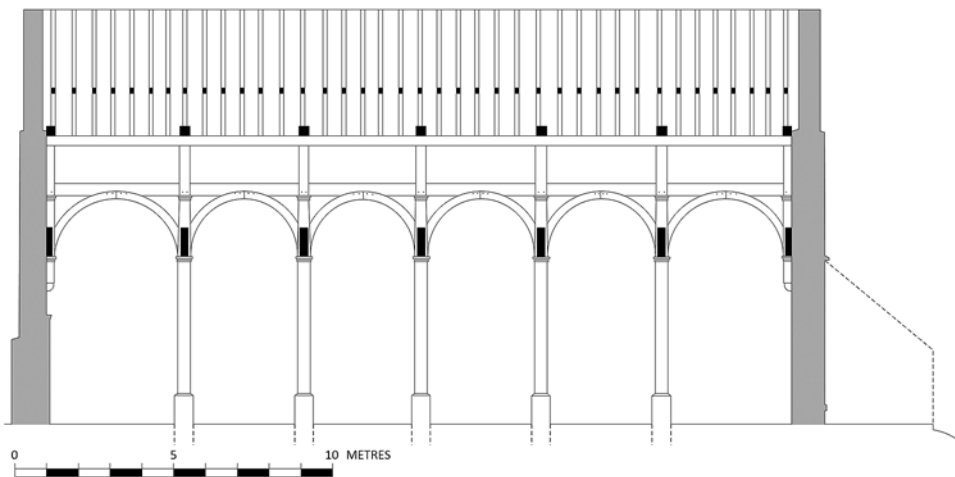


Fig. 29. Leicester Castle Hall: long section reconstructed as original.
Drawing N Hill and R Ovens.

here are fairly plain, but better proportioned than the timber ones of the arcade, with an abacus of normal Romanesque form. No doubt the other original windows and doorways were of matching quality, as indicated by the chevron-ornamented arch re-set over the west window. At Hereford, almost no stonework survives, and the earlier analyses suggested that the original walls were timber-framed.¹³⁵ However, if the original front porch and south gable were of stone, as Blair suggests,¹³⁶ the whole building must surely have had masonry walls, which would seem much more appropriate for a building of this stature, making the comparison between the two early aisled halls at Hereford and Leicester even closer.

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¹³⁵ RCHM 1931, 117; Jones and Smith 1960; Ralegh Radford *et al.* 1973.

¹³⁶ Blair 1987. Hughes and Morris (2018, 24) also conclude the building had stone walls.

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