UNIVERSITY OF LEICESTER
Archaeological Services

An Archaeological Strip, Plan and Sample Excavation at Friars' Mill, Bath Lane, Leicester NGR: SK 58002 04684

Donald Clark

ULAS Report No. 2015-170

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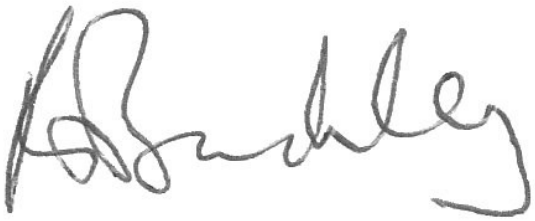
For: Leicester City Council

Checked by Project Manager

Signed:



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CONTENTS

ILLUSTRATIONS

An Archaeological Strip, Plan and Sample at Friars Mill, Bath Lane, Leicester

Summary

An Archaeological strip, plan and sample excavation was undertaken by University of Leicester Archaeological Services (ULAS) on behalf of Leicester City Council prior to redevelopment of land within the compound of Friars Mill, Bath Lane, Leicester. The site lies within the north-west quarter of the Roman and Medieval walled town and offered high potential for the survival of archaeological remains. The particular area of interest lies on the south-east corner of the proposed development site and a previous evaluation trench excavated by ULAS (Thomas 2015) exposed the remains of a Roman structural wall running north-west to south-east with associated surrounding deposits. Further investigation revealed more of the wall, mortar floor surfaces, a surviving section of north-east to south-west structural wall, a metalled surface, a linear feature and a large post-hole. No evidence of the Roman or medieval town defences were found but a large gravel deposit on the northern edge of the site may have been the fill of a large ditch. Roman building materials, pottery fragments and some metal finds were recovered. The site archive will be held by the Leicester City Museum Service under the accession code A10.2015.

Introduction

This report relates to an archaeological strip, plan and sample excavation at a site within the compound of Friars Mill, Bath Lane, Leicester, in advance of the construction of a new building. The archaeological work follows on from an investigation carried out by ULAS in July 2015 (Thomas 2015) when an evaluation trench exposed a section of surviving Roman wall, associated robber trench and surrounding deposits. The work was commissioned by Leicester City Council prior to development of the site and followed earlier archaeological work, by both Birmingham University Field Archaeology Unit (BUFAU) in 2003 and by ULAS in 2013 (Clarke), 2014 (Thomas) and 2015 (Thomas). In 2014-15, Leicester City Council embarked on a major project to restore and bring back into use the 18th century Friars Mill and associated buildings. The works entailed internal and external alterations to three grade II listed buildings (Friars Mill, the cottages and pump house) (amended application 20131614) and a three-storey extension to the side of the former mill; two storey extension to rear of offices; external alterations; new boundary walls, fencing and gates and associated landscaping (amended 20131613). In 2015, a planning application was submitted for the construction of two additional buildings, one on the south side of the site on the Bath lane frontage and one in the north-western part of the site close to the river (Fig. 2). As both lie in an area of known archaeological potential, one within and one without the walls of Roman and medieval Leicester, trial trenches were initially excavated by ULAS in the summer of 2015 to assess the nature, extent date, depth and significance of archaeological deposits. Two trenches were excavated in response to new proposals for buildings in the south-east and north-west corners of the development area (Thomas 2015). Trench 3, adjacent to the Bath Lane frontage at the southern end of the site, contained significant and well-preserved Roman structural remains and associated surrounding deposits. The structural evidence comprised two partially robbed walls forming the junction of an internal wall to an external wall, suggesting the existence of a north-south building approximately aligned on the Roman street grid and lying 25m to the north of a substantial public building found on the

the Merlin Works site (ULAS 2007). A complex sequence of layers either side of the walls indicated that surviving floors and surfaces survived in situ. These were overlain by a finds-rich layer of demolition debris from the building's demise, containing pottery, roofing tile, tesserae and painted wall plaster. The archaeology in this trench was surprisingly well-preserved and lay at a shallow depth, only *c*.0.70m below present ground level at its highest. An assessment of levels indicated that whilst the proposed pile caps could be accommodated above the archaeological deposits, the latter would still be affected by the installation of CFA piles. Although these would only affect less than 3% of the footprint of the building, they would go through complex structural remains and in some cases, would be unable to penetrate solid Roman masonry. For these reasons, the City Archaeologist then required the full footprint of the proposed building to be stripped of overburden to determine the impact at each pile location. This would then be followed by further archaeological excavation of affected deposits. The Written Scheme of Investigation (Buckley 2015) provides details of the methodology to be adopted for the site strip and further excavation.

Location and Geology

The site lies in Leicester City Centre on the west side of Bath Lane and was formerly occupied by Friars Mills, a textile factory, which closed by 2005, with some of the later ancillary structures demolished in 2009. In 2012, the empty buildings on site were subject to arson attack but are presently undergoing a programme of redevelopment and restoration. The British Geological Survey of England and Wales, shows the underlying geology to consist of alluvium - clay, silt, sand and gravel with the bedrock over Branscombe Mudstone Formation (BGS Geology Viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html). The site lies at a height of c.53m OD.

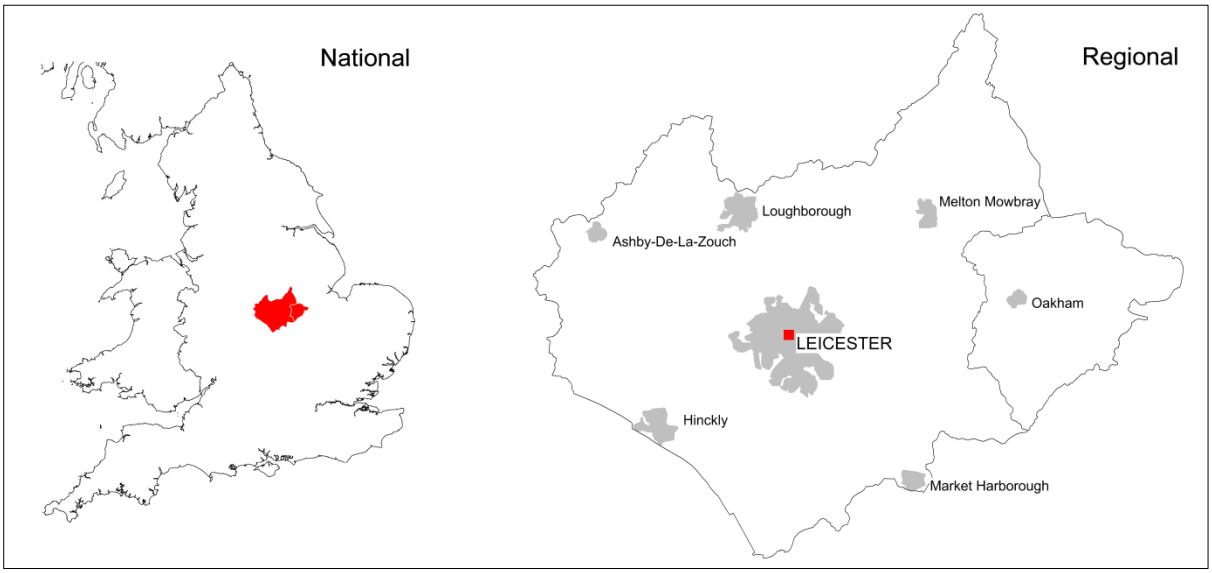

Figure 1 Location

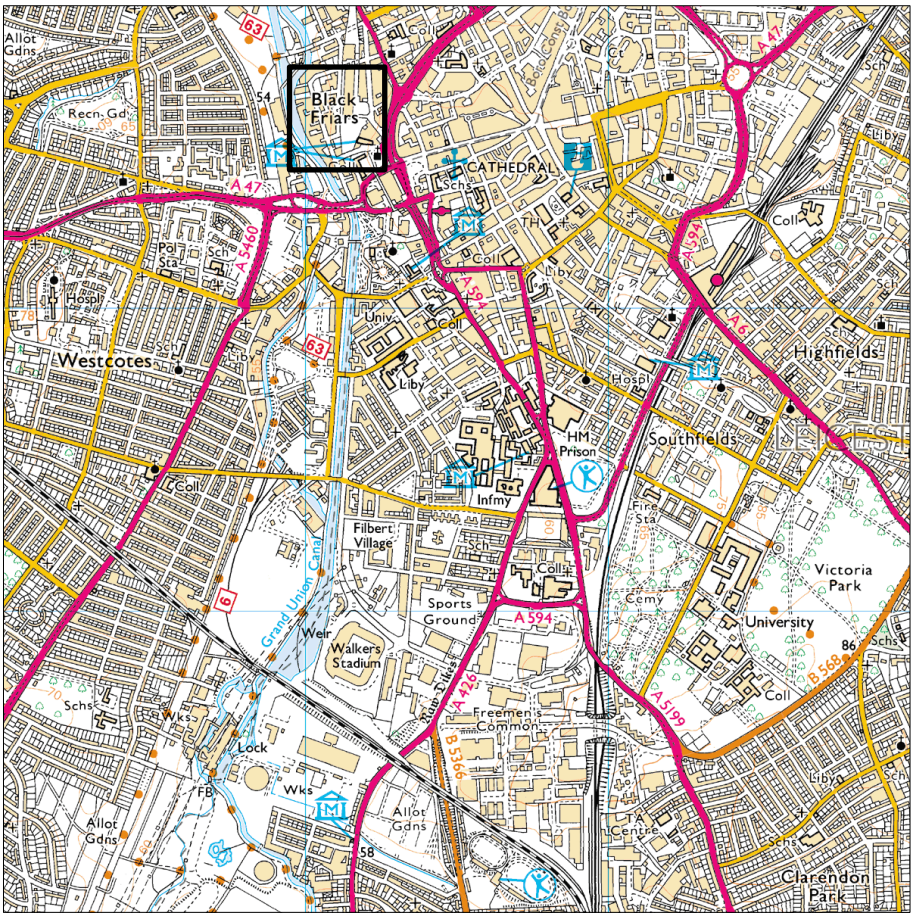

Figure 2: Site location within modern Leicester

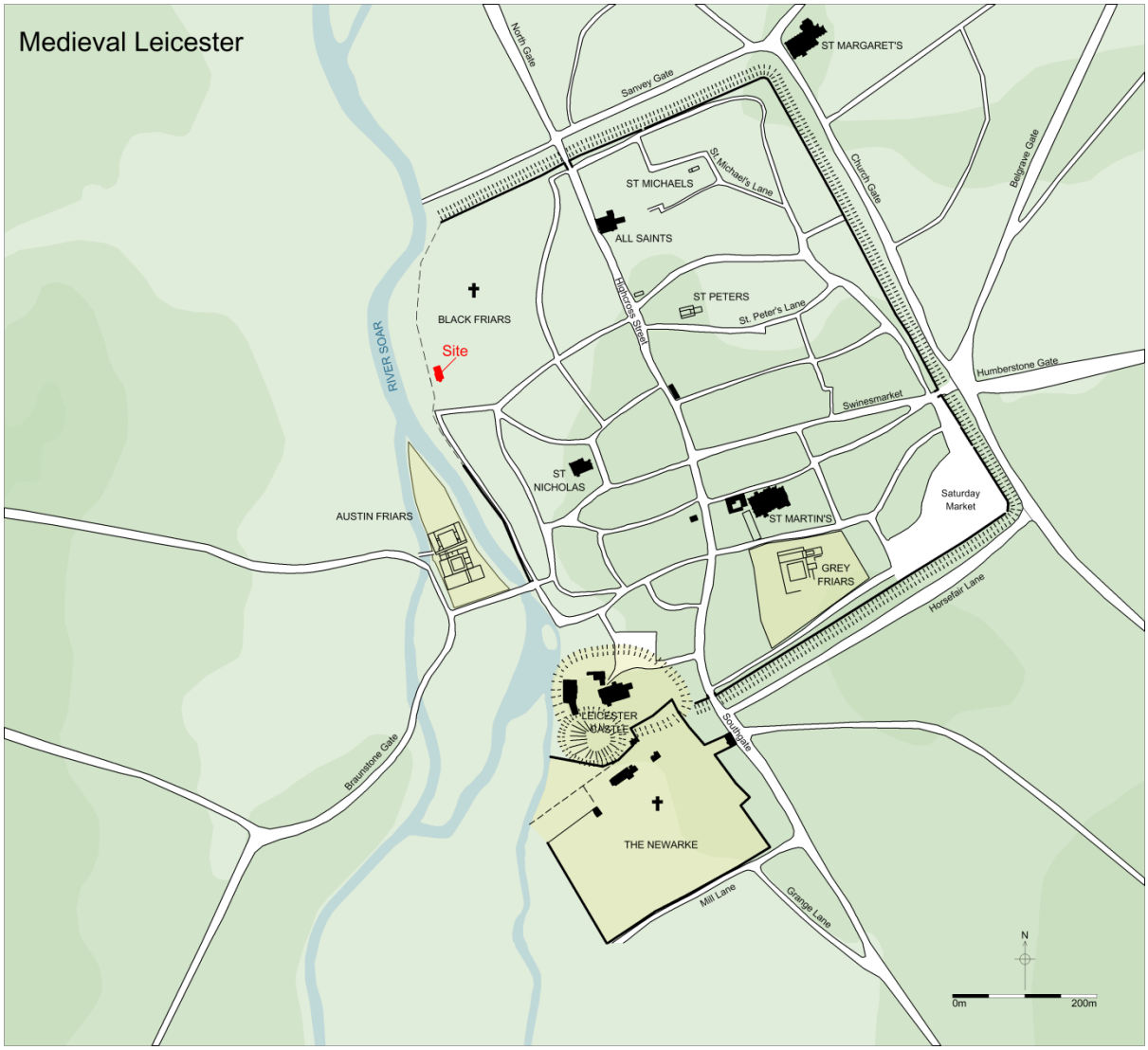

Figure 3: Site within Medieval Leicester

Figure 4: Site within Roman Leicester

Archaeological and Historical Background

The site lies within the north-west quarter of the historic core of the Roman and medieval town of Leicester in an area of extremely high potential for archaeological remains of the prehistoric, Roman and medieval periods in particular. The site is occupied by Leicester's earliest surviving purpose-built factory, of significant interest as an important survival on a site with early associations with a highly significant phase in the development of Leicester's textile industry.

Iron Age

At Leicester the development of the Roman and medieval town has meant that evidence of the Iron Age settlement has been severely truncated. A possible circular house was found at St Nicholas Circle and pits and a burial were present at Blackfriars Street. Evidence of the extent of the settlement has depended on the distribution of Later Iron Age artefacts. These include pre-Roman imported pottery from Gaul, Italy and Spain represented by Arretine ware, Gallo-Belgic butt beakers and Terra Rubra/Terra Nigra ware. At Blackfriars Street fragments of flan trays may be evidence of coin manufacture, and further fragments have been discovered on recent sites on both sides of Bath Lane. The distribution of Iron Age finds

from Leicester, however, does suggest a large lowland settlement covering *c*.8ha and the type of material would suggest a high status settlement with extensive trading links by the time of the Roman conquest. It was this settlement which was to become the Civitas Capital during the Roman occupation. It is worth noting that Roman military artefacts have been found within the area immediately to the south of the Blackfriars study area, including fragments of horse harnesses and the cheek piece of a Roman cavalry helmet. Such remains may indicate a military presence in the Blackfriars area at the time of the Roman conquest.

The Roman Period

After the Roman conquest, there is limited evidence to suggest that a small fortlet was established to control the crossing point of the river near the present West Bridge. Evidence for timber buildings of the pre-Flavian period has been encountered, with the suggestion, on the basis of uniformity of alignment, that they have more in common with buildings within a fort than with a native settlement or vicus. Timber buildings later in the first century are on a different alignment, and are considered to represent the first Roman town, expanding to the east from the river, with the presence of wall plaster and opus signinum suggesting the gradual adoption of Roman tastes.

In the early 2nd century, a formalised street plan began to be adopted, and the town became the civitas capital of the region; Ratae Corieltavorum. The town was divided up into rectangular blocks, known as insulae. Rapid expansion and increased prosperity of the town and its inhabitants is indicated for this period. By the latter part of the 2nd century a major scheme of public and private building occurred. The Forum and Basilica, the Jewry Wall baths, at least one temple site and a variety of domestic, commercial and industrial premises were erected, together with large public buildings of uncertain function on either side of Bath Lane, to the south and east of the application area. Town Houses of apparent high status have been recorded over much of the northern half of the walled area, the evidence including stone walls; mud brick walls; tesselated pavements; mosaics; bath houses; hypocausts; and painted wall plaster. In the late second or early third century, the town was defended with a rampart and ditch, with a wall perhaps being added later in the third century. A stretch of the western defences, to the south of the application area has been recently excavated on two sites to the south of the application area at Westbridge Wharf and Merlin Works on Bath Lane. The exact line of the western defences has not been confirmed where it passes through the Blackfriars area, although the line of the northern stretch can be tentatively projected.

There is some evidence for suburban occupation outside the walls to the north comprising both timber and, possibly, substantial masonry buildings, together with cemeteries.
The proposed building behind the cottages on the Bath Lane frontage crosses the projected line of the Roman town wall and rampart. The area between the town wall and the river Soar is considered to be of lower potential, but could contain evidence for the town ditch or ditches, earlier courses of the river Soar and burials.

Post-Roman and Medieval Period

Excavations some 250m to the south of the town, adjacent to the Roman road to Tripontium (Caves Inn) revealed the truncated remains of two sunken-featured buildings associated with finds of the fifth-sixth centuries. These represent the first Anglo-Saxon structures to be located in or near the Roman town, but may indicate no more than a small suburban settlement. Within the walls, structures of this period with associated pottery and other finds have now been identified at Freeschool Lane and Vaughan Way, whilst other sites in the north-east quarter of the walled area have also produced early Anglo-Saxon finds and in some cases, possible structural features. The density of the Saxon finds recovered from excavations

in the north-east quarter suggests extensive Anglo-Saxon domestic occupation during the 5th, 6th and 7th centuries within this area of the walls.

There is little archaeological evidence so far, for late Saxon occupation and only the church of St. Nicholas, in the Jewry Wall area, has fabric of this period. The medieval 'High Street' (later renamed Highcross and Southgate Streets) was probably the main focus of settlement at this time. Recent excavations at Freeschool Lane have now revealed evidence for late Anglo-Saxon timber buildings and associated finds on the medieval High Street frontage.

The Dominican Friary of the Blackfriars was established in the north-west corner of the town, first mentioned in 1284, and by the 14th century had more than 30 friars. Although the rough location of the precinct is known, the location of the monastic buildings is not. Somewhere in this same area was the church of St Clement, which later evolved into the Friary Church of the Dominicans. Recent excavations at the Merlin Works site to the south of the study area revealed the southern precinct wall of the friary. Given that the projected line of the town wall runs through the eastern side of the study area, evidence for the friary is perhaps unlikely, although there is potential for openings in the town wall allowing access to the river by the friars.

Post medieval

The principal mill building which fronts onto the River Soar is thought to have been constructed between 1794 and 1820. The Leicester map of 1828 records the site as 'Stubbing Mill', stubbing being a part of the process of milling raw wool. By 1887, the site is recorded as Friars Mills and incorporates the Pump House and Bath Lane Cottages. By the late 19th century the site was owned by Donisthorpes and Co., later described as 'suppliers of Hand Knitting Wools and Cotton Yarns to Central Europe and Scandinavia for over 100 years' in a trade advertisement of 1938.

Archaeological evaluation was undertaken on the site in 2014 by University of Leicester Archaeological Services (ULAS) in advance of redevelopment and refurbishment of Friars Mill by Leicester City Council. Two trenches were excavated, with both containing a series of deeply stratified layers overlying probable alluvial deposits. Trench 1 adjacent to the River Soar, had layers of mortar-rich soil overlying waterlogged deposits possibly reflecting filled ditches, or channels associated with the river. Trench 2, on the western side of the site contained a thick layer of silty clay with some occupation debris, overlying what appeared to be layers of alluvium. A small assemblage of Roman and medieval pottery and tile was recovered. No evidence was found for the defences of the walled Roman and medieval town. The site archive is held by Leicester City Museum Service, under the accession code A24.2014.

Archaeological Research Objectives

The project has the potential to address the following East Midlands Research Agenda Topics (Knight *et al* 2012):

Iron Age

Late Iron Age Settlements (4.5). How are the settlements related to one another and to other settlements of the period? In particular is there evidence for a developing settlement hierarchy? (4.5.2)

Finds, crafts, industry and exchange How can we add to our existing knowledge of industries and crafts in this region (4.9.1); what can we determine from artefact studies about trade and exchange and the role of coinage (4.9.3).

Roman

Chronology (5.1); How can we advance our knowledge of the chronology of metal finds, particularly brooches? (5.1.4);
The military impact (5.2); Can we define more closely the distribution of early military sites and their periods of use? (5.2.3).
Growth of Urban Centres (5.3); How does the distribution of towns correlate with Iron Age foci and how far may their social, political and economic roles have overlapped? (5.3.2); How were towns organised, what roles did they perform and how may their morphology and functions have varied over time? (5.3.4)
Ritual and Religion 5.8: Why have so few early Roman burials been found, and may practices have varied regionally and between different communities? (5.8.4).

High Medieval

Urbanism (7.1) How did the major towns develop after the Norman Conquest (7.1.1); Can we define more closely the industrial and trading activities associated with towns and the nature and extent of urban influence upon the countryside (7.1.2)
Religion (7.5). Can we identify additional pre-Conquest church, minster and monastic sites (7.5.1).

Specific objectives of the excavation will be:

- To identify the presence/absence of any archaeological deposits.
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground works.
- Excavate archaeological deposits which will either be destroyed or damaged by piles, or where future interpretation of the stratigraphy will be compromised.
- To produce an archive and report of any results.

Methodology

All work followed the Chartered Institute for Archaeologists (CIfA) Code of Conduct (2010) and adhered to their Standard and Guidance for Archaeological Excavations (2010).

Internal monitoring procedures were undertaken including visits to the site by the project manager. These ensured that project targets were met and professional standards were maintained. Provision was made for external monitoring meetings with the Planning Authority and the Client, if required.

During the machining, general photographs of the site areas, including access areas, were taken. All machine movements were controlled by a trained archaeologist acting as a banks man.

Following archaeological field evaluation of the site (Thomas 2015), an assessment was made of the impact of the piled foundations of the proposed building upon buried archaeological remains. This indicated that whilst the pile caps would only disturb modern deposits, the augered piles would penetrate complex archaeology, with an adverse effect on significant stratigraphic relationships. In addition, it was clear that the augered piles would not be able to pass through any mortared stone walls that might be present without prior excavation to remove the obstruction. Since the piles would disturb less than 5% of the footprint of the proposed building, the strategy agreed with the City Archaeologist was to strip overburden from the entire footprint of the new building, followed by limited investigation to record archaeological deposits in plan, with sample excavation of particular features to determine date and sequence. In addition, the position of the proposed piles was

plotted on the ground and these areas were subject to more detailed excavation to mitigate damage which would occur to archaeological deposits when they were installed.

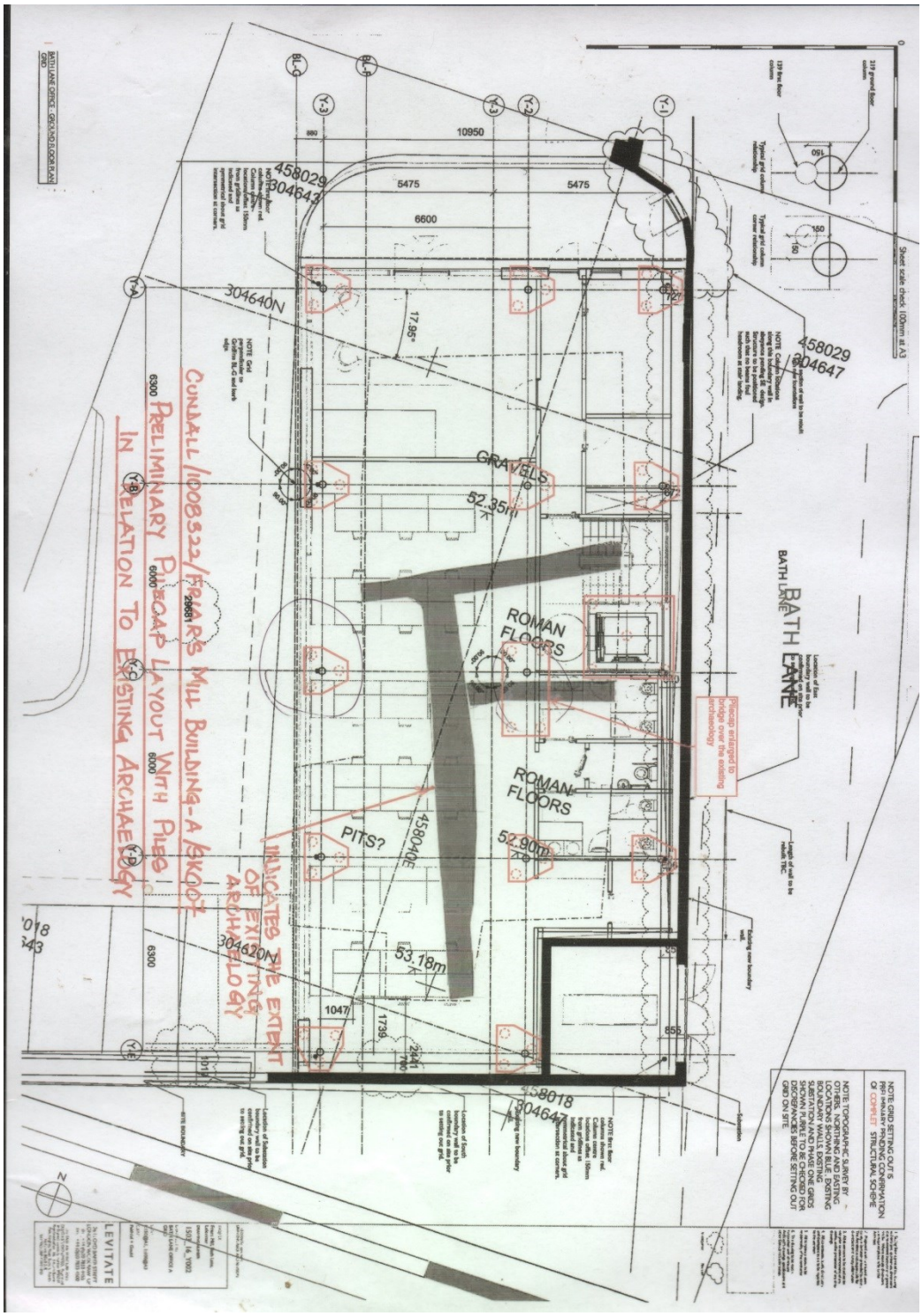

Figure 5 Draft piling plan in relation to archaeology. North to top. Not to scale

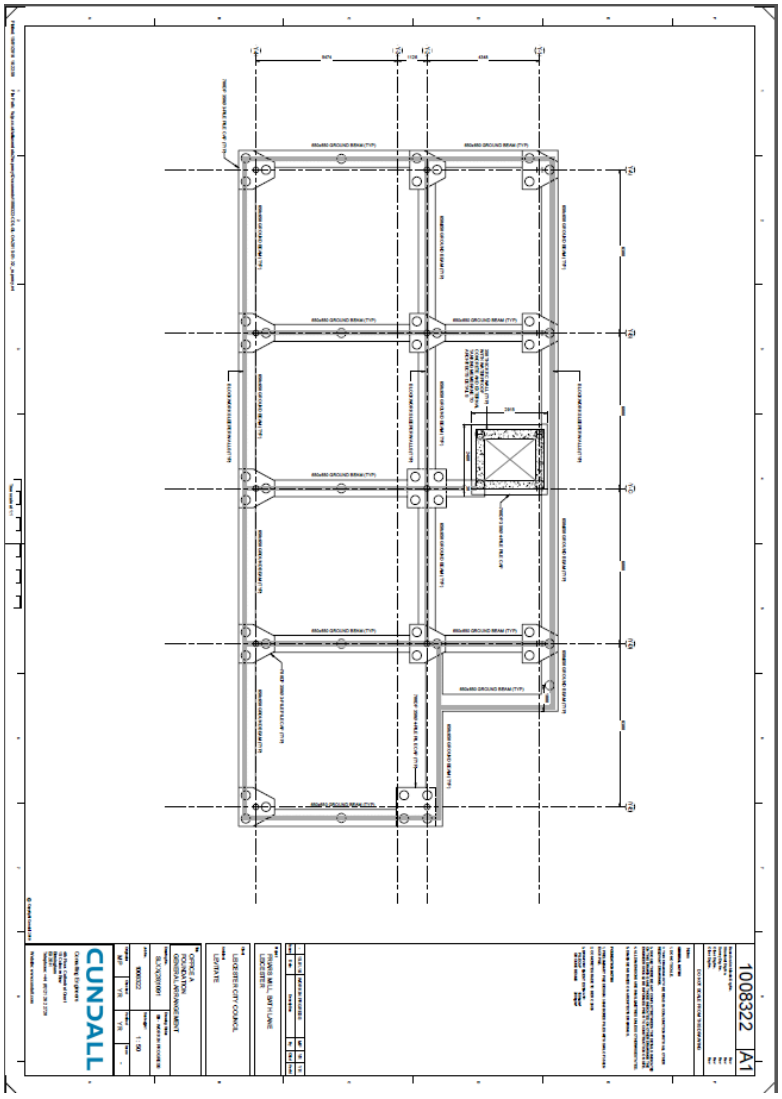

Figure 6 Final piling plan

Topsoil and overburden within the footprint of the proposed building was removed carefully in level spits, under continuous archaeological supervision by a mechanical 360 degree excavator using a toothless bucket. The building footprint was excavated down to the top of significant archaeological deposits. All excavation by machine and hand was undertaken with a view to avoid damage to archaeological deposits or features which appeared worthy of preservation in situ or more detailed investigation. Where structures, features or finds appeared to merit preservation in situ, they were adequately protected from deterioration.

The excavated area was examined initially by hand cleaning to characterise the archaeology and deposits located were planned at an appropriate scale. Archaeological deposits were sample-excavated at proposed pile-location points by hand as appropriate to establish the stratigraphic and chronological sequence, recognising and excavating structural evidence and recovering economic, artefact and environmental evidence.

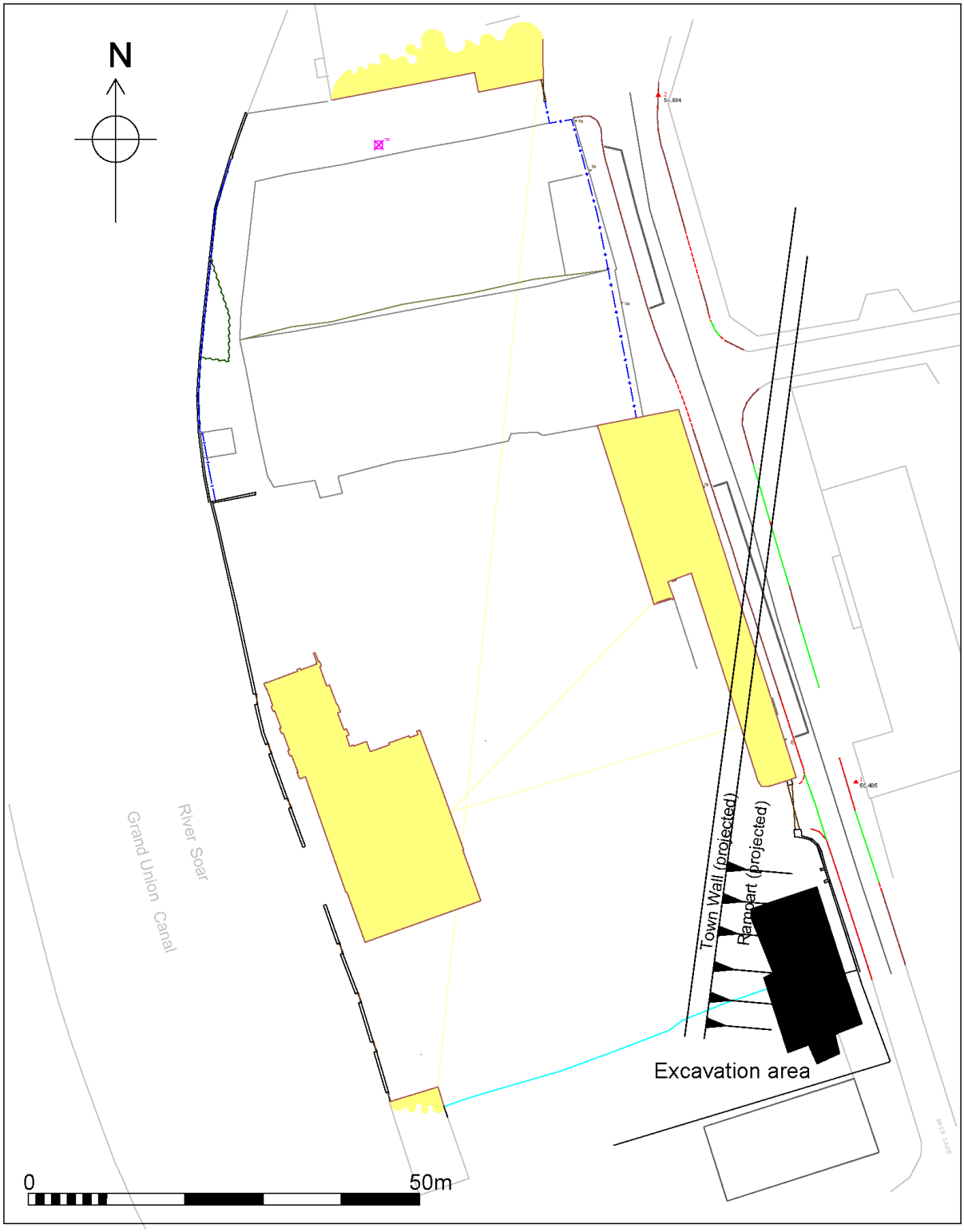

Figure 7: Location of excavation area (shaded black)

Results of excavation

Early Roman activity

Building 1 (Linear feature)

The earliest recorded activity on the site was represented by an east-west orientated linear feature located on the south-east of the excavated area which pre-dated the construction of Building 2. The steep sided gully recorded as [573] and [634] was discovered beneath the foundations of wall [308] and also beneath the floor layers and make up material of the building as it continued east towards the limit of excavation. The gully was cut into the natural gravel deposits and appears to have silted up prior to being overlaid by ground levelling layers (615) and (616). The gully fill (574) was described as mid yellowish brown sandy silt containing small pebbles and occasional flecks of charcoal. Pottery recovered from the gully has been dated to mid-1st century Roman, so the feature could represent activity in either the late Iron Age or the early Roman period in this area of Leicester. The steep sided profile of the gully may suggest it served a structural use but no other contemporary features were found to confirm this.

Figure 8: Building 1 gully [573] looking north-east

Figure 9: Building 1 gully [634] looking south-west

The gravels

In the north east corner of the site a machine excavated trench revealed a deep deposit of golden brown sand and gravel. The trench was 5.50m in length and 0.80m in width and was excavated to a depth of 1.70m but due to collapse only a depth of 1.20m was recorded. The gravel is similar to the natural but is recorded at a higher level and it is possible that the gravels were used to backfill a large cut feature, possibly connected to early town defences. No dating evidence was recovered.

Ground preparation

The natural yellow gravels were overlain by a thin deposit of light brown sandy silt with frequent small pebble inclusions (616), this layer was 0.20m thick and could be interpreted as either an interface between natural and deliberate levelling or the first stage of the ground levelling process. No finds were present in the areas excavated. Overlaying (616) was a 0.60m thick deposit of dark green brown clayey silt with frequent small pebble inclusions (615). Also included in the layer were fragments of animal bone, occasional sherds of pottery and regular flecks of charcoal. This layer is also recorded as (519) in the northern end of the site. This was a deliberate ground levelling layer laid prior to construction of the walls and mortar floors in the southern end of the site, while in the northern end the levelling layer was overlaid by metalled surfaces (517) and (518). The pottery found in the levelling layer has been dated to the 2nd century which coincides with the erection of large public buildings in Leicester and the formal layout of the street plan.

Building 2

Building 2 was represented by two sections of partly surviving masonry wall, one external and the other internal, associated robber trenches and mortar floors and comprised a

minimum of two rooms. The footprint of the building within the site was recorded as 12.40m by 8.34m covering an area of 103.50 square metres. To the north of the site and on the outside of the building, metalled surfacing created a walkway or yard area. Within the two rooms of the building mortar floor surfaces survived and a small amount of painted wall plaster was recovered.

Figure 10: Site plan showing building 2 and building 1 gully

External wall

Situated centrally across the full width of the excavation area, the external wall was constructed on a north-east to south-west alignment, the complete length of the wall was not revealed due to the confines of the excavation area, but a length of 8.34m was recorded; this measurement breaks down into a partly surviving section of masonry wall [521] at 1.25m and a robber trench [309] at 7.09m. The surviving section of masonry wall measured 0.80m in width at the plinth/base then reduced to 0.60m in width on the main superstructure; the height from the top of the foundation to the highest surviving level of the wall is 0.39m.
The wall was constructed of coursed granite blocks forming flat outer faces but with irregular arrangement. Two courses of granite blocks survive along with the granite plinth which is formed by more regular squared granite blocks; the core was formed by irregular pieces of roughly hewn granite. The core and granite blocks were held together by a strongly cemented creamy yellow mortar. The masonry wall continued into the western section at the edge of the excavated area and may survive further in a south-westerly direction.
The foundations [562] of the wall were substantial, much more so than the foundations of the internal wall [308], and were constructed of large leaf-shaped granite pieces which were deliberately positioned within the foundation trench in a herring-bone pattern to provide a strong base for the superstructure. The well-constructed foundations may indicate either a large building with more than one storey or that the ground was unstable, possibly due to its close proximity to the river. The remaining masonry continued into the trench wall on its western side, the exposed wall was protected in situ, should further investigation be required.

Figure 11: Wall [521] and foundations [562] looking south-west

The external wall is mostly represented by the robber trench [309]. This robber trench only reached the base of the superstructure where it attained a bulbous shape in profile possibly indicating where a plinth had continued as part of the main superstructure. The robbers did not excavate deep enough to disturb the large granite pieces which form the foundations, these remain in situ. The robber trench survived at 0.40m below modern ground level and is recorded in the eastern wall at the edge of excavation. The infill of the robber trench [310] was dark greyish brown silty sand containing ceramic building material, crushed mortar, broken slate and granite blocks of various shape and size, an assortment of Roman and medieval pottery and fragments of animal bone.

Figure 12: Robber trench [309] looking north east

Internal wall

Situated centrally partway along the length of the excavation area, the internal wall was constructed on a north-west to south-east alignment, the complete length of the wall was not revealed due to the confines of the excavation area but a length of 12.40m was recorded; this measurement breaks down into a partly surviving section of masonry wall [308] at 5.40m and a robber trench [303] measuring 7m. The remaining section measured 0.80m in width at the base of the superstructure and narrowed to 0.65m in width at the highest surviving course with a height of 0.92m measured from the mortar floor. The wall was constructed of coursed granite blocks forming flat outer faces, with coarse rubble 'infill' of smaller granite fragments and pebbles all bonded with a creamy yellow mortar.
The lower four courses of the wall on its eastern face were constructed with regular long thin granite blocks while the top four courses were constructed more randomly with smaller irregular shaped granite blocks; this may indicate repair or rebuilding of the wall. It is also

worth noting that the mortar bonding the upper courses was less concrete than the lower bonding and a slightly darker yellow in colour. On the western face of the remaining wall the coursing was made up of random and irregular shaped granite blocks from the base to the upper levels, and the differences between the east and west faces may indicate that the western face may have been at some point either an outside wall or part of a covered outside space; this is backed up by the difference in the floor surface on the western side of the wall, as is detailed below. At the southern end of the remaining wall superstructure there is a mid-way plinth suggesting that there may have been a step in the building. The foundation cut [572] had originally been cut through the ground levelling layers (615) and (616) and then backfilled with a mixture of small granite blocks, mortar, large pebbles, sand and gravel, to create a solid standing for the wall. The entire section of remaining wall was not fully excavated due to constrictions of the agreed archaeological work, but this section has been protected in situ should further investigation ever be required.

Figure 13: Wall [308] looking south-west

A ‘robber’ trench is created when a previous surviving section of masonry wall has been removed; in this case probably for re-use in the medieval period, and the then empty trench is backfilled with a material different to the material which had survived around the wall, creating a visible linear feature.

The robber trench [303] formed a slightly wavy linear feature extending from the surviving section of masonry wall [308] to the north-east to south-west aligned wall, also defined at this point by a robber trench [309]. The fill of the robber trench (304) was dark grey brown silty clay containing a heavy concentration of pottery and demolition debris (Thomas 2015).

Figure 14: Robber trench [303] with wall [308] in foreground. Looking north-west.

Mortar floor surfaces

In Room 1 on the eastern side of internal wall [308] there are the fragmented remains of a mortar floor; a large area [526] measuring approximately 3.60m x 2.40m survives, although truncated by a Victorian culvert [502], this comprised of a yellowish white lime mortar mixed with fine gravel and large granite chippings. In the section created by the truncation a thickness for the mortar floor was measured at 0.11m. There was no evidence that any feature flooring such as tile or mosaic had been removed, and the type of flooring may indicate a utilitarian function of the building. The floor was preserved in situ should further investigation be required.

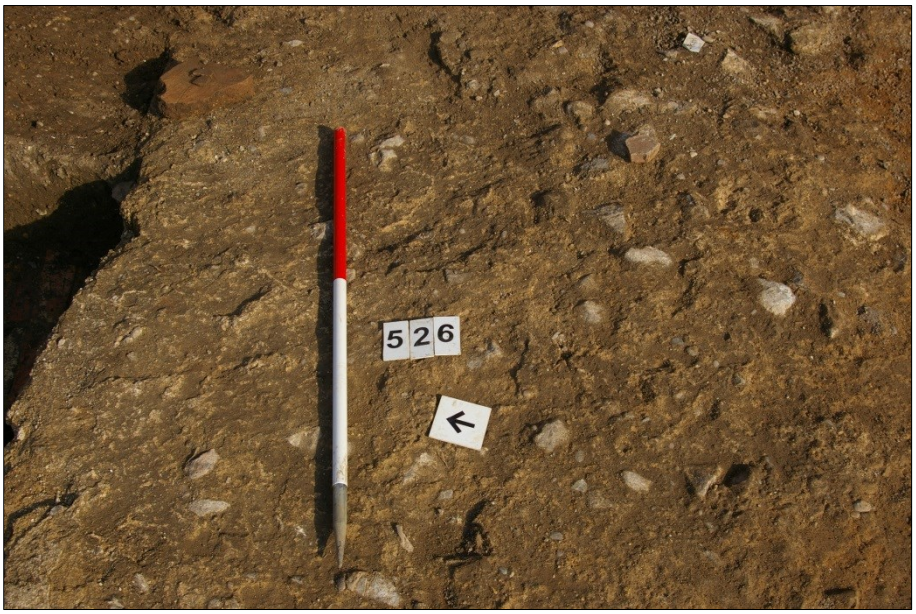

Figure 15: Mortar floor surface [526] looking east

Figure 16: Mortar floor surface [526] looking south at the section created by truncation [502]

Another surviving section of mortar floor surface abuts wall [308] on its eastern face and has also survived along the edge of robber trench [303]. The section created by the removal of robber trench infill revealed two thick layers of mortar floor [614] being the earliest phase and [532] the later, both approximately 0.12m thick; these two layers were divided by a reddish brown silty sand layer measuring 0.09m thick. [614] was recorded as a light yellow lime mortar containing occasional small pebbles and [532] was recorded as similar but with additional granite chippings.

Figure 17: Mortar floor surface [532] where it abuts wall [308]

Figure 18: West facing section created by removal of robber trench infill (568) revealing two distinct phases of mortar floor

In addition to the above mentioned areas of surviving mortar floor there were occasional patches of mortar visible within the eastern confines of the two walls; where there was no mortar the floor consisted of an orange brown mix of sand and gravel. This may represent an attempt to repair the floor during later usage of the building.

Figure 19: Sand and gravel floor surface [528] looking east

In Room 2 on the western side of internal wall [308] is a substantial mortar floor [643], the floor seems complete with only minor truncation but due to confines of the excavation area only a section approximately 3.60m by 4m was recorded. The floor abuts wall [308] on its western face and continues to the western edge of the excavation. This section of floor was not excavated but a small truncation on the southern edge of the excavated area revealed that the mortar overlaid a bed of granite chippings, and that the granite chippings overlaid a layer of made up ground [519]. The made up ground [519] consists of greenish-brown silty clay with flecks of charcoal and mixed with small fragments of broken pot, animal bones and small pebbles and appears consistently throughout the excavated area. Above the mortar floor there was evidence of medieval pitting, but none of these pits, when originally excavated, were able to penetrate the solid surface.

Circular feature

Located in the south eastern quadrant and close to the southern limit of excavation is feature [530], a circular arrangement of granite pieces bonded with creamy white mortar. The diameter of the feature is 0.75m and was recorded as 0.25m in depth and was approximately 2m from the east face of wall [308]. It is unclear whether the feature cuts the mortar floor at this point or that the mortar was set around the feature. It may be contemporary with the wall and a structural part of the building but there is no way to be certain. No other similar features were discovered on the site.

Figure 20: Circular feature (530) looking south-east

Metalled surface (The outside area)

Two phases of metalled surfacing were exposed at the northern end of the excavated area, both measuring approximately 0.1m in depth, 1.80m in width and extending to the limit of excavation, and probably continuing beyond; and running parallel to the north-east south-west wall. Surface [518] overlaid the make-up layer [519] and consisted of tightly packed rounded pebbles of various sizes and light brown grey silty sand with occasional patches of orange sand; this was subsequently overlain by surface [517], which similarly to [518] consisted of tightly packed rounded pebbles of various size and light brown grey silty clay with patches of orange and reddish brown sand. The position of the metalled surface in relationship to the 'building' suggests it may have formed an outside yard area or pathway.

Figure 21: Metalled surfaces (517) and (518) looking north-east

Pile positions

The need for archaeological investigation in this area is necessitated by the need to determine what archaeology may be affected by the proposed construction, and specifically excavate and record any areas that are directly affected by the piling strategy. It was decided that three areas were to be affected and these areas were then excavated down to the natural deposits.

Position 1
Located in the south of room 1 piling position 1 [601] was excavated down to the natural gravel. The sondage measured 1.40m in length and 0.94m in width, natural gravel was

reached at 0.74m below the mortar and gravel floor surface. Cut into the gravel was the continuation of gully [573], recorded within the sondage as [634]. The gravel was overlaid by layer (602); a greenish brown silty clay which contained flecks of charcoal and small rounded pebbles and very similar to make up layer [519] which is seen throughout the site. The silty clay layer was overlain by a narrow band of tightly packed granite chippings and brown clay (603), possibly connected with an earlier phase of flooring [614], and this was overlain by a layer of orange brown sand and gravel recorded in the sondage as (605) and the same as (528).

Figure 22: Piling position 1 [601] looking south east; featuring gully [634]

Position 2

Piling position 2 located in the centre of the excavated area within room 1 was directly in line with a Victorian brick culvert [516]. The brickwork was removed and the remaining trench, measuring 1.25m in length and 0.70m in width, excavated down 0.75m to the natural deposits of sand and gravel. Overlying the natural was bedding sand used in the construction of the culvert, which in turn was formed by the laying of brick voussoirs to create a long cylindrical drain. With the brickwork removed the section created when the trench had been excavated allowed a view of the mortar floor in section and of the make-up layers below. The make-up layer [602] was identified and a coin was recovered from it. The coin was identified as a copper alloy *As*, most likely a Claudian copy dating from 41 to 54AD. No archaeological features were visible cutting into the natural deposits.

Figure 23: Piling position 2 featuring Victorian brick culvert [516] looking south-west

Position 3

Located in the north eastern quadrant of the excavation and within the metalled surface area [517], piling position 3 was excavated down to the natural gravel deposits. The sondage measured 1.40m in length and 1m in width, natural gravel was reached 0.68m below the metalled surface. Overlaying the gravel was a series of make-up layers similar to others across the site, a mix of silty clay with charcoal, pottery and animal bone.

Figure 24: Piling position 3 looking south-east

In the north western corner of the sondage a substantial post-hole [617] was recorded. The post-hole appears to postdate the metalled surface [517] and much of the stone 'packing' had survived in situ. The post-hole was 0.66m in diameter and 0.75m in depth and the fill (618) was described as dark brown silty sand containing occasional small pebbles and a minor amount of ceramic building material. Two fragments of pottery were recovered and these have been dated from the mid to late 1st century. It is unclear what function the post-hole served or if it was contemporary with either building 1 or 2 on the site, but its proximity to the outer wall suggests some connection.

Figure 25: Posthole [617] looking south-west

Figure 26: Posthole [617] showing stone packing, looking north-west

Position 4

Located in the western edge of room 2 pile position 4 was excavated down 1.50m to a natural gravel deposit. This natural gravel was overlain by ground levelling layers [645] and [644] which are similar to levelling layers across the rest of the site. The levelling layers were overlain by mortar floor [643], a light brownish white mix of mortar and gravel. The mortar floor was overlain by a green brown silty clay layer [642] which contained gravel, charcoal flecking and a sherd of Roman pottery dating to the late 1st or early 2nd century. Layer [642] was overlain by a layer of silt clay which contained crushed mortar, ceramic building material and slate [641], this layer is thought to be a layer of demolition material and contained Roman and medieval artefacts.

Figure 27: Piling position 4 showing area of mortar floor [643] looking west

Conclusion

An archaeological strip, plan and sample excavation took place at the site of Friars Mill, Bath Lane, Leicester following an archaeological evaluation by ULAS (Thomas 2015) which had revealed the remains of a granite-built Roman wall. The main objective of the excavation was to mitigate against damage to any archaeology that would be caused by intrusive building techniques i.e. augered piling. Four piling positions were identified as requiring investigation and these were excavated down to the natural substratum. Piling position 1 revealed the continuation of a steep-sided gully first uncovered beneath robber trench [303], this gully is all that was uncovered of the earliest structure on site (Building 1) mid to late 1st century. A second phase of building work in the early 2nd century involved levelling the ground prior to building in stone. The subsequent investigation revealed the partial footprint of a large Roman building with a floor area uncovered during the excavation of approximately 103

square metres with the building continuing beyond the limit of excavation. The dating of the pottery assemblage suggests that the site had initially been occupied in the mid to late 1st century, where a gully found may suggest an early wooden structure. In the 2nd century, during a time of intensive public building within Leicester, a later masonry building was erected using granodiorite quarried from the Charnwood area of Leicestershire. It is possible that building 2 was in use from then until the end of the Roman period as the date of pottery ranges to the late 4th century. There is evidence that the internal wall may have been repaired at some stage and the floor in Room 1 had been laid in mortar twice and then repaired again with sand and gravel, again suggestive of long term usage of the building. Fragments of painted wall plaster were recovered from the site, the low amount may suggest that the greater proportion of internal walls were not decorated in this manner, and in course this may strengthen the case that the building had a more functional use but a few fragments show signs of earlier painted surfaces that had been plastered over and repainted, in some cases more than once. It is possible therefore that the building had contained a more decorative interior and that any evidence of this had been removed post demolition. The function of this building is not clear but we can surmise it consisted of at least two large rooms with durable floors, and the small amount of finds suggests non-domestic activity, however a sample of the finds dating to the later Roman period have been attributed to a high status building, for example the dolphin shaped wine handle (SF 8) and some of the pottery such as the Oxfordshire colour-coated ware. Its association with other buildings in the vicinity cannot be established at this time, however its proximity to other Roman buildings, 15m to the east (Slater 2014) and 25m to the south (Merlin Works; ULAS 2007) indicates an area of occupation and activity during the Roman period. The alignment of the building, north-west to south-east, is similar to the building excavated at the Merlin Works and suggests our building would sit within the known grid plan of Roman Leicester. The carved block of masonry found in the overburden may have belonged to the building or it may have come from the large aisled building to the east (Slater 2014).

Publication

A summary of the work will be submitted for publication in the local archaeological journal in due course. The report will be added to the Archaeology Data Services *Transactions of the Leicestershire Archaeological and Historical Society* (ADS) Online Access to the Index of Archaeological Investigations (OASIS) database held by the University of York.

OASIS Information

ID	**OASIS entry summary**
Project Name	Strip, plan and sample at Friars Mill, Bath Lane, Leicester
Summary	*An Archaeological strip, plan and sample excavation was undertaken by University of Leicester Archaeological Services (ULAS) on behalf of Leicester City Council prior to redevelopment of land within the compound of Friars Mill, Bath Lane, Leicester. The site lies within the north-west quarter of the Roman and Medieval walled town and offered high potential for the survival of archaeological remains. The particular area of interest lies on the south-east corner of the proposed development site and a previous evaluation trench excavated by ULAS (Thomas 2015) exposed the remains of a Roman structural wall running north-west to south-*

	east with associated surrounding deposits. Further investigation revealed more of the wall, mortar floor surfaces, a surviving section of north-east to south-west structural wall, a metalled surface, a linear feature and a large post-hole. No evidence of the Roman or medieval town defences were found but a large gravel deposit on the northern edge of the site may have been the fill of a large earthwork. Roman building materials, pottery fragments and some metal finds were recovered. The site archive will be held by Leicester City Museum Service under the accession code A10.2015.
Project Type	Archaeological Strip, Plan and Sample
Project Manager	Richard Buckley
Project Supervisor	Donald Clark
Previous/Future work	
Current Land Use	Hard standing following demolition
Development Type	Construction of new office block
Reason for Investigation	Planning condition
Planning application number	20131614
Site Co ordinates	SK 58002 04684
Start/end dates of field work	9th September to 16th October 2015
Archive Recipient	Leicester City Museum Services

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Thomas, J. 2014b *An Archaeological Watching Brief at Friars Mill, Bath Lane, Leicester, (SK 58002 04684)* Unpub ULAS Report 2014-190

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The Finds

The Roman Pottery

Elizabeth Johnson

Assemblage Size and Condition

A stratified assemblage comprising 125 sherds of Roman pottery weighing 2.613kg with an EVEs value of 4.975, was retrieved from the excavations. The average sherd weight of 20.9g suggests good levels of preservation. There is evidence of disturbance with 35.2% recovered from levels containing post-Roman material.

Methodology

The pottery was examined in hand specimen using a binocular microscope at x15 magnification and classified using the Leicestershire fabric series for Roman pottery (Pollard 1994). Specific fabrics were assigned to all sherds wherever possible within the archive dataset, however, in this report the generic ware groups summarised below are used for clarity of quantified data presentation.

Table 1: Summary of Roman pottery fabric series (Pollard 1994).

Fabric Code:	Fabric Type:
Samian	Samian wares
C	Colour-coated wares
MO	Mortaria
BB1	Black Burnished wares
GW	Grey wares
MG	Mixed gritted wares

Fabric Code:	Fabric Type:
CG	Calcite gritted (shelly)
GT	Grog Tempered wares
OW	Oxidised wares
WW	White wares
WS	White slipped wares

Quantification was by sherd count, weight (grams) and estimated vessel equivalents (EVEs based on rim values). Average sherd weights (ASW) have also been calculated to provide an indication of the condition of the material and levels of preservation within the assemblage. Vessel forms were assigned where diagnostic sherds allowed, using the Leicestershire Museums form series and other published typologies. The dataset was recorded and analysed within an Excel workbook, which comprises the archive record.

Summary of major pottery fabrics within the assemblage

The table below details a summary of the major pottery fabrics within the assemblage as a whole. **Error! Reference source not found.** shows the percentage of fabrics present by

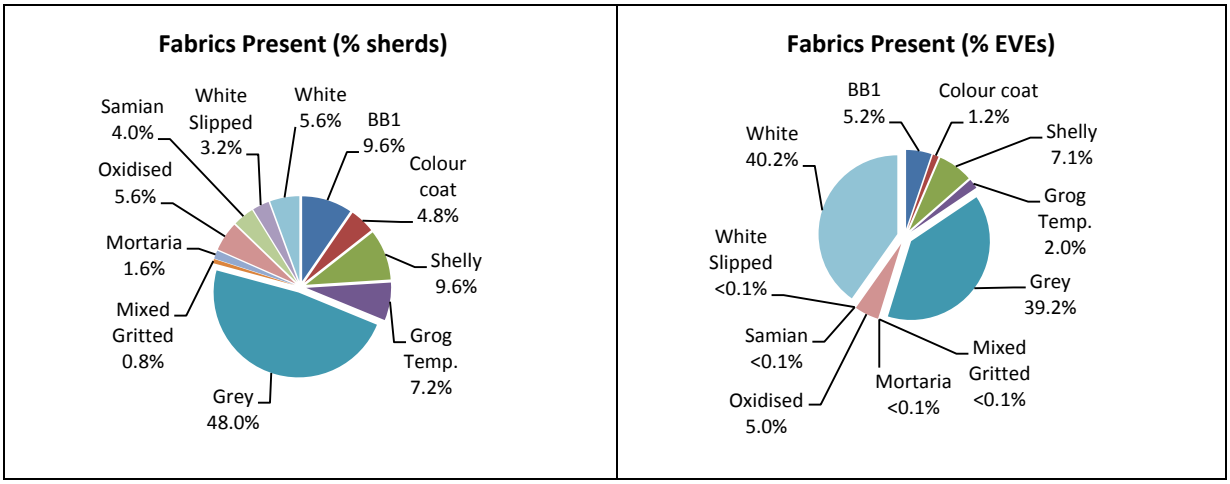
EVEs as a measure of individual vessels identified, whilst sherd count is shown to enable comparison with other published sites. All references to percentage values relate to sherd count unless otherwise stated.

Grey, shelly and grog-tempered coarse wares account for 64.8% of the assemblage, the majority of which are most likely locally made providing utilitarian jars and bowls for general household use. Grey ware forms the largest component at 48%, most of which are jars, with 10 rims recovered. The forms present include rounded outcurved, roll necked and everted forms, whilst the decorative styles present include burnishing, grooves, roulette bands, burnished lines and lattice.

Table 2: Quantification of the Roman pottery.

Fabric	Sherds	% Sherds	Weight (g)	% Weight	EVEs	% EVEs	ASW (g)
BB1	12	9.6%	191	7.3%	0.26	5.2%	15.9
C	6	4.8%	29	1.1%	0.06	1.2%	4.8
CG	12	9.6%	649	24.8%	0.355	7.1%	54.1
GT	9	7.2%	208	8.0%	0.1	2.0%	23.1
GW	60	48.0%	973	37.2%	1.95	39.2%	16.2
MG	1	0.8%	16	0.6%	0	0.0%	16.0
MO	2	1.6%	134	5.1%	0	0.0%	67.0
OW	7	5.6%	108	4.1%	0.25	5.0%	15.4
Sam	5	4.0%	24	0.9%	0	0.0%	4.8
WS	4	3.2%	94	3.6%	0	0.0%	23.5
WW	7	5.6%	187	7.2%	2	40.2%	26.7
Total	**125**	**100.0%**	**2613**	**100.0%**	**4.975**	**100.0%**	**20.9**

Roman pottery fragments fabric percentages



The remaining vessels include a beaker, platter, lids and bowls. The beaker from (640) is a poppy head form dating to the late 1st and 2nd centuries. The lids from (626) and (629) are both domed forms also dating to the late 1st and 2nd centuries, whilst the platter from (304) is a 1st century carinated form. A "London type ware" bowl with circular stamped motif dating from the later 1st century to the first quarter of the 2nd century, was recovered from (304) (Pollard 1994, 55), whilst a bead and flanged bowl from (517) provides the latest datable grey

ware within the assemblage, as this style of bowl appears from *c*.AD250 onwards (Pollard 1986, 5).

All the shelly wares are jars, with 12 sherds representing at least nine vessels. Three rims are present, all of which are the common rounded outcurved rims of storage jars. Three sherds have combed decoration, again a common feature of storage jars dating to the later 1st and 2nd centuries. The grog-tempered wares are also mostly jars,
including a roll necked storage jar. One vessel in the fine GT2 fabric with fine vertical combing could be a beaker rather than a small jar. Early grog-tempered wares are commonly known as "transitional" fabrics and date to the mid-late 1st century (Pollard 1994, 74-75). Sherds from the beaker were found in both (304) and (615). The latter is a make-up layer underneath a floor surface in the same area as the robber trench [303] (304). It is therefore probable that the sherds became separated when the layer (615) was disturbed by what is now a robber trench.

The remaining coarse wares comprise white, white-slipped, oxidised and Black Burnished wares, illustrating regional pottery supply. Black Burnished wares form the largest component at 9.7%. Most of the vessels are bowls with flat rims and acute lattice decoration. There is also a bowl and plain rimmed dish with intersecting arc decoration, a dish or bowl base with burnished swirl decoration and two jars. Overall the forms present suggest a date range within the 2nd century, although some of the forms are long lived (Holbrook and Bidwell 1991, 107-112). The oxidised wares comprise jars, a beaker and a flagon. Not much is closely datable however, a cornice rim beaker with clay roughcast decoration dates within the 2nd century. The white wares are all flagons dating within the 2nd century, including two complete rims. One is a pinched spout flagon or jug comparable to a vessel found at Redcross Street in the West Bridge area of Leicester dated to *c.*AD130-200 (Pollard 1994, fig.61.192, 96-99). The other is a pulley rim form dating to the later 1st and 2nd centuries. Two white-slipped ware flagons also date to the later 1st or 2nd centuries. The presence of two complete vessels is responsible for white wares accounting for 40.2% of the EVEs, a much larger than expected percentage. In this instance, sherd count provides a more accurate reflection of the proportion of white wares within the assemblage. The most likely sources for the oxidised, white and white-slipped wares are Mancetter-Hartshill and Northamptonshire (Swan 1984, 98-101; Pollard 1994, 113-114).
The fine wares comprise samian wares and Romano-British colour-coated wares. Imported samian wares from South and Central Gaul account for 4% of the assemblage. The forms present comprise a Drag.18 plate and two Drag.29 decorated bowls from South Gaul dating to the later 1st century; and a Drag.33 cup from Central Gaul dating to the 2nd century. The Central Gaulish vessel has the distinctively micaceous fabric of products from Lezoux (Webster 1996). Colour-coated wares from Oxfordshire and the Nene Valley account for 4.8%, with five vessels present. Two Oxfordshire red-brown colour-coated ware bowls were recovered from (310). One is a necked bowl with a roulette band underneath the rim comparable to Young form C75, dating from *c.*AD325 onwards. The other is a version of the same form with a roulette band and white painted decoration. Another 4th century Oxfordshire bowl with white painted decoration was found in (503) (Young 1977, 164-167). The other two colour-coated ware vessels within the assemblage are from the Nene Valley, and comprise a beaker dating to the late 2nd-early 3rd century and a flagon dating to the 3rd or 4th centuries (Howe *et al* 1980).

Specialist wares account for 1.6% of the assemblage and comprise two sherds of mortaria. One vessel is from the Nene Valley and would not date before the middle of the 2nd century. The other sherd is as yet unidentified and has been kept for future reference.

Discussion

The assemblage is small and approximately a third of the material is from disturbed layers. The main features comprise robber trenches and demolition rubble, along with a gully and undisturbed Roman floors made of mortar with granite chips. It is presently believed the structure, situated close to the river, is not domestic in nature. This explains both the paucity of pottery finds and the presence of post-Roman material in some contexts. Having said that, the material is generally in good condition and there is enough to characterise the assemblage. There is evidence for activity spanning the Roman period from the mid-late 1st century through to the 4th century, with most of the pottery dating within the 2nd century.

The earliest Roman feature is a gully [634] which runs underneath a later wall. The pottery recovered from this feature comprises a shelly ware storage jar with combed decoration, a grog-tempered s-shaped jar or bowl and a fine mixed-gritted ware jar. These vessels all date to the mid-late 1st century. A mid-late 1st century grog-tempered beaker or small jar was recovered from make-up layer (615), which is in the same area as [634].

The remaining pottery was recovered from the robber trenches and layers of demolition rubble, and as such can only be discussed in general terms. Overall, most of the assemblage can be dated within the 2nd century, with characteristic levels of Black Burnished ware, white, white-slipped and oxidised wares accompanying local grey wares and imported samian fine wares. The latest pottery is the colour-coated ware from Oxfordshire found in (310) and (503), along with the Nene Valley colour-coated wares from (549) and (640). The latest coarse ware vessel is the grey ware bead and flanged bowl from (517), dating from the middle of the 3rd century onwards. An interesting point to note is that whilst the majority of the material is typical of a 2nd century urban assemblage from Leicester, the later Oxfordshire colour-coated wares hint at the presence of something a little more high status. Colour-coated wares from Oxfordshire do occur in Leicester in small but significant quantities however, it is generally the Nene Valley industries that provide the bulk of later regional colour-coated wares to the town. The three Oxfordshire decorated bowls within this group are nice examples, with roulette bands and white painted decoration indicating the very latest regional imports reaching Leicester during the 4th century, probably around the middle of the 4th century.

A previous evaluation excavation at the site produced an assemblage of 15 sherds (368g) of Roman pottery. This group of pottery fits in with the larger assemblage, insofar as 2nd century coarse wares and samian wares were recovered alongside two sherds of later colour-coated wares, comprising a Nene Valley bowl imitating a samian Drag.31 bowl, and an Oxfordshire red-brown colour-coated ware vessel, possibly a lid (Cooper 2015, 14). Again, the 4th century colour-coated wares are not the most common types found in Leicester and their presence is worth noting.

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Post Roman pottery and tile

Deborah Sawday

Methodology

The pottery, 66 sherds, weighing 1.250kg., a vessel rim equivalent of 1.72 (calculated by adding together the circumference of the surviving rim sherds, where one vessel equals 1.00) and an average sherd weight of 18.93grams, was examined under a x20 binocular microscope and catalogued with reference to the guidelines set out by the Medieval Pottery Research Group, (MPRG 1998; MPRG, 2001) and the ULAS fabric series; Davies and Sawday 1999; Sawday 2009). Two fragments of medieval tile in an unclassified fabric were also present.

Discussion

The range of pottery fabrics is typical of that found in Leicester at this time, and spans the period from the mid-11th or 12th century to the 15th century. Potters Marston, which has a date range of c.1100 to the mid or possibly later 14th century, is the most common ware. The identifiable vessels are typically domestic; predominantly jars in Potters Marston, but a few examples of glazed Splashed ware and Chilvers Coton jugs are also present.

Table 3: The medieval pottery and tile fabrics.

Fabric	Common Name/Kiln & Fabric Equivalent where known	Approx. Date Range
ST2	Stamford - fine, fabrics G B/(A) (1)	c.1050-12th C.
RS	Reduced Sandy ware-? Local (2)	c.850-c.1400
PM	Potters Marston ware - Potters Marston, Leicestershire (3)	c.1100-c.1300/50+
SP3	Splashed ware - Leicester (4)	c.1100-1250
CS	Coarse Shelly ware - Northants CTS 330 (5)	c.1100-1400
CC1	Chilvers Coton A/Ai (6), Warwick CTS WW01,?WW012, ?SQ51, (7)	c.1250-1400

(1) Kilmurry 1980, Leach 1987	(4) Sawday 1998, Davies and Sawday 1999
(2) Davies and Sawday 1999	(5) Northants CTS
(3) Haynes 1952, Vince 1984, Sawday 1991, Davies and Sawday 1999	(6) Mayes & Scott 1984
	(7) Soden & Ratkai 1998.

Conclusion.

This small assemblage has a relatively large average sherd weight, although few joining sherds were found. The site lies within the town defences to the north of West Bridge Wharf and the pottery evidently represents several episodes of rubbish deposition in the vicinity of the river during the late Saxon and medieval periods. A similar pattern of rubbish disposal was noted during previous excavations nearby, which also uncovered evidence of the medieval refurbishment of part of the Roman town wall (Cooper 2004).

Table 2: The medieval pottery by fabric, sherd numbers, weight (grams), ASW (average sherd weight) and EVEs.

Fabric	Common Name	Sherds	Weight	ASW	EVEs
ST2	Fine Stamford	2	35	17.5	0.19
RS	Reduced Sandy	1	2	2.0	
PM	Potters Marston	54	1010	18.7	1.175
SP3	Splashed ware 3	4	143	28.6	0.175
CS	Coarse Shelly	4	54	13.5	0.18
CC1	Chilvers Coton	1	6	6.0	
Site Totals		66	1250	18.93	1.72

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Table 4: The medieval and later pottery by fabric, sherd numbers and weight (grams) and EVES, by context.

Context	Ware/Fabric	No	Gr	EVE	Comments
301	CC1 – Chilvers Coton A ware	1	6		Green glazed jug neck .c.1250-1300+
302 T3	PM – Potters Marston	1	45	0.125	Shouldered, externally sooted jar rim, similar at Freeschool Lane, Leicester (Sawday 2009, fig.24.154. diam 210mm, 12-13th C.
302	CS – Coarse Shelly	1	20	0.10	Everted jar rim, diam 190mm, similar at Northampton c.1100-1250 (McCarthy 1979, fig.81.57).
302	CS	1	15	0.080	Jar rim, diam 210mm, similar at Northampton (McCarthy 1979, fig.81.32), c.1100-1400.
304 T3 [303]	ST2 – Fine Stamford	1	8		Lead glazed body
304	PM	19	215		Misc. body/base
304	PM	1	63		Basal angle, curvilinear dec
304	PM	1	45	0.10	Jar rim, similar at Causeway lane, Leicester (Davies and Sawday 1999, fig.89.56), diam 300 mm
304	PM	1	18	0.11	Jar rim, similar at Freeschool Lane, Leicester (Sawday 2009), fig.24.154. diam 180mm,
304	PM	1	10	0.05	Jar rim, similar at Causeway Lane, Leicester (Davies and Sawday 1999, fig.89.50), diam 180 mm
304	PM	1	19	0.135	Jar rim, similar at Causeway Lane, Leicester (Davies and Sawday 1999, fig.88.38), save this example thumbed, heavily sooted. Rim diam 140 mm
304	PM	1	9		Body, externally sooted, inscribed horizontal lines
304	SP3 – Leicester Splashed ware	1	99	0.175	Jar rim & neck and handle stub, the handle shows evidence of slashed decoration, similar at Causeway Lane, Leicester (Davies and Sawday 1999, fig.95.95), but this example has a strap rather the rod handle which is more typical of this fabric. Rim diam 130 mm
304	SP3	1	24		Base fragment – flat.
305 T3	PM	3	26		Misc. body/base
305	PM	1	42	0.07	Storage jar rim, similar at Causeway Lane, Leicester (Davies and Sawday 1999, fig.95.95), Rim diam 320 mm
501	ST2	1	27	0.19	Jar rim, sooted, abraded. Diameter, c.140mm
501	PM	1	59		Internally reduced, thick walled storage jar body with applied thumbed strip
501	PM	1	3		body
510	PM	1	7		sooted body

510	CS	1	13		Abraded, sooted body
515	SP3	1	5		Glazed body
522	RS – Reduced Sandy	1	2		Sooted body
534	CS	1	6		body
534	SP3	1	15		Glazed jug neck
534	PM	3	49		Misc. body - sooted
534	PM	3	125	0.170	Joining sherds jar rim, Freeschool Lane, Leicester (Sawday 2009, fig.24.154). sooted externally, diam c.290mm
534	PM	1	54	0.110	Jar rim, slashed ext neck, externally sooted (Davies and Sawday 1999, fig.88.44), diam c.230mm
534	PM	1	14	0.04	Fragment only, similar to the above, est diameter c.230 mm
534	PM	1	26	0.125	Jar rim (Davies and Sawday 1999, fig.88.44), rim diam 180mm.
549	PM	6	111		Misc. body/base - sooted
549	PM	1	17	0.08	Jar rim, (Davies and Sawday 1999, fig.88.42-47), sooted ext, estimated diam c.150mm.
549	PM	1	23	0.06	Jar rim, , (Davies and Sawday 1999, fig.88.42-47), slashed neck & sooted, estimated diam c.200mm..
560	PM	4	30		Misc. body, 3 externally sooted
TILE					
310	Unclassified	2	74		Fragments only, iron rich inclusions

Site/ Parish: Friars' Mill, Bath Lane, Leicester Accession No.:A10 2015 Document Ref: bath lane5.docx Material: pot/ tile Site Type: NW quarter med town	Submitter: D. Clark Identifier: D. Sawday Date of Identification: 4.12.2015 Method of Recovery: eval/exc Job Number: 15-084

Small finds from excavations at Friars' Mill. A10.2015

Nicholas J. Cooper

Introduction

The excavation yielded just three small finds, but the identification of just two of them has been sufficient to label the assemblage as unusual and the product of a high-status residence, an assertion also supported by the building materials recovered. Both finds are related to dining, one is a copper alloy water jug handle and the other the foot ring of a shale dish. In both cases the object type has only been recovered from one other site in Leicester in recent times. The last find is the pin from a single piece brooch of the Conquest period, and commensurate with the location of the oppidum of *Ratae*. The objects have been classified in accordance with Nina Crummy's functional categories (Crummy 1983) and are described and discussed below.

Objects of personal adornment and dress

1) Sf.11 (578). Pin and part of a three-coil spring from a small, single-piece, copper alloy brooch. Length of pin: 26mm. Early to mid-1st century date.

Household Objects

2) Sf.8 (600). 'S'-shaped or dolphin-shaped copper alloy handle detached from a water jug. The handle is of circular section tapering from the rim to the partial remains of the ovoid plate by which it was probably riveted to the body of what would have been a squat globular jug. There is a thumb grip projecting from the outer edge of the thickest part of the handle, to enable a firm hold when pouring. The top of the handle has a pair of semi-circular lugs projecting upwards with the remains of an iron hinge pin *in situ*, which would have held a lid. The top of the handle also has one tapering spur surviving, which follows the circumference of the rim and would have aided attachment. Surviving length: 99mm. Estimate diameter of jug rim 50mm.

This handle is tangible evidence for the 'proper' consumption of wine represented by the use of metal vessels. Amongst all the sites in Roman Leicester, only the second-century town house at Blue Boar Lane, excavated in 1958 (Lentowicz 2009, 210, fig.108.44) has produced the handle of a similar copper alloy water jug, comparable to another example from Colchester, with a hinged lid (Crummy 1992, fig.15.5). Such jugs were part of a specific suite of vessels necessary for consuming wine in the Roman manner, which involved mixing it with water. The service therefore comprised separate metal jugs for wine and water and a metal bowl for mixing, together with a ladle for serving and cups, probably of glass or pottery, as shown on the sarcophagus of a woman's grave from Simpelfeld in Holland (Cool 2006, 136 and fig.15.1). Hilary Cool's survey of the occurrence of such vessels from nearly 400 excavations, based by necessity on the un-recycled fittings that regularly fell off them, shows that whilst only 2% of rural farmsteads drank wine in this way (or perhaps picked up the vessels second hand for another use), about 18% of towns show evidence for it, with water jugs being the most common find (Cool 2006, 139 and Table 15.3).

3) Sf.15 (304). Foot ring of a shale dish. Fragment of rounded triangular section representing 18% of the circumference, with a diameter of 110mm. Height of foot ring: 13mm.

This represents an unusual find in Roman Leicester. Although other objects produced in Kimmeridge shale from the Isle of Purbeck, such as bracelets, are relatively common, dishes have only been recognised in recent times from excavations at Causeway Lane (Cooper 1999, 267, fig.129.141-145) where five vessels, with diameters ranging from 140mm, possibly up to 250mm were recorded. Given the diameter of the foot ring on the present example and overall diameter toward the top of this range is likely. Because these vessels are produced on a lathe they are usually open forms such as platters, dishes or shallow bowls with tapered curving rims, although taller beakers are known from production sites in Dorset (Sunter and Woodward 1987, 108, fig.58.278). The vessels from Causeway Lane come from third century and later contexts; the trade in jet and shale object being most popular in the later Roman period.

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The Coins

Richard Buckley

Two Roman coins were recovered from the site and are described as follows:

A10.2015 SF13 Context (602). Obv. Bust left Rev: illegible. Copper alloy *As*. Diam: 28.5mm A copper-alloy contemporary copy of an *as* of Claudius I dating to the period AD 41 to 54 (Reece period 2).

A10.2015 SF12 Context (304). Obv. Bust right [CONSTAN]TINVS[AVG] Constantine I. Rev. [GLORIA EXERCITVS] 2 soldiers with 2 standards AD 330-35. Copper alloy *nummus*. Diam 10mm

Figure 28: Metal finds, jug handle, pin and coins

The Roman Wall Plaster

Heidi Addison

Introduction and Methodology

The excavation at Friars' Mill followed an evaluation where two fragments of wall plaster from context (302) small find 2 were found and reported on. A total of 95 fragments (11.527kg) of painted wall plaster were retrieved from 11 contexts (304), (309), (501), (510), (549), (583), (587), (618), (624), (626) and (643) from the excavation The material was quantified and separated into categories according to context, colour, stripe and design elements. A photographic record and catalogue has been made and will be placed within the site archive.

Constructional and painting techniques

There was a distinct lack of evidence of keying or reed impressions on the reverse of the fragments, nor were there any remains of mud. Most of the fragments were not their original thickness and appeared to have broken away from their earlier layers though many examples were of at least three layers thick. The technique of applying paint to damp plaster *fresco* is represented in the plain colour examples, with the exception of the black polished fragment (Plate 4), whereas painting on to dry plaster or paint *tempera* is also present.

Decorative Schemes

The assemblage lacks any tangible evidence for figurative design. Most of the material seems to be to have been part of two-dimensional panel schemes either from the lowest part of the wall *(dado)* or the central part.

The bulk of the assemblage came out of a demolition layer (510), producing 10.431kg of painted wall plaster. The largest group of material within context (510) was 1,615g of plain polished red wall plaster (Plate 1) Polished fields of colour in panel schemes, particularly red, are typically assigned to the first and second centuries (Davey and Ling 1982, 31). The red panels would have been edged with contrasting bands or borders. One fragment which could plausibly be related is polished red against a worn green (under colour yellow) and separated by a white 2.5mm stripe (Plate 2). Context (510) produced another polished group of 10 plain grey/black fragments weighing 777g (Plate 3) and 1 grey/black polished fragment 27g with a hint of a wispy figurative element in white paint skilfully executed in the fresco manner (Plate 4) A further two joining fragments 213g of white against a smooth/polished dark grey (worn ?black) separated by a 6mm burgundy stripe (Plate 5) could also relate to this grey panel group.

Plate.1 Plain polished red

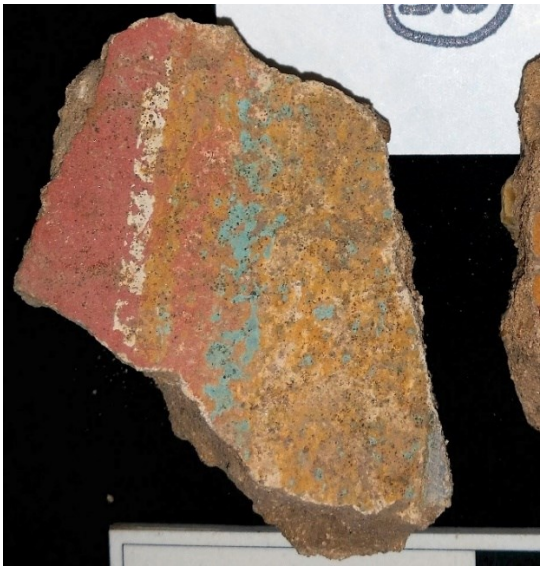

Plate 2. Polished red with stripe

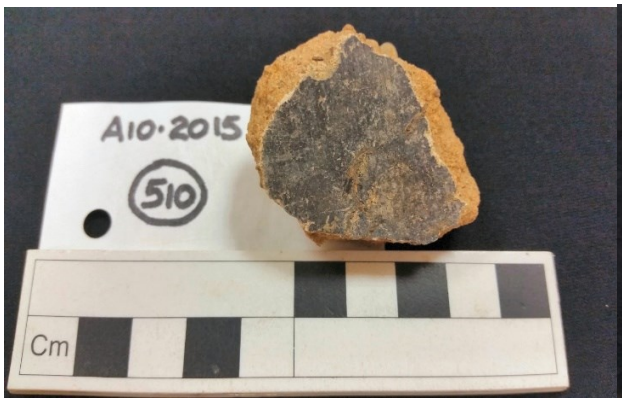

Plate 3. Plain polished grey/black

Plate 4. Figurative element

Polished wall plaster exhibited wealth and status so would have generally been located in the most prominent area of a building. Of particular note is an extremely abraded fragment 96g (510) which shows crushed glass (Plate 6). This is a technique which enhances the vibrancy of colour. The covering *intonaco* layer has completely worn away leaving remains of black pigment. Black pigment would often precede the imported pigment of Egyptian blue (G. Morgan pers.com). Crushed glass with Egyptian blue was found at Leicester's Blue Boar Lane town house site (1958) and signified the patron's considerable wealth. Lane town house site (1958) and signified the patron's considerable wealth.

Plate 5. Grey/black against white with burgundy stripe

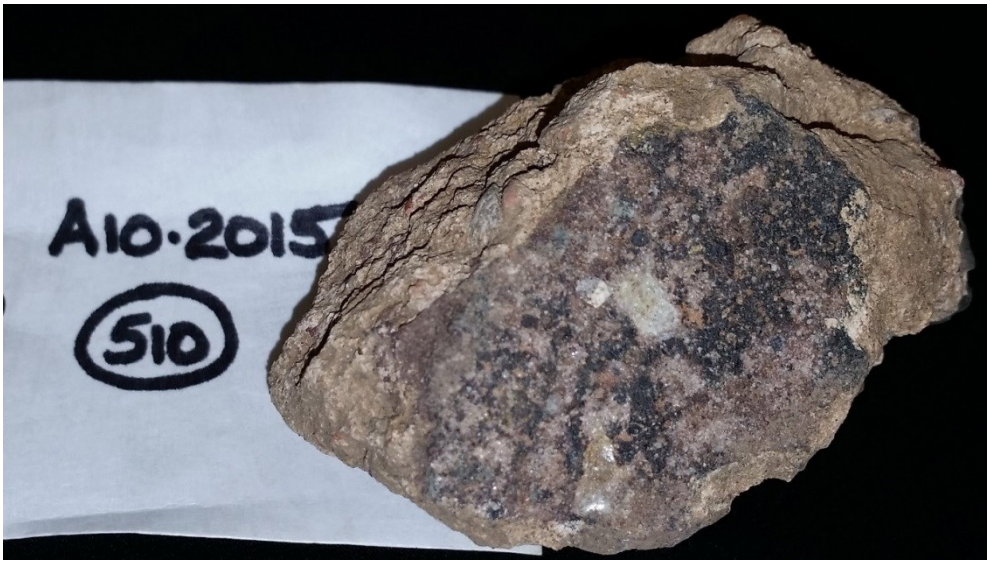

Plate 6. Abraded fragment with crushed glass fragments

Also recovered from context (510) were seven plain yellow fragments and two yellow fragments with 6mm white stripes totalling 1,302g. It is tempting to suggest that a large fragment with white against yellow relates to the yellow group. A 7mm black stripe (which could possibly have extended to 10mm before abrasion) separates the white and yellow

which grades into orange where a 6mm white stripe runs adjacent to a 4mm-5mm linear black line that fuses with the white at one end. A black blob is painted on the white stripe. The surface of the fragments are fairly smooth and probably part of a simple panel scheme.

Plate 7. Plain yellow

Plate 8. Yellow with white stripes

Plate 9. Graded yellow to orange

Plate 10.Yellow and turquoise green

A single fragment 44g from context (510) is of a dark yellow contrasting with a vivid turquoise green intersected by a 6mm white stripe (Plate 10). The yellow *intonaco* is very smooth with some dashes of figurative elements in *tempera.* This quality *intonaco* appears to be the undercoat beneath the green paint.

Also recovered from context (510) was 1,364g of plain white fragments. Some are relatively smooth while others are roughly finished. One fragment has a level underside where it has broken away from an earlier layer showing the remains of a previous *intonaco* (Plate 11). Another fragment has mortar remnants attached to the painted surface. Both fragments are suggestive of a redecoration. A straw impression can be seen on one fragment. Straw was used to strengthen the plaster mixture in the coarser layers (Davey and Ling 1982, 54).

Plate 11 Reverse showing earlier paint layer

The technique of pseudo-marbling is represented in the demolition layer (510) with two burgundy fragments 773g (Plate 12). Splashes of paint are simply flicked from a brush to suggest a marbling effect. Pseudo-marbling would most likely to have been confined to the panelling of the dado area which could be substantiated by three fragments 1056g also found in context (510) of burgundy against white (Plate 13). One fragment has a worn olive green band of approximately 15mm. Another fragment has remnants of an olive green band measuring at least 20mm. One of the fragments shows the same burgundy pseudo-marbling as noted in Plate 12 (Plate 14). All of the three fragments are slightly moulded and roughly painted. The mortar contains tile dust generally reserved for areas likely to encounter damp such as the very base of the dado.

Plate 12 Pseudo marbling

Plate 13 Burgundy, white and olive green

Plate 14. Detail

Plate 15. Coarse paintwork

Other examples of pseudo-marbling found in (510) are roughly finished with paint splashes on a white ground (Plates 15-16) Coarser paintwork on a plaster of a white ground is largely thought to belong to the third and fourth centuries (Davey and Ling 1982, 31).

Plate 16. Coarse paintwork

Other contexts

One fragment 111g recovered from context (501) has a black band in excess of 15mm (Plate 17) and a 4mm light grey stripe at right angles. An example of wall plaster from context (549) 189g shows the side having a straight edge and a slight lip where the fragment has presumably been butted up against a timber lath (Plate 18). The fragment has broken away from an earlier layer and left traces of tile dust. *The intonaco* is pale pink against burgundy and has a 15mm white band creating a right angle. The context (549) produced two highly polished and technically accomplished orange fragments 9g (Plate 19). The paint contains the expensive mercury-based cinnabar pigment which was imported (G. Morgan pers.com).

Context (624) provided the only blue fragment of 8g. Dark blue powdered specks can be viewed under the microscope and therefore likely to be blue frit otherwise known as Egyptian blue (Plate 20).

Plate 17. Corner border

Plate 18. Corner border

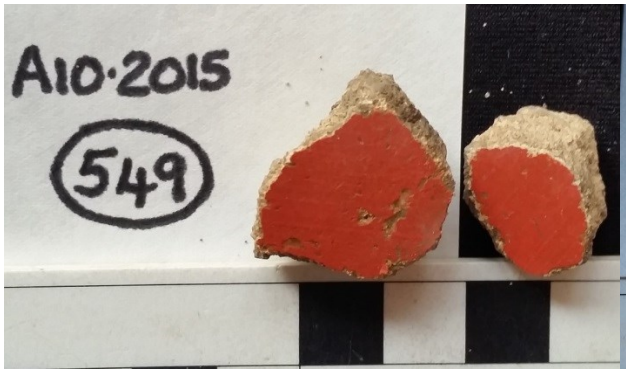

Plate 19. Cinnabar fragments

Plate 20. Egyptian blue fragment

Opus signinum and mortar flooring

The assemblage from (510) also contained eight fragments (5kg) of flooring with quartz and flint pebble inclusions, one with thin screed of *opus signinum* on the surface.

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Roman Masonry

Sue Henderson and Donald Clark

A large Roman architectural fragment, almost certainly the stylobate for a column, was uncovered during removal of the overburden and unfortunately was slightly damaged by the machine bucket. The stone is most likely a 'Millstone' grit deriving from Melbourne, South Derbyshire and measured 0.95m x 0.82m x 0.33m. The stone is light cream brown with orange brown banding throughout and is carved on all four sides, the top section moulded with a recessed lip, towards the base of the stone it was less decorated and some evidence of cross hatching was recorded. No evidence of bonding was noted and it seemed that the stone was quite weathered prior to its re-depositing. To the east of where the stone was found, excavations by Wardell Armstrong in 2013 uncovered a large Roman aisled building, the eastern arcade of which was represented by a line of six column bases, the northernmost one retaining its stone stylobate block, measuring 0.85 x 0.89 x 0.19m with tapered upper edges and clearly visible chisel marks on the sides. An identical stone was found in *situ* adjacent to column {**1787**} during the 2007 evaluation (Slater 2014, 26-27). So it is conceivable that the Friars Mill stylobate comes from the same building. The fragment of a similar moulded stone was recovered from a site closer to the centre of Roman Leicester, in Jubilee Square (Jarvis 2015). The stylobate is now in the possession of Leicester City Museum.

Figure 29: Roman masonry, possible column stylobate

The Animal Bones from Friars Mill, Bath Lane, Leicester (Accession A10.2015)

Rachel Small

Introduction

This report presents the study of a small animal bone assemblage (101 fragments) from Friars Mill, Bath Lane, Leicester; the remains were recovered by hand during the evaluation and excavation, also by wet sieving. The assemblage came from sixteen contexts, seven of which were securely dated to the Roman period and three to the medieval period, the remaining contexts were disturbed.

Method

Identification to element and species was attempted on all specimens using the University of Leicester's bone laboratory reference collection. Distinction between sheep and goat was not attempted. Ages based on epiphyseal fusion followed Ritz and Wing (2008: 72) whilst recording of tooth eruption and wear followed Grant's (1982) system. Sexing of pig canines followed Schmid (1972). Measurements largely followed von den Driesch (1976) but Payne and Bull's (1988) system was used for pig teeth. Harland et al's (2003) four point scale was used to consider preservation.

Results

Generally the animal bones were of 'good' preservation; they lacked a fresh appearance but were solid with only localised flaking (Harland et al 2003). Root etching was noted. It was possible to identify a large proportion of the fragments (56/101) to element and species. Below the results are presented by period - phases are grouped together due to the small assemblage size. A catalogue of the remains is presented in tables 1, 2 and 3.

Roman (mid to late 1st century; late 1st to 2nd century; 1st – 4th century)

Thirty-three fragments were securely dated to this period (table 1). Species identified included cattle (four specimens), sheep/goat (six), pig (three) and equid – probably horse (the latter was only represented by an incisor). It was possible to obtain ageing data from some of the remains (table 4 and 5) and mature and younger individuals were both present. An interesting specimen was a complete cattle tibia (629) which had a small bone growth on the lateral condyle (measurements are in table 6 and 7). The bone had also been butchered; cut marks where on the shaft, near the midline of the body, and this occurs during de-fleshing the carcass. Only one other bone was butchered - a large mammal rib (629). Of note was a pig radius (629) which had periostosis on the shaft. Six small fragments of calcined bone were recovered from environmental sample number six (context 635).

Medieval (1100 – 1400 AD)

Securely dated to the medieval period were twenty-six fragments (table 2). The following animals were present including cattle (eight specimens), sheep/goat (one), pig (one) and chicken (one). The goose bones were similar in size to the greylag goose. Two goose bones were identified, an ulna (560) and coracoid (302); both had cut marks around the articular ends and this would have occurred during disarticulation of the carcass. Four other specimens had cut marks present and details are given in the catalogue (table 2) whilst ageing information is given in table 4.

Mixed (Roman and medieval), not dated un-stratified

Forty-two specimens fell into this category (table 3). Domestic animals included cattle (thirteen fragments), sheep/goat (nine), pig (three), chicken (one) and goose (one). Wild species were identified; a fragment of roe deer humerus (304) and a woodcock humerus (501). The roe deer is native to England and prefers to live in woodland but also inhabits fields (The British Deer Society 2015). The woodcock is a large bulky wading bird; it is also a resident of the British Isles being nocturnal spending much of the day under dense cover (RSPB 2015).

Two pig canines could be sexed, based on the size of the tooth and the root's morphology, and one was female (305) and the other male (304). It was also possible to age some specimens and this information is presented in table 4 and 5. The epiphysis of a cattle metatarsal (304) had fused on a misalignment and also had a polished appearance (eburnation); the latter is the symptom of osteoarthritis and suggestive of the animal use for traction. A large mammal vertebra, probably cattle (304), showed signs of osteoarthritis (over growth of a process) and a pig metacarpal (305) had periostosis on the shaft.

Four sheep/goat horns (US) were present in the assemblage and all had been chopped through at the base, perhaps they were to be used for working. Three other specimens showed butchery marks and details are given in the catalogue (context 304 and US). Two specimens had been singed and a large mammal hyoid exhibited copper staining (US). Only one specimen showed signs of canine gnawing and this was a pig metacarpal (305).

Discussion

It is believed that the material from Friars Mill is primarily Roman in character and was disturbed in the medieval period. The earliest feature on site is a gully dating to the mid to late first century. The remains of undisturbed floors from a Roman building were also present and it is believed this structure was not domestic, perhaps a warehouse for example. Robber trenches and demolition layers were recorded too and this is where a lot of the medieval remains came from.

The deposits of animal bone represent domestic consumption refuse; the good preservation and lack of gnawing suggests the remains were promptly buried. The assemblage was too small in size to permit statistical analysis of age and skeletal representation for example; therefore only general comments can be made regarding diet and animal husbandry strategies.

The inhabitants were eating the main domesticates: cattle, sheep/goat, pig and chicken (abundance is also in this order). Roe deer, if not a chance find, represents the consumption of wild resources; whilst goose (greylag) and woodcock probably represent opportunistic wild-fowling. The species represented are typical of Leicestershire urban sites (both Roman and medieval) such as Causeway Lane (Gidney 1999).

Recommendations for further work

If further work is carried out in the vicinity the implementation of a suitable strategy for animal bone collection is recommended.

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Appendix

Table 1: catalogue of animal bone for Roman contexts.

Context	Description	Date	Frags	Bone	Taxon	Notes
310	Fill of robber trench E-W	1st - 4th C.	1	Radius	Sheep/ goat	Shaft
310	Fill of robber trench E-W	1st - 4th C.	1	Metatarsal	Sheep/ goat	Proximal end and shaft
310	Fill of robber trench E-W	1st - 4th C.	1	Skull	Sheep/ goat	Horn base and frontal
310	Fill of robber trench E-W	1st - 4th C.	1	Skull	Sheep/ goat	Horn base and frontal
310	Fill of robber trench E-W	1st - 4th C.	1	Incisor	Equid	Complete, worn
310	Fill of robber trench E-W	1st - 4th C.	1	Indent.	Indent.	Frag
310	Fill of robber trench E-W	1st - 4th C.	1	Rib	Medium mammal	Frag
310	Fill of robber trench E-W	1st - 4th C.	1	Long bone shaft	Large mammal	Frag
310	Fill of robber trench E-W	1st - 4th C.	1	Mandible	Cattle	Complete, present: m3 in crypt, m2, m1 and dp4
578	Levelling layer	1st - 2nd C.	1	Teeth	Cattle	Maxillary M1 and M2 in situ
618	Fill of posthole	Mid - late 1st C.	1	Rib	Large mammal	Frag
618	Fill of posthole	Mid - late 1st C.	1	Scapula	Large mammal	Frag
629	Layer of silty sand	Late 1st - 2nd C.	1	Rib	Large mammal	Frag, chopped through
629	Layer of silty sand	Late 1st - 2nd C.	1	Ulna	Sheep/ goat	Proximal end and shaft
629	Layer of silty sand	Late 1st - 2nd C.	1	Radius	Pig	Proximal end and shaft, periostosis
629	Layer of silty sand	Late 1st - 2nd C.	1	Tooth	Pig	Mandibular dp4 in situ
629	Layer of silty sand	Late 1st - 2nd C.	1	Tibia	Cattle	Complete, cut marks on shaft on the midline of body, small bone nodule on lateral condyle
635	Fill of gully	Mid - late 1st C.	1	Radius	Cattle	Proximal end and shaft
635	Fill of gully	Mid - late 1st C.	1	Metapodial	Large mammal	Shaft fragment
635	Fill of gully	Mid - late 1st C.	1	Tibia	Sheep/ goat	Shaft fragment
635	Fill of gully	Mid - late 1st C.	1	Radius	Large	Shaft fragment

					mammal	
635	Fill of gully	Mid - late 1st C.	1	Indent.	Large mammal	Frag
635 [6]	Fill of gully	Mid - late 1st C.	6	Indent.	Indent.	Small calcined frags
635 [6]	Fill of gully	Mid - late 1st C.	2	Indent.	Indent.	Small frags
635 [6]	Fill of gully	Mid - late 1st C.	1	Rib	Medium mammal	Frag
644	Silty clay make up layer	Late 1st - 2nd C.	1	Long bone shaft	Medium mammal	Frag
645	Silty clay charcoal layer	Late 1st - 2nd C.	1	Metacarpal	Pig	Proximal end and shaft
TOTAL 33						

Table 2: catalogue of animal bone for medieval contexts.

Context	Description	Date	Frags	Bone	Taxon	Notes
302	Interface layer	12th - 13th C.	1	Rib	Large mammal	Frag
302	Interface layer	12th - 13th C.	1	Astragalus	Cattle	Complete
302	Interface layer	12th - 13th C.	1	Calcaneus	Cattle	Proximal end
302	Interface layer	12th - 13th C.	1	Coracoid	Goose	Near complete, adult, cut marks around the proximal and distal ends
510	Demolition layer	1100 - 1400	1	Radius	Cattle	Distal end, cut marks present, and shaft
510	Demolition layer	1100 - 1400	1	Tooth	Sheep/goat	Third molar, mandibular, broken
510	Demolition layer	1100 - 1400	1	Ulna	Chicken	Proximal end and shaft, adult
510	Demolition layer	1100 - 1400	1	Indent.	Large mammal	Frag
510	Demolition layer	1100 - 1400	3	Rib	Large mammal	Frags
510	Demolition layer	1100 - 1400	1	Long bone shaft	Large mammal	Frag
510	Demolition layer	1100 - 1400	1	Pelvis	Cattle	Acetabulum
510	Demolition layer	1100 - 1400	1	Tooth	Pig	Incisor
510	Demolition layer	1100 - 1400	1	Occipital	Cattle	Frag
510	Demolition layer	1100 - 1400	1	Skull	Cattle	Frontal
510	Demolition layer	1100 - 1400	1	Cervical vertebra	Cattle	Chopped through sagittal plane
510	Demolition layer	1100 - 1400	1	Cervical vertebra	Cattle	Chopped through sagittal and dorsal plane
510	Demolition layer	1100 - 1400	1	Lumbar vertebra	Large mammal	Process

510	Demolition layer	1100 - 1400	1	Indent.	Medium/large mammal	Frag
560	Mortar foundation	1100 - 1350	2	Rib	Medium mammal	Frags
560	Mortar foundation	1100 - 1350	3	Indent.	Medium mammal	Frags - one has cut marks
560	Mortar foundation	1100 - 1350	1	Ulna	Goose	Distal end, cut marks present
		TOTAL	**26**			

Table 3: catalogue of animal bone from mixed (Roman and medieval), not dated and un-stratified contexts.

Context	Description	Date	Frags	Bone	Taxon	Notes
304	Fill of robber trench N-S	Roman and med	1	Humerus	Roe deer	Distal end and shaft
304	Fill of robber trench N-S	Roman and med	1	Long bone shaft	Large mammal	Frag
304	Fill of robber trench N-S	Roman and med	1	Radius	Cattle	Distal end and shaft
304	Fill of robber trench N-S	Roman and med	1	Atlas	Sheep/ goat	Near complete
304	Fill of robber trench N-S	Roman and med	1	Cervical vertebra	Medium/ large mammal	Cattle? Near complete - process has overgrown
304	Fill of robber trench N-S	Roman and med	1	Long bone shaft	Large mammal	Frag
304	Fill of robber trench N-S	Roman and med	1	Tooth	Pig	Canine, open rooted, triangular cross section - male
304	Fill of robber trench N-S	Roman and med	1	Metatarsal	Cattle	Near complete, cut marks around distal articulation and on shaft, distal epiphysis fused on a miss-alignment and has eburnation
304	Fill of robber trench N-S	Roman and med	1	Skull	Cattle	Premaxillae
304	Fill of robber trench N-S	Roman and med	1	Skull	Medium/ large mammal	Frag
305	Demolition layer	N/A	1	Metacarpal	Pig	Proximal end and shaft, periostosis, gnawing
305	Demolition layer	N/A	3	Mandible	Cattle	Articulating fragments, present: m3, m2, m1, p4, p3, p2 (erupting)
305	Demolition layer	N/A	1	Mandible	Pig	Present: incisor (closed rooted - female), p2, p3, damaged p4
323	Demolition layer	N/A	1	Long bone shaft	Large mammal	Frag
501	Pit fill	Roman and med	1	Rib	Medium mammal	Frag
501	Pit fill	Roman and med	1	Rib	Large mammal	Frag

501	Pit fill	Roman and med	1	Cervical vertebra	Sheep/ goat	Complete
501	Pit fill	Roman and med	1	Lumbar vertebra	Cattle	Body frag
501	Pit fill	Roman and med	1	Indent.	Large/ medium mammal	Frag
501	Pit fill	Roman and med	1	Indent.	Medium mammal	Frag
501	Pit fill	Roman and med	1	Scapula	Large mammal	Frag
501	Pit fill	Roman and med	1	Humerus	Chicken	Adult, distal end and shaft
501	Pit fill	Roman and med	1	Humerus	Woodcock	Proximal end and shaft
501	Pit fill	Roman and med	1	Carpometa-carpus	Goose	Adult, distal end and shaft
549	Mortar floor/pit	Roman and med	3	Mandible	Cattle	Articulating fragments, roken third molar in-situ
549	Mortar floor/pit	Roman and med	1	Radius	Sheep/ goat	Shaft
587	Mortar spread/layer	N/A	1	Tooth	Cattle	Maxillary premolar, calculus present
587	Mortar spread/layer	N/A	1	Indent.	Large mammal	Frag
US		N/A	1	Humerus	Sheep/ goat	Distal end, singed, and shaft
US		N/A	1	Humerus	Cattle	Distal articulation chopped through, shaft
US		N/A	1	Tooth	Cattle	Mandibular m1/2
US		N/A	1	Metapodial	Sheep/ goat	Distal end and shaft
US		N/A	4	Horn core	Sheep/ goat	Near complete, all examples chopped through at base
US		N/A	1	Hyoid	Medium/ large mammal	Sheep? Near complete, cut marks and copper staining
US		N/A	1	Scapula	Medium/ large mammal	Frag, singed
		TOTAL	**42**			

Table 4: epiphyseal fusion ageing data based on Reitz and Wing (2008: 72).

Context	Description	Date	Frags	Bone	Taxon	Fusion	Age
310	Fill of robber trench E-W	1st - 4th C.	1	Radius	Sheep/ goat	Distal metaphysis unfused	≤ 84 months
310	Fill of robber trench E-W	1st - 4th C.	1	Metatarsal	Sheep/ goat	Distal metaphysis unfused	≤ 36 months
629	Layer of silty sand	Late 1st - 2nd C.	1	Ulna	Sheep/ goat	Proximal epiphysis fused	≥ 42 months

629	Layer of silty sand	Late 1st - 2nd C.	1	Radius	Pig	Proximal epiphysis fused	≥ 12 months
629	Layer of silty sand	Late 1st - 2nd C.	1	Tibia	Cattle	Both epiphysis fused	≥ 48 months
635	Fill of gully	Mid - late 1st C.	1	Radius	Cattle	Proximal epiphysis fused	≥ 18 months
645	Silty clay charcoal layer	Late 1st - 2nd C.	1	Metacarpal	Pig	Distal epiphysis unfused	≤ 27 months
302	Interface layer	12th - 13th C.	1	Calcaneus	Cattle	Proximal epiphysis fused	≥ 42 months
510	Demolition layer	1100 - 1400	1	Radius	Cattle	Distal epiphysis fusing	42 - 48 months
510	Demolition layer	1100 - 1400	1	Cervical vertebra	Cattle	Vertebra plates unfused	≤ 108 months
510	Demolition layer	1100 - 1400	1	Cervical vertebra	Cattle	Vertebra plates unfused	≤ 108 months
304	Fill of robber trench N-S	Roman and med	1	Humerus	Roe deer	Distal epiphysis fused	≥ 20 months
304	Fill of robber trench N-S	Roman and med	1	Radius	Cattle	Distal epiphysis fused	≥ 48 months
305	Demolition layer	N/A	1	Metacarpal	Pig	Distal metaphysis unfused	≤ 27 months
501	Pit fill	Roman and med	1	Cervical vertebra	Sheep/ goat	Vertebra plates unfused	≤ 60 months
501	Pit fill	Roman and med	1	Lumbar vertebra	Cattle	Vertebra plates fused	≥ 108 months
549	Mortar floor/pit	Roman and med	1	Radius	Sheep/ goat	Distal metaphysis unfused	≤ 84 months
US		N/A	1	Humerus	Sheep/ goat	Distal epiphysis fused	≥ 10 months
US		N/A	1	Humerus	Cattle	Distal epiphysis fused	≥ 18 months
US		N/A	1	Metapodial	Sheep/ goat	Distal epiphysis fused	≥ 28 months

Table 5: tooth wear and eruption ageing data based on Grant (1982) and Hambleton (1999).

Context	Description	Date	Frags	Taxon	Tooth wear stage	Age
629	Layer of silty sand	Late 1st - 2nd C.	1	Pig	DP4 stage C	2 - 21 months
310	Fill of robber trench E-W	1st - 4th C.	1	Cattle	M3 unworn, M2 stage E, M1 stage G	18 - 30 months
305	Demolition layer	N/A	3	Cattle	M3 stage G, M2 stage G, M1 stage K	Adult

Table 6: measurements of post-cranial animal bones following von den Driesch (1976) and Greenfield (2005) in mm. Key: GL = greatest length; BP = breadth of proximal, DP = depth of proximal, SD = smallest diameter, BD = breadth of distal, H1 = height of the medial wall of the acetabulum.

Context	Description	Date	Frags	Bone	Taxon	GL	BP	DP	SD	BD	H1
310	Fill of robber trench E-W	1st - 4th C.	1	Radius	Sheep/ goat				13.6		
310	Fill of robber trench E-W	1st - 4th C.	1	Metatarsal	Sheep/ goat		18	17.5	10.6		
629	Layer of silty	Late 1st - 2nd C.	1	Tibia	Cattle	343			38	61.2	

	sand										
635	Fill of gully	Mid - late 1st C.	1	Tibia	Sheep/ goat				13		
302	Interface layer	12th - 13th C.	1	Astragalus	Cattle	62.5 (GLI)		40.5 (DI)		39.5	
510	Demolition layer	1100 - 1400	1	Pelvis	Cattle						7.2
304	Fill of robber trench N-S	Roman and med	1	Humerus	Roe deer					26	
304	Fill of robber trench N-S	Roman and med	1	Metatarsal	Cattle				23.1	43.4	
549	Mortar floor/pit	Roman and med	1	Radius	Sheep/ goat				16.3		
US		N/A	1	Humerus	Sheep/ goat					28	
US		N/A	1	Humerus	Cattle					63	
US		N/A	1	Metapodial	Sheep/ goat					23.3	

Table 7: tooth measurements following von den Driesch (1976) and Payne and Bull (1988) in mm. Key: DP4 = deciduous fourth premolar, M3 = third molar, L = length, W = width, WP = width of posterior cusp.

Context	Description	Date	Frags	Taxon	DP4 L	DP4 WP	M3 W
629	Layer of silty sand	Late 1st - 2nd C.	1	Pig	18.5	8	
310	Fill of robber trench E-W	1st - 4th C.	1	Cattle			11.5
305	Demolition layer	N/A	3	Cattle			12

The charred plant remains from Friars Mill, Bath Lane, Leicester (A10.2015)

Rachel Small

Introduction

This report presents the study of the charred plant remains recovered from environmental samples taken during excavation at Friars Mill, Bath Lane, Leicester. Four samples were considered: three layers and one gully fill all of which date to the Roman period (mid – late 1st century). Plant remains, which may include cereal grains, chaff, and weed seeds, provide evidence for past food production, consumption, agricultural practises and environment.

Method

One part of each sample was processed in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve. The flotation fractions (flots) were transferred into plastic boxes and left to air dry; they were then sorted for plant remains using a x10-40 stereo microscope. The residues were also air dried and the fractions over 4mm sorted for all finds. Plant remains were identified by comparison to modern reference material available at ULAS and names follow Stace (1991).

Results

Modern roots and seeds were present in samples along with snail shells indicting a level of disturbance to the contexts. Charcoal and charred plant remains were present in small numbers (table 1). A grain of spelt/emmer wheat (*Triticum* sp.) and barley (*Hordeum vulgare* L.) were also present. Seeds of stinking chamomile (*Anthemis cotula* L.), possibly chickweed (*Stellaria* sp.) and large grass (Poaceae) were identified, all of which are weeds of arable fields.

Table 1: Analysis of flots. Key: + = rare, 0 – 10 items; ++ = common, 10 – 50 items.

Sample number	Context	Description	Litres	% Analysed	Grain	Chaff	Seed	Snail	Charcoal	Root	Note
1	644	Sealed layer below floor surface	6	100			+		+	+	2 x large grass; 1 x cf. chickweed; charcoal flecks
5	519	Layer	7	100	+		+	+	+	+	1 x spelt/emmer grain; 1 x stinking chamomile; 1 x indent. seed
6	635	Gully fill	8	100	+				+	+	Barley grain
7	645	Layer at base of pile slot	9	50	+				++	+	Cereal grain fragment

Discussion

The remains probably represent residues from food preparation and consumption; this is typical of many Leicestershire sites and similar examples include Kirby Muxloe, Desford and Stamford Road (Monckton and Hill 2011: 134). In the Roman period small amounts of grain would have been taken out of storage on a day-to-day basis and prepared for consumption. A standard process was followed and involved parching and pounding to free the grain from the chaff; then winnowing, coarse and fine sieving to remove light chaff, large weed seeds and glume bases, and small weeds respectively. Finally hand sorting would have removed any weed seeds similar in size to the grain. These waste products would have been burnt on the fire acting as good tinder. Food spilled during cooking would also have burned. A general scatter of ash would have formed across the site accumulating on surfaces and in open features such as gullies. Waste would have also of been formally deposited in features such as pits (Monckton and Hill 2011: 130).

Recommendations for further work

If more work is carried out in the vicinity it is recommended that a suitable sampling strategy is implemented.

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