

# EXCAVATION ON THE SITE OF THE HOSPITAL OF ST JOHN THE BAPTIST, MILL FARM, LUTTERWORTH, LEICESTERSHIRE

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Archaeological excavations at Mill Farm, Lutterworth (SP 547 840) in 2001, on the former site of the medieval hospital of St John the Baptist, revealed a medieval cemetery with 22 individuals, the vast majority being male. Cobble-built structures, possibly associated with either the thirteenth- to sixteenth-century hospital or the seventeenth-century mansion house, both known from documentary records, were also present. To the north, remains associated with a post-medieval watermill were also revealed. The archive is held by Leicester County Council under Accession No. XA 84.2001. The full report (Priest and Chapman 2002) can be consulted through the Oasis Database.

## INTRODUCTION

The hospital of St John the Baptist was founded on land known locally as ‘the warren’ during the reign of King John in 1218. The remains of the hospital and the Spital Mills lay at Mill Farm, south of the core of the historic town of Lutterworth (SP 547 840), close to the junction of the A426 Rugby Road and the A4304 Coventry Road. The hospital was located on a river terrace with lower ground to the north, adjacent to the River Swift and slightly higher ground to the south (Fig. 1).

Archaeological evaluations undertaken by University of Leicester Archaeological Services in 1996 (Gossip 1996) found part of a medieval graveyard south of the farmhouse, cobble structures and the site of the eighteenth- to nineteenth-century Spital Mill. Previous archaeological evaluation on land immediately to the south and west of Mill Farm in 1992 had revealed thirteenth-century closes, probably representing paddocks, gardens or orchards, a possible medieval house platform and thirteenth-century quarry pits (Cooper 1992).

Proposals for the development of the site prompted further extensive work. In 2001 open area excavations were undertaken on two areas: the mill site (Fig. 2, Area 1A); and the hospital and cemetery (Area 2A). Further trial trenching was also undertaken around the existing Farm House (Area 2c) and to the south-east (Area 2b). A watching brief was later undertaken on Area 2c after the house had been demolished.

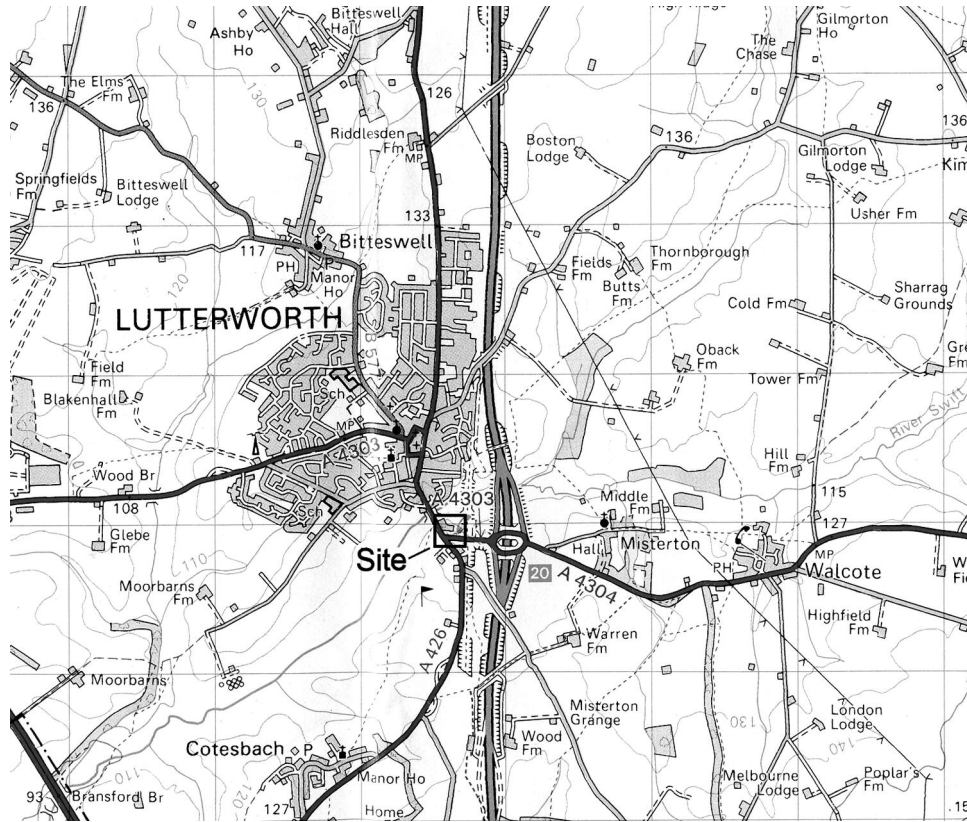


Fig. 1. Location plan of the site.

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## HISTORICAL BACKGROUND

Lutterworth is recorded in the Domesday Book as a rural manor held by Mainou the Breton (Morgan 1979). It was granted a market charter in 1214 by King John, although there is no indication of burgage tenure (Hilton 1954, 175 and 177). Lutterworth remained small – Leland noted in the 1530s that it was ‘scant half so bigge as Lughborow’ (Smith 1956, 167; Toulmin Smith 1964, i, 19). However, it thrived as a local market town in the sixteenth and seventeenth centuries serving its immediate hinterland, which was largely enclosed by the end of the seventeenth century (Goodacre 1994).

In an Indenture of Lease and Release of 1693, Colonel William Cole, a Royalist veteran of the English Civil War, was mentioned as living at the ‘Spittal’; he apparently owned the Spittal Estate and its two water mills. During the reign of Henry VIII the mills were part of the St John’s Hospital property leased to the Faunts (Marriot 1870, 61). In 1577 possession of two water corn mills went to the

Crown when the Hospital was dissolved (Nichols 1807, 259–62). It has been suggested that one of these may be the mill mentioned under Misterton in the Domesday Book (Ashton 1977, 87–8). In 1631 the spital mills comprised two water cornmills, one windmill and one maltmill (Nichols 1807, 260). Spital Mill ceased working in the 1890s after the construction of the Great Central Railway, which cut off the feeder channel from the River Swift. Ordnance Survey records indicate that the buildings were of eighteenth- to nineteenth-century red brick; surviving photographs confirm this (Fig. 9). These were inhabited until fairly recently and probably were finally demolished around 35 years ago (Mr Burton former tenant, pers. comm.). Bent states that a subscription windmill was built *c.* 1800–10 and that a windmill at Lutterworth is mentioned in 1316, in Farnham's Village Notes. The windmill was burnt down around 1910.

Rubble and human bones, possibly from the hospital's graveyard, were found in the 1890s during construction of what is now the A4303 (Dyson 1913, 18). By this time, however, no structural remains of either the hospital or the mansion house survived above ground.

### The hospital of St John the Baptist

The hospital of St John the Baptist, Lutterworth was founded in 1218, probably by a member of the Verdon family (McKinley 1954, 42–4; Nichols 1807, 4i, 259–62). The officials who produced the chantry certificates of 1546 believed Nicholas Verdon to have been the founder of the hospital, and that it was intended to house a priest, six poor men and provide hospitality to poor travellers (Thompson 1910, 496). In the early fourteenth century, Bishop Dalderby of Lincoln drew up rules for the hospital based on the Augustinian order; he ordered that no women should be admitted as sisters without the bishop's permission. In its day the hospital complex was a wealthy institution, its revenue being greater than that of the contemporary parish church of St Mary. Much of this wealth was doubtless generated by the mills and from farming land. In 1329 the hospital possessed lands at Gilmorton, and at other times at Cotesbach, Shawell and Bitteswell.

It seems clear that by the end of the fourteenth century the hospital had ceased to operate as such. In a papal letter dated to 1436, it was said to 'have had no brethren for 50 years, on account of the diminution of its fruits' (Clay 1909, 225). The pope therefore decreed that the mastership of the hospital could be held with any other benefice. However, the master did have to distribute £4 in alms every year. In 1534 the mansion house and demesne land were being leased for £8 to Richard Wingfield, and the two watermills were leased for another £8 to John Wright (Nichols 1807, 4i, 262). The hospital's net yearly income in 1546 was £33 7s. 4d., mainly from lands in Leicestershire, Warwickshire and Northamptonshire, along with the lease of the two mills. By this time the houses and the chapel were said to be greatly in decay and in ruins (Thompson 1910, 496–8).

The lands were eventually purchased by the Faunt family, former lessees, from the crown during the reign of Henry VIII (Nichols 1807, 260). Although the house

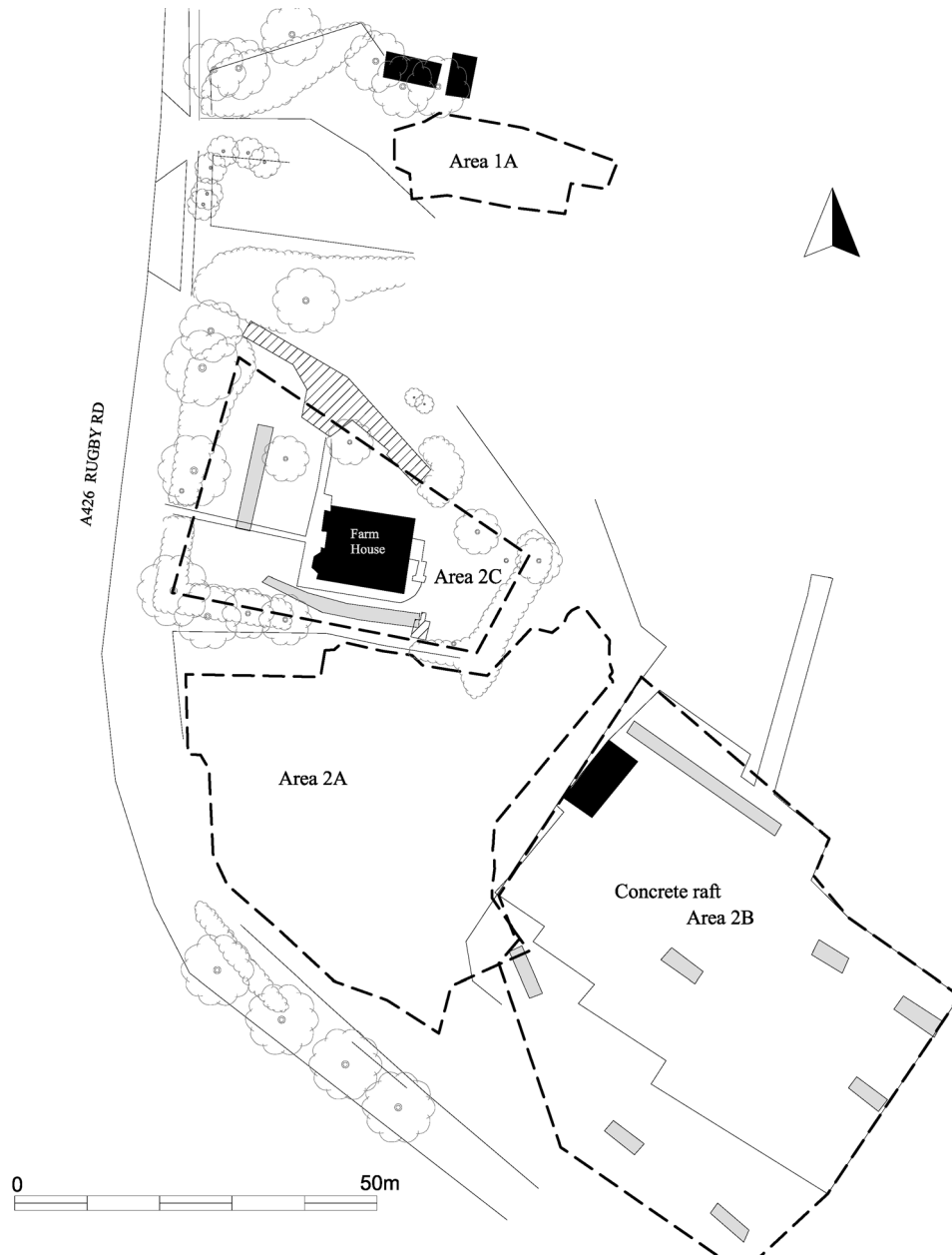


Fig. 2. Detail of the excavated areas showing evaluation trenches (in grey) and open area excavations. Area 1A was of the mill area, and 2A the cemetery and structures. Areas 2B and 2C were subject to trial trenching and a watching brief.

survived the Dissolution and masters were presented up to 1676, it appears to have fallen into ruin. In 1556 there was said to be ‘noe pore men within the same Hospytal remaynyng or inhabiting; and the house, with the chapel, greatly in decaye and ruyne’ (quoted in Clay 1909, 225).

A mansion house appears to have been built subsequently, using building materials from the hospital (Dyson 1913, 60), which Nichols describes as ‘a much later building than the fashion of those times’. After this, the estate passed into the ownership of the Shuttleworth family.

## AIMS AND METHODOLOGY

The majority of modern archaeological investigation within the East Midlands has centred on the larger religious houses, with the result that our understanding of smaller establishments such as hospitals is severely limited (Lewis 2006, 198). Within Leicestershire, the only surviving upstanding remains of hospitals are Trinity Hospital in Leicester and Rothley Temple, neither of which has been the subject of extensive modern excavation or architectural survey. The location of the hospitaller site of Old Dalby is not certain, and although the leper hospital of Burton Lazars was excavated in 1913, the exact location of these trenches is now unclear. Hence the redevelopment of Mill Farm, Lutterworth represented a rare opportunity to investigate an important medieval site, albeit one which had seen truncation by later activity.

Topsoil and interface layers were removed using a machine excavator and a mini digger. Areas were hand cleaned, and the locations of deposits recorded in plan and section. All archaeological features were either half sectioned or excavated in plan (in the case of graves) for the retrieval of finds and environmental samples.

## EXCAVATION RESULTS

### **The medieval hospital and cemetery**

Initial stripping of the area showed that a large part of the western area of 2A was occupied by a substantial quarry pit (Fig. 3). This quarry continued to the north, where it was also visible in both trenches in Area 2C. None of the late nineteenth- to early twentieth-century OS maps show a quarry in this area, and it would appear to be a relatively modern feature perhaps related to the road. Other modern features had also disturbed the cemetery. To the south-west (Fig. 2; Area 2B) several excavated trenches featured deep-water-lain clay deposits, likely to have been associated with a modern pond.

The cemetery lay to the west of Area 2A (Fig. 3) and comprised 22 articulated burials, all orientated west–east, a number of which had suffered truncation by the quarry (Fig. 4).

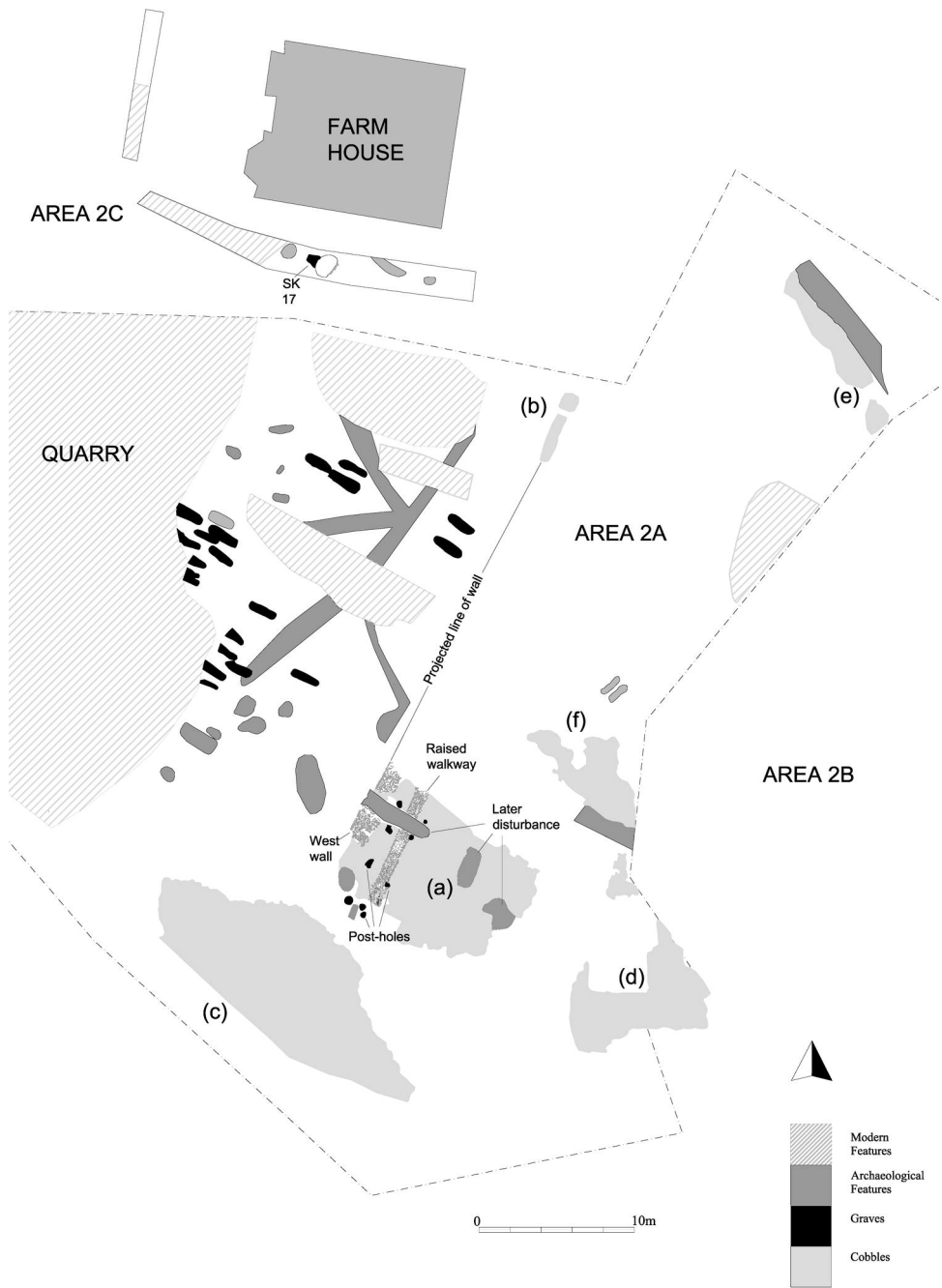


Fig. 3. Plan showing the cemetery and the cobble structures.

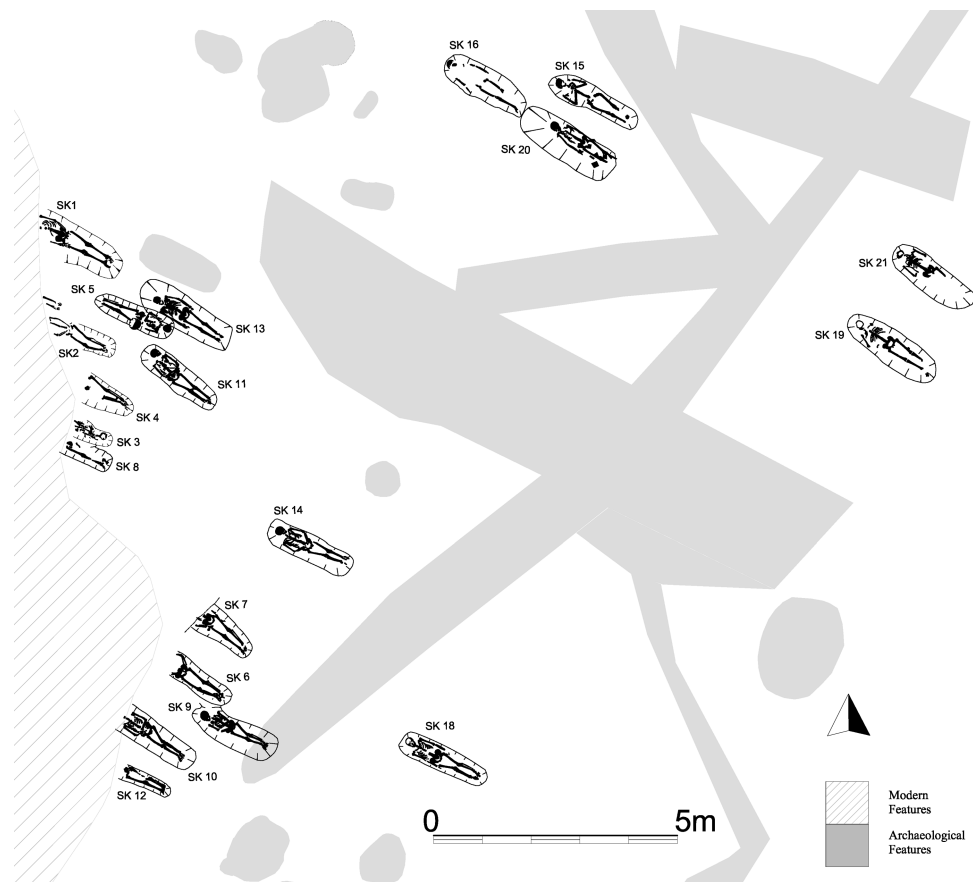


Fig. 4. Plan of the cemetery.

The skeletons appear to form a cohesive group within a relatively restricted area, with a single additional burial located to the north in one of the evaluation trenches (Fig. 3; SK17). There does appear to be some grouping within the burials, although the obvious truncation by later features and the proximity of the bones to the surface means that there may have been other graves in the excavation area now removed. During the nineteenth century, rubble and human bones were found during road construction, suggesting that both the cemetery and the buildings may have extended further to the west. No graves were found south of SK12 and SK18, and it seems likely that this is the southern extent of the cemetery. To the east the truncated line of a wall may mark the cemetery boundary (Fig. 3).

Besides the burials, a number of linear features were identified running in various directions across the cemetery. One ditch running approximately north–south pre-dates the burial of SK9, and the other linear ditches and gullies (Fig. 4) all contained similar fills. Substantial amounts of unstratified broken brick

and tile were found in this area, and these may represent structural activity of some kind, perhaps pre-dating this part of the cemetery.

A small group of pits was recorded in the north-west area of the cemetery (Fig. 3). These were originally thought to be parts of graves, but excavation showed them to be mostly empty. A second group of features to the south included several pits of unknown date and function. The presence of mixed finds from the pits (tile and brick etc.) suggests that these most likely represent later features, backfilled with rubbish from demolition rather than the bases of graves.

### Structural remains

A cobble structure was discovered to the south-east of the cemetery, measuring approximately 10m × 15m (Fig 3(a)). It was truncated to the north by a loading bay that cut into the deposits and by farm-tracks to the east and south. The structure comprised a tumbled wall along the west side with a cobbled surface, set into the natural clay deposits and a raised marked pathway across the centre (Fig. 5).

The western wall consisted of two to three courses of cobbles set in a red-brown sandy-clay matrix with mortar visible, especially on the upper surface. The western side of the wall had been faced to present a flat uniform surface (Fig. 6), and debris and large cobbles behind it suggested that the upper wall had tumbled eastwards. It had been partially disturbed in the centre by a later sub-rectangular



Fig. 5. Cobbled structure looking south, with the tumbled wall to the right.





Fig. 6. West face of the wall.

feature, which truncated both the wall and the cobbled surface. Beneath the wall there appeared to be a shallow gully, possibly the line of an earlier wall or fence.

East of the wall the cobbled surface sloped steeply to the north-east. A fine metallised surface running beneath the cobbles in places may be an earlier floor survival and a slate-lined drainage channel was also identified. Approximately 1.5m east of the west wall was a raised mounded pathway within the cobbled surface, demarcated by larger stones set on edge (Fig. 7). Excavation of a slot through this raised area showed it to have been constructed using smaller cobbles and pebbles in clay to create the mound. Further east, large cobbles had been set beneath the surface where it sloped away, possibly to bolster the surface on the sloping ground. Slates had also been used to pack between the cobbles. Six shallow post-holes, containing stones possibly used as post packing, lay either side of the raised walkway. It is possible these may have supported a roof or shelter, either above the walkway or against the wall.

Several post-holes, a gully and a small area of clay packed with slate fragments were also recorded on the south side. Although this area was badly truncated, these could represent other structural deposits.

Further sections of wall were discovered to the north of the structure. Two largely disturbed sections on the same alignment of the west wall of the cobble structure survived as linear mortar and stone spreads, suggesting perhaps a boundary wall attached to the front of the building (Fig. 3(b)). Along the southern edge of the excavation area was a compact metallised surface (Fig. 3(c)), suggesting



Fig. 7. Detail of the demarcated raised walkway within the cobbled surface, looking west.

a simple track running in a north-west to south-east direction. This made use of small rounded pebbles embedded in clay, presumably to stabilise the ground and to prevent rutting by cartwheels. This track may have led from the hospital buildings to the cemetery. Five possible post-pads consisting of large irregular flat cobbles set into the cobbled surface may indicate temporary structures or fencing, and several patches of coarser metalling may indicate repairs. A similar metallated surface was identified to the east (Fig 3(d)), which may be another roadway or possibly part of the same track.

Later features identified include a wall to the north with a ditch containing late medieval pottery along its north side (Fig. 3(e)). Unlike the cobble structure, this wall contained several sandstone blocks. A tumbled wall (Fig. 3(f)) of un-mortared cobbles also contained sandstone fragments, with late medieval pottery and tile, in its associated ditch to the south.

#### **The mill site (Area 1A)**

The previous evaluations had recorded predominately late nineteenth- to early twentieth-century structural remains, cobbled surfaces and waterlogged areas, whilst trenches to the east revealed waterlogged deposits probably associated with

the mill pond (Gossip 1996). The open-area excavations found similar post-medieval remains, including late nineteenth- to early twentieth-century brick buildings and walls, and several patches of a fine metalled surface, likely to have been associated with the post-medieval mill.

A large millstone was uncovered immediately beneath the debris in the centre of the excavation. This was obviously not *in situ*, but had probably been left there after demolition of the buildings. It appeared to be made up of several fragments of stone bound together by iron bands (Fig. 8) and was very similar to the remains of a millstone recovered in the south-west corner of the 1996 evaluation trench. These millstones appear to be made with French *burr* stone and are consistent with a nineteenth-century date (Gossip 1996, 8).

A brick culvert, probably a storm drain, was recorded to the west. Several late nineteenth- to early twentieth-century photographs of the mill buildings show a stream running out from a culvert in approximately the right location (Fig. 9). Based on the location of this culvert, the main buildings almost certainly lie further west and have probably been destroyed by subsequent recent road improvements. Interestingly the same photograph shows two millstones, approximately the same size as those recorded during excavations, on display in front of the house rather than in use.

Although the Spital Mills were recorded in 1631, the remnants of the buildings in Area 1 were clearly of late eighteenth- to nineteenth-century date. These are likely to be the buildings shown on early OS maps and only demolished 35 years



Fig. 8. Millstone found in the debris of the mill site.



Fig. 9. Photograph of the nineteenth-century mill buildings, looking south. Note the brick culvert and the two millstones either side of the door of the central building. Date *c.* 1892 (after Ashton 1977)

ago (Marsden 1996). There was no evidence for any earlier medieval deposits from the 2001 excavations.

## DISCUSSION

### The date of the hospital and cemetery

The date of the pottery recovered suggests activity on the site from the eleventh or twelfth century, becoming more intense during the thirteenth century, and peaking in the later medieval period, from the fourteenth to the mid-sixteenth century (Sawday 2002). The only archaeological evidence for activity pre-dating the cemetery was a single undated linear feature, cut by SK9, although it is not clear whether this pre-dates the cemetery or just that particular burial. The demolition rubble from these features does raise the possibility of there having been an earlier building on the site.

The only clear dating evidence for the burials is from the presence of a buckle on the pelvis of SK16 (Fig. 10). Plain circular buckle frames were probably attached directly to leather straps rather than having a buckle plate between, as demonstrated by examples from Leicester and London where the straps had survived (Clay 1981, 133, fig. 48.24; Egan and Pritchard 1991, 57 and figs 37, 39). The Lutterworth example is paralleled most closely by an example from London (Egan and Pritchard 1991, 57, and fig. 36), where the raised grip on the



Fig. 10. The truncated remains of SK16, with the buckle *in situ*.

upper surface of the pin close to its loop is in the form of an animal head rather than the simpler transverse grooving here. The London example dates to *c.* 1350–1400, which appears to be the typical date range for circular buckles of this size (Cooper 2002; Clay 1981, 133).

Worn floor tile fragments, some decorated with the Arms of Beauchamp, were also present in the fill of several graves (Fig. 11). These appear to date to the early fourteenth century and, given their worn and broken (and occasionally reused) appearance, provide a *terminus post quem*, probably around the mid- to late fourteenth century (Sawday 2002).

Although most of the burials appeared to be simple interments without coffins (the bodies may simply have been wrapped in shrouds that have since rotted), one burial was found to incorporate a wooden coffin held together with approximately 30 iron nails, with attached deposits of mineralised wood. This coffin burial was also the only double interment, found in ‘double-decker’ style below the burial of SK20 containing the tiles, and may well be later in date. Besides having a different tradition, the earlier burial also appeared to have been deliberately backfilled with tiles, perhaps marking its location and depth.

The date of the foundation of the cemetery therefore remains unknown, although it seems clear that burials continue into the fourteenth century. This would be consistent with the foundation of the hospital in 1219, falling into disuse by the late fourteenth to fifteenth century.

The accurate dating of the structures and associated features is difficult due to the lack of finds from securely stratified deposits. The pottery from immediately above the structures is predominately of twelfth- to thirteenth-century date, with



Fig. 11. Fourteenth century floor tiles in the fill of Grave SK20.

floor and nib tile, dating to the first half of the fourteenth century (Sawday 2002). A gully sealed by the cobbled surface of the structure produced several sherds of thirteenth-century Stanion Lyveden ware. The metallised surfaces produced a similar date range for the finds as the cobble structure, suggesting that these were constructed around the same period. Fragments of floor tiles (similar to those found in the graves) were also recovered. It is, however, uncertain whether the fourteenth-century tile fragments were contemporary with the structure or whether they had been incorporated into its fabric at a later date. It seems likely that the structure which apparently had a terminal date in the sixteenth or seventeenth century may have formed one of a sequence of buildings originally associated with the hospital.

Pottery from later features suggests that activity continued on site into the sixteenth century. It is possible that these later features represent additions or repairs to the existing structure during the post-Dissolution period, perhaps utilising material from the earlier structures. The hospital was in decline by 1435–36 (Thompson 1910, 496–8) and dissolved after 1577 (Marsden 1996, 2).

The quantity of building material in the area suggests there may have been a post-medieval building in the vicinity that was subsequently destroyed, the remnants being mixed with demolition debris from the nearby hospital site

and becoming backfill for later features. This may possibly be related to the post-medieval Spital Mansion mentioned by Dyson, built using building materials from the hospital (Dyson 1913, 17 and 60).

### The structural remains

The function of the cobble structures remains unknown. The north–south wall aligned with the front of the structure appears to extend for some distance and may represent a boundary wall, possibly to the cemetery. Remnants of cobbled structures were also recorded further to the east during the 1996 evaluations. Although the cobble structures could be dry stone walling of any date, twelfth- to thirteenth-century pottery was recorded in the area, and they could also represent other buildings/structures associated with the hospital. Cobble structures are typical of buildings in boulder clay regions in this part of the county. Many buildings in the area still retain parts of original cobble walls including the churches at Lutterworth, North Kilworth and Cotesbach, and some local buildings may even have re-used stone from the hospital.

It seems unlikely that any of the excavated structures represent the actual hospital. There would, however, have been a range of ancillary buildings, including storehouses, animal barns and kitchens. These would have probably been separate from the infirmary and chapel areas in order to preserve the sanctity of the latter. The slope and raised walkway of the cobble surface suggest that this may be a yard with covered shelters rather than the interior of a building – this could represent one of these associated buildings with the metalled surface forming a road or trackway. The main monastic buildings could easily have been destroyed, along with further remnants of the cemetery, by quarrying and road construction.

Although none of the main buildings appear to be represented here, the range of pottery from the structures includes regional and continental imports, as well as fine table-wares and specialised cooking wares, hinting at the presence of a communal establishment of some status nearby. That this may have been a relatively high-status site during the Middle Ages is suggested by two fragments, which have been tentatively identified as Brill Boarstall-type ware from Buckinghamshire (McCarthy and Brooks 1988, 292–4), from just above the cobbles of the building in Area 2A. This pottery is rarely found in Leicester or the county, and may represent here a personal item rather than a traded ware. The presence of Surrey Whitewares (Pearce and Vince 1988) is also not commonly found in any quantity in the county.

The vessel forms also are not typical of the rubbish normally associated with domestic occupation in the medieval period. A spout with applied clay decoration in Chilvers Coton ware may be part of an aquamanile or a knight jug – a rare find. The presence of a mortar and a possible skillet, both in the Midland Purple fabric MP1, is also unusual. These two-vessel forms and the several cisterns in Midland Purple ware, and the quantities of jugs and cups in Cistercian ware and the Surrey Whitewares noted above, also hints at the presence of a communal establishment in the vicinity.

The medieval ridge, floor and nib tiles are further evidence of a substantial building or buildings in the vicinity associated with a religious community. A few fragments of painted plaster consisting mainly of lime white wash, possibly with ochre added, were found to be associated with the structure. Although one piece had a fragmentary design, simple lime-wash was seen as adequate decoration in even very high-status buildings in the medieval period (Salzman 1952, 156–7). A small assemblage of slate included blue-grey coarse Swithland slate, and a greenish, finely laminated slate, almost certainly from Charnwood, is of probable thirteenth- to fifteenth-century date. Although little can be deduced from the slates themselves, they may indicate the presence of slate-roofed buildings.

The animal bones from the site suggest that domesticated animals were exploited for food (Browning 2002). Sheep and cattle were most abundant, but the remains of pig, dog, rabbit, hare, chicken, goose, horse, rabbit, rat (black) and rook/crow were also identified. There were only two instances of burning and a mixture of chop and cut marks, consistent with primary butchery as well as the preparation of the carcass for consumption. In addition, there are a few instances of bones apparently having been deliberately split, probably to facilitate marrow extraction. The presence of fish bones (one of which compares with salmon) is consistent with a higher status site or religious houses. The smaller creatures, such as chicken and goose, may have been raised on site, and those that were not were probably obtained from the market of the adjacent settlement of Lutterworth.

### The cemetery and the population

The skeletons appear to form a cohesive group within a relatively restricted area. Although the extent of the cemetery is truncated by the quarry, both the cemetery and the buildings probably originally extended further west. The southern extent of the cemetery appears to be marked by SK12 and SK18, while the eastern extent is bounded by the presence of the hospital buildings and wall. SK17 was located furthest north, but some 10m from its nearest neighbour, with no further graves nearby. This may have been an isolated burial, or else other skeletons in the area may have been truncated by the house.

All the bodies were oriented west–east, with the heads at the west end in the Christian tradition except for the unsexed juvenile (SK5) whose head lay to the east. This may simply have been a mistake; if the bodies had been wrapped in shrouds it may have been difficult to tell the head from the feet. There is very little inter-cutting of the graves, suggesting that markers of some kind were used to locate burials.

The most marked discovery from analysis of the skeletal material is the over-representation of adult males in the monastic cemetery of St John's (Table 1; Chapman 2002). This supports the early fourteenth-century reference in which Bishop Dalderby of Lincoln drew up rules for the hospital based on the Augustinian order, and ordered that no women should be admitted as sisters without the bishop's permission (Marsden 1996). It might also suggest that few



Skeleton (SK) no.	Age	Sex	Build	Stature (m)
1	45–50	M	medium	1.76
2	Adult	M	medium, large on femurs	1.67
3	Adult	M	medium	1.75
4	45–50	M	medium	1.72
5	15–20	?	very light	1.6
6	Adult	M	medium	1.75
7	Adult	M	light	1.71
8	Adult	?	medium	unsexed
9	40–50	M	light, medium on femurs	1.59
10	40–50	M	heavy	1.64
11	45–55	M	heavy	1.72
12	Adult	?	light	unsexed
13	40–50	M	light	1.71
14	45–50	M	medium	1.69
15	Adult	M	light	1.8
16	35–45	M	medium	frag
17	30–40	F	light	1.66
18	60+	M	medium	1.66
19	40–50	M	medium	1.72
20	55–65	M	medium, heavy on femurs	1.7
21	Adult	M	light	frag
22	50–60	M	light	1.66

Table 1. Age, sex and build.

women were permitted admittance to the hospital as residents, or at least not given burial in the hospital's cemetery. It is worth remembering, however, that only a small percentage of the hospital cemetery was available for excavation, and even this had been truncated by quarry pits. It remains possible that the cemetery may have been zoned, with the females being buried in a different area to that excavated. That females and juveniles were sometimes interred is certainly proven by the presence of SK17 (female) and SK5 (juvenile).

The individuals represented in this cemetery were of average height compared with other, larger, contemporary populations (see Table 2). Variations in skeletal build among the males of this group, from light to heavy build, and with preponderance to heavier muscularity in the legs, seem consistent with the character of the site. Both residents (poor people who had laboured hard during their lives) and hospital staff and clergy (whose occupations would have been less physically demanding) could be represented in this assemblage. The strong muscularity of the legs of several of these individuals could simply reflect the use of the feet as the primary form of transport, especially if we are to suppose that many residents of the hospital may have been itinerants.

The diet was typically coarse for the period; this is reflected in the high levels of dental attrition observed in all individuals present and was especially severe in the

Location	Period	Sample size	Mean male stature (cm)	Mean female stature (cm)
St John's, Lutterworth	13–15th	17	1.7	1.66
St Helen, Aldwark, York (Dawes and Magilton 1980)	10th–16th	724	1.693	1.575
Abingdon, Oxfordshire (Wakeley 1995)	medieval	750	1.70	–
Wharram Percy DMV (Brothwell 1971)	medieval	large	1.68	–
St Leonards, Hythe, Kent (Parsons 1908)	medieval	large	1.702	1.574
Austin Friars, Leicester (Stirland 1981)	medieval	13	1.778	1.575
Rothwell Charnel House, Northamptonshire (Parsons 1910)	medieval	large		–
St Nicholas Shambles, London (White 1988)	11–12th	94	1.7275	1.575
Modern (Office of Population Census & Surveys 1981)	Modern		1.738	1.61

Table 2. Mean statures observed among the Lutterworth skeletons, compared with individuals from other sites of similar date and of modern day.

over 40s. Such high levels were the norm prior to the introduction of flour sieving, for the removal of grinding grit, in the mid-seventeenth century. Dental hygiene, however, was fair. The group exhibited low levels of decay, calculus (tartar) and periodontal disease, despite the apparently normal rates of ante-mortem tooth loss. Low levels of calculus throughout the group may equally have resulted from a low carbohydrate diet.

There were no signs of chronic disease nor excessive trauma. The only pathologies noted during the analysis were those linked with old age. Minor trauma was noted in several cases, but all of these could be explained simply as accidental damage inflicted during the course of a normal life. Three probable cases of rickets were identified affecting one articulated skeleton, SK20, and two individuals whose bones were recovered from the sand/gravel pit. In each of these cases the most pronounced affect of vitamin D deficiency was displayed in the warpage of the femurs. Two cases of supernumerary (additional) lumbar vertebrae were observed in SK1 and SK9, while three cases of spina bifida occulta, the mildest form of the often fatal condition 'Spina bifida', were identified in SK6, SK14 and SK22. Four fractures were identified among the skeletal remains, each of these representing fairly mild accidental fractures. SK9 had two left rib fractures and a left medial finger phalanx, each of which had fully healed (albeit somewhat misaligned in the case of the finger). SK13 displayed a slightly more serious injury in the form of a compressed fracture of the first lumbar vertebrae, caused by a downward force impacting on the vertebrae. Compression or crush fractures of this nature are often associated with an underlying weakness of the bone, possibly osteoporosis.

The ages at death observed in this population may also be considered as normal, if the findings from larger cemeteries such as St Helen on the Walls

(Dawes and Magilton 1980) and St Nicholas Shambles, London (White 1988) are taken into consideration.

### Medieval hospitals in Britain

There is little doubt that independent hospitals were established during the Anglo-Saxon period, with King Athelstan's foundation of the great hospital of St Peter at York and his connection with other similar institutions at Bath and Malmesbury (Godfrey 1955, 16). This was the first of a long line of royal foundations, the last, in medieval times, being that of the Savoy, London founded by Henry VII, which was planned around a great cruciform structure with a lantern over the crossing, and incorporated a grave yard and part of the old Savoy palace, where a master and four chaplains provided accommodation for 100 poor (Godfrey 1955, 38). Other hospitals were founded by the church; for example, at Canterbury *c.* 1089 by Archbishop Lanfranc, Norwich in 1246 by Bishop Suffield, and St Cross, Winchester in 1136 by Henry de Blois (Godfrey 1955, 17). Some hospitals were even founded as gifts by wealthy landowners, as was the case of the 'isolation hospital' for Lepers founded by Roger de Mowbray (1138) at Burton Lazars, Leicestershire (Brown 1996, 31). The Newarke Hospital, Leicester, founded by Henry Earl of Lancaster in 1331, was dedicated to the Annunciation of the Blessed Virgin Mary. It had one of the longest infirmary halls in England (*c.* 66m long), and was built for the provision of 50 poor men. The structure and intake was enlarged by Henry's son to incorporate a collegiate church with a dean and 12 canons, 12 vicars, three clerks, six choristers and 10 nurses, by which time it could provide for 50 poor men and 50 poor women (Godfrey 1955, 30). It was reconstituted in the seventeenth century when it was renamed Trinity Hospital.

The medieval hospital arose out of the belief that the sick and suffering could purge their sins on Earth through prayer and confession, while their material needs were being satisfied by the hospital. A ruling of the fourth Lateran Council threatened excommunication of any medical practitioner who treated anyone who had not first made a full confession (quoted in Rawcliffe 1999, 103).

The length of stay of any particular inmate appears to have been flexible and based on the needs of the individual. At St Giles, Norwich, from which substantial records survive, between 1479 and 1503, 13 long-term inmates were recorded as 'paupers lying in bed', of which two stayed for *c.* six years, one for *c.* four years, one for *c.* three years, two for *c.* two years and the rest between *c.* six weeks and 11 months (Rawcliffe 1999, 166). In addition to inmates there may have been an outpatients facility; again, St Giles bears record to a few deserving cases in need simply of an overnight shelter and a halfpenny's worth of food.

Actual medical attention for the sick does not appear to have been widespread and, where present, was rudimentary. The tradition of employing barbers as surgeons is documented in the records of some of the larger hospitals such as St Giles, Norwich (Norwich City Records 24A – Archive of the Great Hospital – quoted in Rawcliffe 1999, 159), although the nature of the surgery undertaken may have been little more than a blood-letting and a good shave and haircut.

Better-qualified surgeons, some of whom may have trained at Oxford or Cambridge, did exist before the sixteenth century, although most would have had royal appointments or have been employed exclusively by the wealthy; doubtless, few would have tended the poor. Uroscopy (examination of urine), leeching (for blood-letting) and herbalism (using produce from the infirmarer's garden) were the mainstays of medical intervention at institutions such as St John's.

Most medieval hospitals were intended to provide both spiritual and material benefit to their inmates, and as such were usually run by religious bodies, if not by monastic orders. The Order of St Lazarus, which had its origin in Jerusalem, for example, administered several leper hospitals including that at Burton Lazars, Leicestershire. As such, the architectural design of medieval hospital complexes usually reflected this dual purpose. The plan normally centred on a large 'infirmery hall', which provided bed space for inmates in its aisles and a large central area for hospital staff to go about their daily duties. A chapel was usually situated at the eastern end of the infirmery hall. Such a plan can be seen in most monastic infirmaries, as at Christ Church, Canterbury, and also in independent hospitals such as St Mary's, Chichester (early thirteenth century) and Trinity Hospital, Leicester.

As well as a chapel and infirmery hall, a medieval hospital also required a range of buildings to sustain its daily requirements, including store houses for meat, grain, fuel and building materials, and stables and cart houses, facilities for malting, brewing, baking, cooking and butchery. Domestic spaces, notably the kitchens, were generally kept separate from the infirmery and chapel areas, so as to preserve their sanctity (Rawcliffe 1999, 55). As nothing suggesting the main hospital building or chapel was found at Lutterworth, the structural remains probably represent an ancillary building with associated outdoor yards and trackways. Archaeological investigations have demonstrated that hospital precincts were frequently enclosed in perimeter walls, or were fenced into discrete courtyards (Cullum 1993, 14–17; Thomas *et al.* 1997, 86, 101). The remains of the wall separating the structures and the cemetery may well be such a boundary.

Hospitals with landholdings used these as a means to boost revenue. St. Giles, Norwich is recorded as having produced 'apples, pears, leeks, garlic, onions, hemp, madder and honey' (Norwich City Records 24A – Archive of the Great Hospital quoted in Rawcliffe 1999, 53). St. John's, Lutterworth took this sideline a step further and managed and/or leased up to three local mills and farm land in various locations outside its immediate precinct, sufficient to have generated an annual income in excess of the local parish church of St. Mary's. Much of this revenue may have taken the form of produce such as wheat, rye, barley and oats paid either as rents by tenants or as donated as gifts by landed gentry and the mercantile elite.

## CONCLUSIONS

The deposits found during excavation in Area 2A appear to represent the cemetery and medieval buildings associated with the Hospital of St John the Baptist,

Lutterworth. The pottery from the site is typical of the region and suggests that although there was occupation in the vicinity from the eleventh century onwards, the principal activity on site dates to the thirteenth to mid-sixteenth centuries. This is consistent with the suggested dates for the cemetery and the documentary evidence for the foundation of the hospital in 1218 and its late fourteenth century decline, with the spital mills and mansion house subsequently leased out during the sixteenth century.

The excavated structures appear to represent ancillary buildings rather than the main hospital buildings or chapel, the remains of which are likely to have been destroyed by the building of the main road to the south. The cemetery was separated from the buildings by a boundary wall on its eastern side, and was truncated to the west by a large quarry pit and the main road. Most of the inhabitants were male as expected and seemed to be in relatively good health.

St John's Hospital managed and/or leased up to three local mills, in addition to sufficient farmland to have generated an annual income in excess of the local parish church of St Mary (Thompson 1910). None of the excavated remains at the mill site, however, appear to be medieval in date, and it would seem that the medieval Spital Mills of St John's were either destroyed by subsequent development or are located elsewhere.

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