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Northamptonshire Archaeology

Excavation at the Grange, Fowke Street
Rothley, Leicestershire, 2007
Assessment Report
and Updated Project Design



Tim Upson-Smith

December 2008

Report 08/176



Leicestershire
County Council

Historic Environment Record

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ROTHLEY

THE GRANGE ROTHLEY

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THE GRANGE ROTHLEY

OASIS REPORT FORM

PROJECT DETAILS		
Project name	Excavations at The Grange, Fowke Street, Rothley, Leicestershire 2007 Assessment Report and Updated Project Design	
Short description	Northamptonshire Archaeology carried out an open area excavation at the Grange, Fowke Street, Rothley, Leicestershire. The excavation revealed a number of Roman post-pits and spreads of Roman roof tile suggestive of a nearby occupation focus. From the southern part of the site 138 late Saxon/medieval inhumation burials were recovered, along with 149 deposits of disturbed bone. These would have formed an outlying zone of the churchyard attached to the adjacent parish church, which had been abandoned by the 13th century, when the churchyard must have contracted significantly. Medieval features included several pits and a well. There were also a number of post-medieval features which relate to the formal garden of the Grange.	
Project type	Excavation	
Site status	None	
Previous work	Trial trenching Oxford Archaeology	
Current Land use		
Future work	Unknown	
Monument type/ period	Roman/medieval	
Significant finds	Human remains	
PROJECT LOCATION		
County	Leicestershire	
Site address	The Grange, Fowke Street, Rothley, Leicestershire	
Study area (sq.m or ha)	c 1.8ha	
OS Easting & Northing	SK 5867 1273	
Height OD	c 48m	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	Leicestershire	
Project Design originator	CgMs Consulting	
Director/Supervisor	Tim Upson-Smith	
Project Manager	Adam Yates/Iain Soden	
Sponsor or funding body	William Davis Homes	
PROJECT DATE		
Start date	March 2007	
End date	July 2007	
ARCHIVES	Location (Accession no.XA.52.2007)	Content (eg pottery, animal bone etc)
Physical		
Paper		
Digital		

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EXCAVATIONS AT THE GRANGE, FOWKE STREET

ROTHLEY, LEICESTERSHIRE

2007

ASSESSMENT REPORT AND UPDATED PROJECT DESIGN

Abstract

Northamptonshire Archaeology carried out an open area excavation at the Grange, Fowke Street, Rothley, Leicestershire. The excavation revealed a number of Roman post-pits and spreads of Roman roof tile suggestive of a nearby occupation focus. From the southern part of the site 138 late Saxon/medieval inhumation burials were recovered, along with 149 deposits of disturbed bone. The cemetery shows several phases of development, including an original row structure. It would have formed an outlying zone of the churchyard attached to the adjacent parish church of St Mary's, and had been abandoned by the 13th century, when the churchyard must have contracted significantly. Medieval features included several pits and a well. There were also a number of post-medieval features which relate to the formal garden of the Grange.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by CgMs Consulting, on behalf of their client William Davis Ltd, to undertake an archaeological excavation in advance of development at The Grange, Rothley, Leicestershire. The site is situated to the east of Fowke Street, Rothley (NGR SK 5867 1273, Figs 1 and 2). The work was carried out between March and July 2007. The Leicestershire Museums Accession Number is XA.52: 2007.

1.1 Archaeological background

William Davis Ltd made a planning application to Charnwood Borough Council for the construction of apartments and for converting the Grange to residential use (Application ref P/05/1550/2).

An Archaeological Desk-Based Assessment of the site was undertaken by John Samuels Archaeological Consultants (JSAC 2004), which identified that the south-western half of the site lay within the medieval village of Rothley, and therefore had the potential to contain medieval or earlier remains. The Leicestershire Senior Planning Archaeologist recommended to Charnwood Borough Council that an archaeological evaluation be undertaken as a condition of planning consent.

The archaeological evaluation was undertaken by Oxford Archaeology (OA) for JSAC in two phases in September 2005 and June 2006 (OA 2005 and 2006). The investigation revealed traces of possible late Roman activity. A villa site at the western end of the village (c 1.6km away from the development site) provided some context for this discovery (HER ref. MLE891-2), but it is also relevant to note the recovery of a late Roman coin from 25 Fowke Street (MLE7775), and reference to a coin hoard from the village (MLE7776). A Roman pavement is reputed to have been found within the Vicarage garden to the south. This was

marked on old editions of the Ordnance Survey. However, a change in Ordnance Survey records, adding the date of discovery as 1722, suggests that there may have been some conflation of this with another villa at Swithland Road, itself always regarded as found in that year. The Vicarage villa remains a possibility but the 1722 date is thus in doubt.

The evaluation revealed the presence of a cemetery in the south-western part of the development area. The northern extent of the cemetery was postulated on the basis of the evaluation. It appeared from the evaluation that the density of burials increased to the south, reinforcing a likely link with the extant parish Church of St Mary and St John. The presence of the Saxon cross (HER ref. MLE910, SAM ref.: 21646) within the churchyard to the south, would indicate a Christian presence in the area from the pre-conquest period (see Cover).

1.2 Topography and geology

The overall site covered an area of approximately 1.8ha, and lay at an average height of c 48m AOD, sloping gently down to the south and east, towards Rothley Brook, which formed the eastern boundary of the original garden to The Grange. The site was bounded to the west by the gardens of the properties fronting onto School Lane. The southern part of the site was scrub woodland. The underlying superficial deposits comprise alluvium overlying Triassic mudstones <http://www.bgs.ac.uk/geoindex/>.

1.3 Original objectives and methodology

Aims and objectives

The desk-based assessment and evaluation trenching demonstrated that the site at The Grange, Rothley contained undated burials and Romano-British remains. The primary objectives of the mitigation strategy as outlined in the specification (CgMs 2007) were:

To mitigate the effect of the development on the existing archaeology, through preservation by record and, where appropriate, publication of the results in a suitable academic journal

To remove all human remains to be affected by the development

To clarify the date, nature, density, extent and state of preservation of any archaeological remains

To assess the significance of the site at local, regional and national levels.

The aims were to be realised through the achievement of the following specific objectives:

To recover a plan of any Romano-British features present on site

To establish the nature, duration and development of any Romano-British remains

To recover information relating to the social, industrial and economic nature; status and function of any Romano-British settlement features

To recover the plan of the cemetery and any associated features

To establish the nature, duration and development of the cemetery

To interpret the nature of human activity at the site and to place the site within its local, regional and national context as appropriate.

Excavation methodology

An open area of approximately 1,450sq m was opened in the south-west portion of the development site (Figs 2 and 3). The excavation area was sited in response to the results of the previous evaluation.

Topsoil and overburden were removed by mechanical excavator using a toothless ditching bucket, under constant archaeological supervision. The spoil generated during the excavation was mounded away from the edges of the excavation.

Mechanical excavation ceased at either undisturbed natural deposits or when archaeological features were identified. The nature of these deposits was assessed by hand excavation.

The excavation area and spoil heaps were scanned with a metal detector to ensure maximum finds retrieval.

Hand excavation and recording proceeded following the methodologies set out in the project specification (CgMs 2007).

2 ASSESSMENT OF ARCHAEOLOGICAL EVIDENCE

2.1 Stratification

The varied survival of archaeological stratification was caused by the building which had recently occupied the site. This comprised prefabricated 1960s offices on a concrete raft and a configuration of pads, which formed a building L-shaped in plan (Fig 3). Its construction and demolition on ground which seems to have undulated, left localised truncation. Thus the northernmost third of the site was truncated down to the natural, leaving no stratified archaeological horizons, while the central and southernmost thirds of the site had not been so truncated, the western portion being under mature tree-cover, although landscaping for the prefabs had contributed to localised damage. This landscaping had also potentially resulted in other areas of archaeology, such as the eastern side, being more deeply buried.

The southern edge of the site was formed by an old tree line and a stone wall. The trees had self-seeded northwards when the garden became unkempt. Thus scrub and roots had subsequently impinged upon the southern edge of the excavated cemetery and root systems were found amongst relatively shallowly-buried inhumations.

2.2 Prehistoric

Prehistoric remains were limited to a scatter of residual flints dating to the late Neolithic or early Bronze Age (c 2500-1500 BC). No related features of this period were present

2.3 Roman

It is during the Roman period that the site was first occupied, and there was a concentration of Roman occupation debris on the western side of the site.

Roman activity had begun with ditches located in the northern part of the excavation area, and running west to east. Pottery from the fills of these ditches is dated to the 2nd century AD.

The remainder of the pottery assemblage, which is associated with the other Roman features

and the tile dumps is largely later 3rd to 4th century in date.

A series of post-pits lay in the western part of the excavation, some of which are dated by small pottery assemblages. While there is no clear pattern, it is suggested that they formed the eastern end of a substantial timber building, with the remainder lying beyond the excavated area (Fig 3, Structure A).

In the same area as Structure A, there were two rubble walls or foundations and an extensive spread of roof tile and demolition rubble, which formed a roughly rectangular area, also extending beyond the excavation to the west. To the east of the roof tile there was an area of pebble metallurgy; the largest of several spreads which survived as islands amidst later truncation.

A large shallow sub-rectangular pit, which continued beyond the eastern edge of the excavation, was contemporary with the building deposits.

2.4 The late Saxon and medieval cemetery

Introduction

A total of 138 *in situ* inhumation burials were recovered, although many of these survived as only partial skeletons as a result of later disturbance (Fig 3). There were a further 149 deposits of disturbed and redeposited human bone, indicating just how widespread disturbance was, with this material representing the lost parts of those recovered *in situ* and perhaps parts of some burials for which no remains survived *in situ* (Fig 4). As part of the analysis a minimum number of individuals will be calculated on the basis of the representation of major skeletal elements.

All of the articulated burials were extended and supine aligned west to east. Due to later disturbance and shallowness of the soil horizon, clear grave cuts could only be defined in a few instances.

The general state of preservation was poor, with the major bones typically crushed and fragmented and the minor bones in even worse condition, if not totally lost to decay. In addition, many have missing elements as a result of the later disturbance. This clearly limits the potential of the assemblage for analysis.

Chronology

The date of origin of the cemetery has not been established, although the presence of small quantities of late Saxon pottery, Lincoln ware and Stamford ware, might relate to the use of the cemetery from the mid-9th century onward. To refine this date it will be necessary to obtain radiocarbon dates from potentially early burials.

At the northern margin of the cemetery, burials had been disturbed by a large pit that is dated to the 13th century. This suggests that this part of the cemetery may have been abandoned by the end of the 12th century or, at the latest, during the 13th century. To further refine the date of closure radiocarbon dates should be obtained from burials that are late in the burial sequence.

Organisation

While the northernmost extent of the burials was determined, there was no discernable boundary feature forming the northern limit of the cemetery, although it would be expected that some form of boundary would have existed.

The extent of later disturbance and the dense scatter of burials within the central part of the excavated cemetery area make it difficult to formulate a simple scheme for the original organisation and the later development of the cemetery.

Provisional analysis indicates the presence of a structured row system (Fig 4). This is most clearly evident to the west, where a single near complete row of burials survived with minimal later disturbance, except at the southern end. There may have been a further four rows to the east, spaced at intervals of around 4.0-4.5m, which would have left generous pathways between the rows (Fig 4, light brown). However, none of the rows to east was anywhere near fully occupied, even allowing for the loss of some burials to later disturbance. At a later date a new row system may have been introduced, parallel to but slightly offset from the original rows, so that the head ends of the new graves impinged on the foot ends of the original rows (Fig 4, green). These too may have been spaced at 4.0-4.5m apart. Three possible rows can be identified, but again none of these are anywhere near fully occupied. It is the absence of a second phase row to the west that left the original westernmost row undisturbed.

On top of the underlying pattern of order, there are further burials, with a particular cluster across the central part of the excavated cemetery, which seem to show no respect for any row structure. These may represent a final phase of fairly indiscriminate usage of the area, or perhaps clustering resulting from the establishment of small family plots. In addition, there are also scattered individual burials, and scattered deposits of disarticulated bone beyond the core area. These may mark outlying family plots or the burial of those similarly on the margins of society. In a few instances one burial almost exactly overlies an earlier burial, suggesting the insertion of a family member into an existing grave.

There may also have been a break between the southernmost burials and the suggested row structure (Fig 4, purple). This would indicate the presence of separate zones of burial, with the southernmost burials belonging to a zone lying largely to the south of the excavated area. The majority of the excavated burials lay within a single zone forming the northern extremity of the more extensive churchyard.

Radiocarbon dating of selected burials may help to resolve some of the details of the organisation and chronology of the cemetery.

Disturbance

In some instances it is clear that the loss of parts of an inhumation was the direct result of the digging of a later grave, and the displaced parts had been inserted, as charnel deposits, within the new grave. However, in many instances there is no surviving later inhumation to account for the loss, and it is likely that much of the disturbance occurred accidentally at later periods, following the abandonment of this part of the cemetery. Intensive gardening during the post-medieval period may have been responsible for much of this disturbance, and also for some of the charnel deposits that lay at some distance from any *in situ* burials.

2.5 The medieval features

A large sub-rectangular pit, which cut some of the burials at the north margin of the cemetery, was dated by pottery to the 13th century, which suggests that the cemetery had gone out of use by then. However, this feature is isolated within the cemetery and its purpose is unclear. (It was previously seen in Trench 7 of the 2005 evaluation.) Under the former prefab buildings was a well of possible 12th-century date. Other medieval features would suggest low level activity in the vicinity continuing into the 14th century but these are limited to isolated pits,

postholes and a gully. Their unrelated locations leave no scope for detailed interpretation, but they may be the deepest surviving examples of a wider selection of shallower features subsequently lost (Fig 3).

2.6 The post-medieval and modern features

In a pattern which continued the experience of medieval activity, there were disparate and isolated post-medieval garden features which included a pair of parallel, interrupted, 19th-century ribbon planting beds, a Victorian brick-lined well and the brick footings of a Victorian greenhouse. However, unlike the medieval predecessors, the post-medieval features are more widespread and include some within the cemetery, including two areas of rubble packing and a short length of stone-lined drain, which truncated at least two graves in the furthest south-eastern corner of the excavation. Latterly, The Grange was used as offices and the prefabricated L-shaped building on its concrete raft took up much of the centre of the excavation area, along with areas of very regular, deeper truncation related to landscaping (Fig 3).

2.7 Summary of artefactual evidence

Flint by Yvonne Wolfram-Murray

A total of 13 flints were recovered. These comprise three cores, one scraper, two utilised flakes and seven unutilised flakes. All were residual and therefore reflect background late Neolithic/early Bronze Age activity.

Romano-British Pottery by Jane Timby

The excavation recovered 314 sherds of Roman pottery weighing 17.9kg (Table 3). In general terms the assemblage is in very good condition, reflected in the overall average sherd weight of 57g. This figure is somewhat skewed by a number of amphorae sherds, their parent vessels being large and robust.

The pottery derived from 60 separate contexts. The quantity of material present per context was thus generally very low with just four contexts producing in excess of 20 sherds; the remainder less than 10 and in many cases just single pieces. This clearly affects the level of confidence that can be placed in the dating.

At this stage no detailed research work has yet been carried out to specifically compare the assemblage with other material published from the immediate locality or to link the fabrics in with any pre-existing local fabric or form series.

Following a comment on the methodology used, the assemblage is briefly described. A section follows this on the potential of the group and further work.

Methodology

The assemblage was sorted into broad fabric groups based on inclusions present, the frequency and grade of the inclusions and the firing colour. For the Roman sherds known regional or traded wares were coded following the system advocated for the National Roman Reference Collection (Tomber and Dore 1998).

The sorted assemblage was quantified by sherd count and weight for each recorded context and the data entered onto an MS Excel spreadsheet.

Overall the assemblage appears to mainly date to the later Roman period and comprises a mixture of imports, both continental and regional and local wares.

Finewares and amphorae represent continental imports. Four sherds of Central Gaulish

Samian are present (Dragondorf forms 31, 79). Some 48 sherds of Baetican olive oil amphorae were present, mainly from two post-pits, which may in effect be from a single vessel.

Regional imports include a number of Lower Nene Valley products, both whiteware mortaria and colour-coated wares, four sherds of Dorset black burnished ware, and three colour-coated wares and a whiteware mortaria (Young 1977, type M21) from Oxfordshire.

A variety of vessels feature from the Nene Valley industries including plain walled dishes, a copy of a Samian Dragondorf 36, flanged bowls, boxes, beakers and jar or flagon.

The local wares dominate the assemblage accounting for 61% by count. These largely comprise well-fired grey or black sandy wares and shelly ware. Of note is a part of a small cheese press.

Potentially the earliest pottery in the assemblage comes from a ditch aligned east-west across the northern part of the site, with two lid-seated jars normally associated with the 2nd century AD accompanied by a Lower Nene Valley whiteware mortarium sherd and a slightly micaceous greyware. The only other lid seated jar came from a burial and is therefore residual. The remainder of the assemblage with diagnostic material appears to be mainly later 3rd-4th centuries AD.

Roman building material by Pat Chapman

Ceramic tile

The total ceramic tile assemblage comprised 815 fragments, weighing 520.64kg, consisting of 175 *tegulae*, 142 *imbrices*, 100 brick type, 19 box flue tile and 379 body sherds. Because of the quantity of tile a sampling policy was applied (see Tables 5 and 6). The assemblage retained for analysis comprises 360 tile fragments consisting of 118 *tegulae*, 66 *imbrices*, 108 brick-type tiles, 19 box flue tiles and 49 body sherds.

The majority of the tile fabrics conformed to one type, a very hard, slightly coarse clay fired to an orange red, sometimes with a brown surface, or just brown.

Within the *tegulae*, some flanges have a cutaway feature and some nail holes were noted. Quite a few tiles have various swirl marks across the surface, which have been interpreted as tally or tilers' marks, and other deliberate markings. A few body sherds have dog and cat footprints, and there is one possible deer slot.

A range of sizes for the *imbrices* were noted, the largest of which might be part of a ridge tile.

Most of the brick/tile fragments are probably from *bessalis* and/or *pedalis* tiles, however, a complete *lydion* tile also survived. It may also be the case that some of the larger fragments are also from *lydion* tiles.

Tesserae

Twenty-eight tesserae come from eleven contexts, all associated with ceramic roof tile. They were found either singly, in threes or fours and one group of six.

Twenty are ceramic, in the roof tile fabric. The other eight tesserae are stone.

They have presumably come from at least a polychrome tessellated pavement in three colours located somewhere nearby.

Plaster

There are three small residual fragments of plaster, but with no traces of paint.

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Concrete

This assemblage, weighing 4.255kg, comprises fragments varying in size from large lumps of *c* 700g down to small fragments. Some fragments have the impressions from the tiles or other structural elements that they were used in conjunction with, including one piece still adhering to a fragment of slate roof tile.

The use of limestone to make mortar and water-resistant cement and then concrete (*opus caementicium*) with the addition of sand and other materials was common throughout the Roman Empire and the earliest recorded limekilns in England date from this period (Williams 2004, 3-4).

Stone

A small piece of worked granite, probably from Charnwood, Leicestershire, has been faceted with one face fairly smooth, but has been broken so only a portion survives. It was residual in a grave fill.

Slate tile

The assemblage comprised 180 slate roof tiles, weighing 162.88kg. Ninety-two tile fragments were discarded during the initial quantification, with 88 tiles retained.

The colour of the slate varies between green or blue, grey or reddish. They are generally a diamond-shape with some triangles or rectangles. The surviving perforations are single.

Saxon and medieval pottery *by Paul Blinkhorn*

The Saxon and medieval pottery assemblage comprised 87 sherds with a total weight of 3,337g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 1.80. It was recorded using the conventions of the Leicestershire County type-series (Sawday 1994), as follows (the alphanumeric codes refer to those used in the database):

- F1: Early/Middle Saxon Grano-Diorite ware, AD450-850. 5 sherd, 110g, EVE = 0.10.
- F100: LI2: Lincoln ware, 850-1050. 1 sherd, 30g, EVE = 0.18.
- F205: ST: Stamford ware, 900-1150. 7 sherds, 38g, EVE = 0.
- F300: PM: Potter's Marston ware, 1100-1300. 29 sherds, 1,792g, EVE = 1.28.
- F301: CC1: Nuneaton 'A' ware, AD1200-1400. 1 sherd, 10g, EVE = 0.
- F302: CC3: Nottingham Ware 2, 1230-1300. 1 sherd, 4g, EVE = 0.
- F303: CC2: Chilvers Coton 'C' ware, 1200-1475. 16 sherds, 333g, EVE = 0.
- F330: LY4: Shelly wares, 1100-1400. 1 sherd, 18g, EVE = 0.
- F360: MS1: Medieval Sandy ware, 1100-1400. 6 sherds, 75g, EVE = 0.04.
- F365: RS: Late Medieval Reduced ware, L 14th-15th century. 1 sherd, 303g, EVE = 0.20.
- F403: MP1: Midland Purple ware, 1375-1550. 4 sherds, 208g, EVE = 0.
- F414: EA3: Staffordshire Mottled ware, 1650-1780. 1 sherd, 2g.
- F426: EA6: Post-medieval Blackware, late 17th century+. 6 sherds, 113g.
- F1000: EA10: Fine white earthenware, 19th century+. 8 sherds, 301g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Appendix 3, Table 8. Each date should be regarded as a *terminus post quem*. The range of fabric types is typical of the area, and indicates that there was low-level activity at the site from the later 11th or early 12th century onwards, as well as a small assemblage of early/middle Saxon pottery, although it is impossible to date these wares other than to within any time between AD450-850. The single sherd of Lincoln ware shows that there may have been some activity at the site in the late Saxon period, although it could be as late as the

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Norman Conquest and date to the start of medieval occupation.

All the sherds were in good condition, and show little evidence of abrasion. The mean sherd weight is fairly large, although this is somewhat influenced by the presence of a near-complete Potter's Marston ware jar and a large rimsherd from a Late Medieval Reduced Ware storage jar.

Other finds by Tora Hylton

The excavation produced 97 individually or group recorded small finds spanning the Roman to post-medieval period. The assemblage is dominated by nails (39), recovered from Roman (3), Saxon/medieval (29) and post-medieval (7) deposits. Small numbers of Roman finds were recovered from Roman deposits (9) or were residual within medieval and later deposits (4). A small number of finds were recovered from the Saxon/medieval burials (22). With the exception of a fragment from a Saxon pin-beater, the majority are single nails residual in grave earth. Later activity is represented by a small uninspiring group of medieval, post-medieval and modern finds.

All the common materials are represented and may be quantified by material type as follows:

Table 1: Other finds by material

MATERIAL	TOTAL
Silver	1
Copper alloy	13
Iron	54
Lead	1
Metal alloy	3
Stone	3
Flint	11
Bone	2
Ceramic	3
Glass	6
Total	97

Data collection

All finds were recorded on site manually following NA guidelines. The majority of finds were recovered by hand. The positions of all excavated finds were recorded by three-dimensional co-ordinates. All the recorded small finds have been entered on to a computerised database (ACCESS). A basic catalogue has been compiled, comprising material type and object identifications, together with context information. All finds have been boxed by material type, in numerical small find order.

Condition

All the metalwork (silver, copper alloy, lead and ironwork) is in a stable condition, but some of the iron objects are encrusted in corrosion products, therefore a small number of undiagnostic objects have been x-rayed to aid identification. The worked bone and glass objects are all in a good condition and require no further work. No waterlogged organic material was found.

The Finds

Roman

There are 13 small finds which may be dated to the Roman period. Nine objects were recovered from stratified Roman deposits and four are objects which stylistically date to the Roman period, but were recovered as residual finds in later deposits.

The assemblage comprises a small group of portable items which may have been casually lost and includes items reflecting trade and personal possessions. All five coins date to the 4th century AD, two were recovered from Roman layers (98, 240), one residual within a medieval charnel pit and two from subsoil deposits. Other objects associated with trade include two lead weights for use with a steelyard, both from a Roman layer. The weights are biconical and still retain the corroded remains of the iron suspension loop. Items for personal use include a small copper alloy brooch, a bone pin and an iron knife. The brooch, a 'Harlow' type brooch which dates to c 40/45-75/85 AD, was recovered from topsoil and therefore unstratified.

Part of a worked bone shaft, probably from a hair/dress pin, was recovered from a Roman layer. A tang and blade fragment from a single-edged knife was recovered from a medieval pit, but the blade form suggests that it may be Roman in date, with similarities to Mannings Type 11a/b (1985, fig 28).

Other objects from Roman deposits include a undiagnostic fragment of copper alloy plate with convex surface from Ditch 176 and 3 iron nails, one each from Layer 118, (fill 416) and Spread 188, which lack any specialist use.

Late Saxon/medieval

Finds from late Saxon and medieval deposits are dominated by nails (29). They were recovered either as individual finds from burials (17) or as group/individual finds from medieval features (12). Other finds of late Saxon and medieval date include a bone point, a silver coin, a knife and an iron nail.

The earliest datable object, and the only one of Saxon date, is the worked bone point from Grave 132. Although incomplete, it appears to be part of a double-pointed pin-beater, a tool used during the process of weaving to separate coarse threads that catch on each other when the shed is changed. Such tools would have been for use with warp-weighted looms, which are common on settlement sites of early/middle Saxon date.

A Scottish silver penny, Alexander III (1249-1286), was recovered from the subsoil deposits:

Other finds of medieval date include a whittletang knife, from Pit (220), and a fiddle key horsehoe nail with large semicircular head, from the grave fill of burial 158.

There is one slightly damaged limestone 'pot lid', 85mm diameter, which is of the thirteenth century.

Post-medieval

Finds of post medieval date were recovered from tree planting trenches, a 19th-century well and various post-medieval spreads/layers. The assemblage includes fragments of vessel and window glass, a heel protector, a hinge, a staple, buttons and nails.

2.8 The human bone by Sarah Inskip

Summary

A total of 287 bone deposits, including articulated burials and disarticulated material, were analysed to explore the research potential of the assemblage. The preservation was fair but disarticulation and fragmentation levels were high making a large quantity of the material unobservable. However, the assemblage warrants further research in a comparative context for palaeopopulation analysis particularly as it represents a large rural population.

THE GRANGE ROTHLEY

Aims and objectives

The aim of these analyses was to assess the skeletal material excavated from the cemetery at The Grange Rothley with regards to age, sex, pathology, metric and non-metric traits. The objective of this was to produce recommendations for the future analysis of the remains and highlight the research potential of the material.

Methodology

The remains have been assessed according to English Heritage's *Human Bones from Archaeological Sites, Guidelines for Producing Assessment Documents and Analytical Reports* (Jones 2004). Completeness was recorded in four categories based on the amount of the skeleton that was present. These were as follows: <25%, 25-50%, 50-75% and 75%+. A fifth category of 0 was created for burials that contained more than one individual. It is not uncommon for burials to contain multiple individuals either through burial rite or through disturbance. Therefore, the number and side of skeletal elements per burial were recorded to highlight if the burial contained bones originating from more than one individual.

Preservation was recorded in four categories, poor (no cortical bone surfaces available for pathological observation), fair (few cortical surfaces available for pathological observation), good (most surface available for pathological observation) and excellent (all surfaces available for pathological analysis).

For age assessment, the presence of teeth, completeness of the skull sutures, the conditions of the auricular surface and the pubic symphyses was noted. As the most sexually dimorphic regions of the skeleton, the presence and condition of the skull and the pelvis were recorded and their availability for sex assessment noted.

Results

Preservation

The preservation of the material was generally fair. Only 14 individuals were classified as having good preservation. The majority (70%) were classified as being fairly preserved. Table 2 shows the frequency of burials in each preservation group.

Table 2 Preservation of burials

Preservation	Good	Fair	Poor	Total
Total	14	206	67	287

Completeness

Table 3 displays completeness for the burials. There is a high frequency of individuals where less than 25% of the skeleton remains. This is the result of the high level of disarticulation, truncation and the low levels preservation. Additionally at least 10% of the burials contain material originating from more than one individual. It is not possible to comment on the completeness of these burials, as it is very difficult to separate out mixed skeletal material, particularly with adult individuals. The frequency of leg bones, in particular the number of femurs was noteworthy. This is undoubtedly due to the size and density of the cortical bone shaft.

Table 3 Burial completeness

Completeness	0	<25%	25- 50 %	50 - 75%	>75%+	Grand total
Total	28	197	33	17	12	287

Number of individuals

There is a total of 287 numbered bone groups but, as mentioned above, some of these contained more than one individual. To take a reliable estimate of the original number of

burials a sided element count will be required. This would prevent the same individual being counted twice.

Juvenile skeletal material was identified and there appears to be a reasonable number of adolescents. Only one possible infant bone was identified and a few younger children (less than 10 years of age). Out of the ageable individuals (n = 71) 18 or 25% could be classed as juvenile or younger (eg less than 21). This is similar or a little lower than other contemporaneous sites. Based on other medieval sites we would expect there to be far more child and infant remains, in fact a third of the assemblage from Barton on Humber (Waldron 2007) consisted of individuals below the age of 15 years. It is not possible to comment on whether there was selective deposition of infants and babies due to the preservation and disturbance to the site.

Age

Only 71 of the skeletons could be aged. The dentition can be analysed using either Brothwell's (1981) method produced from British populations or Miles (1962) wear chart produced from the Anglo-Saxon material of Breedon. The method of Miles (1963) cannot be calibrated to this population due to the limited number of ageable juvenile material in the assemblage. Another indicator that can be used to estimate adult age is the auricular surface following Lovejoy *et al* (1985). The auricular surface is a dense part of the pelvis and survived more frequently than the pubic symphyses. Suture closure cannot be used due to the high level of fragmentation and poor preservation. Not a single, complete skull was excavated. Similarly, no intact ageable pubic symphyses were identified.

Juvenile individuals should be aged using long bone length (Mareš 1955), dental eruption sequencing following Gustafson and Koch (1974) and assessing the progression of epiphyseal fusion using the methods set out in Buikstra and Ubelaker (1994).

Sex

There were only 26 individuals on which sex estimation could be taken. Individuals should be sexed following the methods in Buikstra and Ubelaker (1994). Metric assessment can be used to determine sex, particularly using the femur and fourth rib. However, the femurs are fragmentary and the trabecular head is frequently broken. This means that sex determination through discriminate function analysis would not be fruitful. There is also no possibility of sexing using the ribs, as they are incomplete and poorly preserved. Despite this based on a preliminary analysis it appears that there may be a sex bias towards males at the site.

Pathologies

Due to the condition of the material it was unsurprising that there were only a few major pathological conditions of note in the assemblage beyond that of the diseases expected in any population ie osteoarthritis, healed fractures, dental caries, cribra orbitalia, periostitis and Schmorl's nodes.

Metric assessment

Although a lot of the skeletal material is fragmented, many of the bones could be put back together and measured. There appears to be a high frequency of taller individuals in the assemblage. Metric assessment may be able to confirm whether the population's average height is normal for the period and site type. Stature is often used as an indicator of health, and can therefore be used to assess the general health of the population. The population's stature estimate should be produced from the most common long bone using the formulae from Trotter (1977) and Trotter and Gleser (1952). In this case this is likely to be the femur. The following measurements should be taken in accordance with Buikstra and Ubelaker (1994):

Maximum length of humerus

Maximum length of radius

Maximum length of the ulna
Maximum length of femur
Antero-posterior diameter of the femoral shaft
Transverse diameter of femoral shaft
Maximum length of tibia
Antero-posterior diameter of the tibial shaft (taken at nutrient foramen level)
Transverse diameter of the tibial shaft (taken at nutrient foramen level)
No cranial measurements should be taken due to the fragmentation of the skulls.

Non-metric assessment

Fair preservation of the material means that many non-metric traits cannot be recorded. However the survival of the leg bones means a number of traits that are related to activity would be worth recording and comparing to similar sites. Where possible the following non-metric should be recorded on articulated individuals.

Squatting facets tibia (Finnegan 1978)

Squatting facets on the talus (Finnegan 1978)

Third trochanter (Finnegan 1978)

Hypotrochanteric fossa (Finnegan 1978)

Discussion

There are a number of compounding factors at the site, which makes further analysis of this assemblage limited. The preservation of the material is generally fair and a substantial quantity of the material is disturbed and disarticulated. Graves have been intercut with pre-existing ones leading to a commingling of individuals. Few individuals can be aged and sexed and as most scientific analysis relies on relating different types of data to each other, our interpretations are somewhat limited. A final major problem is that there is no definite date for the cemetery meaning that the burials cannot be placed in time periods more precisely than the late Saxon/early medieval period. This means that a diachronic study of changing health and life at the village of Rothley is not possible through osteological means.

Rothley should be further analysed as it represents a rural community outside of Leicester City and can therefore act as a useful comparison site for urban-rural analysis. This type of research is crucial as residing in a town in the medieval period could be vastly different to living in the countryside. Furthermore, this may vary from region to region. There are a number of large skeletal assemblages from Leicestershire and Leicester City of the same date that can be used as comparison sites. This could include, when published, the material from the recently excavated cemetery at St Peter's, Leicester. Data from Rothley could be combined with other local sites to allow regional palaeopopulation analysis. Examples of non-local comparison sites could include the 10th-12th century material from rural Raunds Furnells (Boddington 1996) from nearby Northamptonshire or the relevant phases from the Barton on Humber material (Waldron 2007).

Disarticulated material

The value of disarticulated material is limited (Jones 2004). Analysis could result in the recording of a single individual numerous times. Furthermore, the material cannot be dated or placed within a context. For this reason, the analysis of disarticulated material is not recommended. Unfortunately this means that 52% of the material from Rothley does not warrant further analysis beyond that of estimating a minimum number of individuals or looking for interesting pathological case examples.

Health and disease

Pathological alteration to bone results in a change in the bone structure. In some cases this can leave the bone porous and more vulnerable to digenesis after burial. In the case of the Rothley skeletons, there is limited opportunity to study pathology due to the relative

preservation of the material. Flaking of the cortical bone will have removed evidence of many bony changes including signs of infection, joint disease and metabolic diseases. This problem was further exacerbated by the disturbance to the material and when pathological material was identified it could not always be related to an articulated individual. One such example is a severe case of osteomyelitis noted on a disarticulated femur. More detailed analysis might highlight other conditions but this will only be worthwhile on articulated material. Despite this, it was possible to view the more common pathological changes including cribra orbitalia, osteoarthritis, periostitis and Schmorl's nodes. These will be analysed in relation to sex and age. OA will be analysed to assess whether there is an unusual distribution pattern in the joints and whether this maybe related to activity.

Although the majority of long bones were fragmented, many of them could be measured. Stature can be seen as an overall indicator of health and dietary status. Stature is genetically predetermined but without an adequate diet the potential to reach this height is limited (Roberts and Cox 2003, 248). Due to the preservation of the bone, it is unlikely that other bony indicators of health will be available for analysis, but the survival of teeth may mean that hypoplasia caused by prolonged illness, disease or stress could be recorded.

Metrics and activity

As mentioned above, stature estimates could be calculated for a number of individuals. Based on preliminary analysis, there appears to be an unusual number of taller, larger individuals. Preservation factors alone do not explain this phenomenon as a substantial amount of child remains was also recovered. This is particularly of interest, as there also appears to be a bias towards the number of males at the site. I therefore recommend that measurements are taken of all available long bones to assess the stature of the population and whether it is indeed unusual for the period and location.

The diaphysis shape of the femur and tibia has been used as an indicator of health, activity and genetics through the analysis of platymeria and platycnemia. Although the exact cause is not agreed upon, it is generally thought to be related to activity (Capasso *et al* 1999). A large number of femora and tibia remain intact and platymeric and platycnemic indexes could be collected. This can then be compared with the sites mentioned above.

Taphonomy

Finally, patterns of preservation should be noted. This should be compared to research on elemental survival and bone density.

2.9 Summary of environmental evidence

Animal bone by Karen Deighton

A total of 13.3kg of animal bone was recovered by hand from a range of contexts. The material was assessed to determine the taxa present, the level of preservation and the potential contribution to the understanding of the site (Appendix 4, Tables 10-14).

Method

The material was scanned and species, preservation, potential ageing and metrical data, modification and butchery were noted. Metrical data is after von den Driesch (1976). Butchery and gnawing are after Binford (1981). Ageing data is comprised of fusion information, bone morphology and tooth eruption and wear. Material recovered from samples is also included in the assessment.

Results

Fragmentation was fairly heavy with few complete long bones observed; abrasion was high in several contexts which was possibly due to soil conditions. Ten instances of canid gnawing and nine examples of butchery were noted including evidence for the removal of cattle horn cores. A cattle scapula with knife marks could indicate the removal of meat. Evidence of antler working was noted which consisted of saw marks indicative of the removal of a branch from the burr.

The Taxa present

Cattle were the most abundant species, followed by almost equal numbers of sheep/goat and pig. Wild species were limited to red deer (in Roman and burial contexts); although the presence of limb bones suggests there was not just the collection of shed antlers. A pathology was noted, exostosis on a large ungulate vertebra.

Ageing and metrical data

Neonates were present including a possible partial neonatal pig skeleton in a medieval well.

Tooth data was present for cow, sheep/goat and pig and fusion data was available for all species. Unfortunately data would be too sparse for meaningful interpretations to be made.

Evidence for the sexing of pigs (tusks) is also available. However, the same problem as above is encountered.

Some pigs appeared very large; however there is little metrical data available to explore this observation.

Discussion and conclusion

The majority of the assemblage was from Roman and medieval contexts, where the species observed are typical for both periods. Unfortunately due to the small amount of material present (95 fragments from Roman contexts, 62 fragments from medieval contexts) little can be said of the animal economy of the site beyond the species present. Little material was recovered from the burials or post-medieval and modern features.

Environmental samples by Wallis Lord-Hart

Seven soil samples were taken from Roman and medieval layers, pits and a well in order to identify macroscopic plant remains (Appendix 5, Table 14)

Methods

All samples were processed by flotation with a 1mm sieve used for the residue in a modified siraf tank, and then agitated in order to assist in separation. The floating fraction (flot) was

collected into a 500 micron mesh. This fraction was then dried and scanned using a binocular microscope with a magnification of up to x 20. Seeds were then identified using Zohary and Hopf (2000), Cappers *et al* (2006), with terminology from Stace (1997).

Results

Charred seeds were recovered from each of the seven soil samples. Several types of cereal grain were present, including Barley, Wheat, Spelt and Oats. Only a few chaff fragments were found, in the form of spelt glume bases, and one Barley rachis fragment. The most fruitful samples produced between fifty and seventy cereal grains. There were also a fair few weed seeds present. Due to poor preservation of a large number of the seeds, identification was difficult, and many of the seeds could only be identified to family.

Discussion

Samples were taken from features dated to the Roman, medieval, and Victorian Period. Sample one was determined to have been Victorian in date, and is therefore no longer being considered of interest here.

Sample seven, dated to the Roman period, is demonstrative of the detritus from the storage of grain. Weed seeds recovered such as Bromus (Bromes) and Rumex (Dock) are typical crop contaminants. There were a moderate number of various cereal grains entering this area as detritus, although not a large enough number to reveal for certain that grain processing was occurring on site, as there were so few chaff fragments found. The seeds recovered in this area help to support the idea that this layer is from the Roman period, as Spelt, a seed common to the Roman period, was found here. It was rarely used during the medieval period (van Zeist 1991). As the number of seeds recovered was minimal however, any interpretation is difficult to make.

The remainder of the samples have been recovered from medieval contexts, dated between the 12th and 14th centuries, when it is thought the cemetery was no longer in use. The pits and well that were sampled from this period each contained several grains of wheat (*Triticum aestivum*) and some barley (*Hordeum*) as well as a few types of weed seeds. The limited number of seeds recovered from these features is not demonstrative of any economic activity, but are more likely to be simply the native weeds and detritus from the neighbouring houses/land accumulating here. A medieval layer (sample 2) recovered a medium quantity of cereal grains. As there is no chaff associated with this feature, it is likely that the grain was of a partly processed crop, where the chaff has already been separated out. It would seem that this layer of activity demonstrates the storage of processed Barley and Wheat. The limited number of samples taken from this period makes it difficult to further characterize the agricultural economy of this site.

2.10 Statement of potential

The Roman occupation

Further analysis of the finds distribution, integrated with an appraisal of the ceramic dating, will facilitate greater understanding of the post-pits, pits, ditch and spreads of Roman material. The bulk of Roman building material, although large, is offset by the relative paucity of stratified occupation debris, a great deal of Roman material being residual in later contexts.

No foundations existed within the excavation area to provide a ready context for the tesserae or box flue tile. While the western periphery of the site did contain elements of Roman remains, including a configuration of postholes and the concentration of a possible roof covering discarded, the latter does not constitute a single phase of collapse *in situ*. Similarly the amounts of other Roman building debris, tesserae and wall plaster, while usually

indicative of villa-style living, are present in negligible quantities. Two interpretations of this are possible. Firstly, that the excavation lies at the very furthest reaches of a possible villa site, just attracting some demolition debris. Alternatively there exists in close proximity to the site a virtually complete villa complex which either retains most of its building debris or has been effectively robbed for materials which have gone elsewhere. Thus the tradition of the Vicarage villa is perpetuated (regardless of the date of discovery) but conclusive evidence is not forthcoming from this site. In either scenario, the evidence of this site is unable to contribute further. There is Roman occupation at the edge of the site, but its nature is unclear.

The late Saxon and medieval cemetery

Further study of the layout of the cemetery has the potential to look at questions of planning within the cemetery. The arrangement of the burials indicates that there was originally a planned layout, based on a regular row system (Fig 4). The bulk of the disarticulated material comes from a central area, with earlier burials being disturbed where there appears to be a concentration of later burials showing no evident regular layout. Despite the level of disturbance, there remains a potential to ask questions regarding the layout and preferences for burial within the cemetery, with the provisional model needing detailed testing against the evidence from the numerous intercutting graves. Much of the disturbance, of course, may be accidental and much later.

The medieval, post-medieval and modern features

The main potential of the medieval features is to suggest a date for when the cemetery went out of use and to aid the interpretation of reduced activity on the site thereafter. Some features shed light on the later development of the site after the Grange was built and the site became part of a formal garden for the house. In terms of the Roman remains and the cemetery, these are periods not of meaningful occupation and activity, but of attrition and degradation of archaeology.

Artefactual evidence

Flint

As the flint recovered during the excavation was residual no further work is recommended.

Romano-British Pottery

The size of the Roman assemblage is quite modest but appears to document activity at the site in the later Roman period. Many of the contexts produced single greyware sherds, which cannot be reliably closely dated. Many of the sherds appear to be accidental inclusions in grave fills.

The generally small size of the Roman assemblage would suggest that it does not merit further detailed analysis. A short summary report should suffice for publication.

Roman tile

The quantity of the tile fragments and the fact that many are large would suggest that this is a deposit very close to its primary source.

The tegula tile has the potential for analysis of the cutaways on the flanges for dating (Warry 2007). The concentric grooves or wavy lines should be recorded for the possibility of being a signature or trademark of a tiler, and any other distinguishing features such as pegholes are to be noted. The patterns on the flue tiles to be recorded and examined whether combing and/or die patterns were used (Betts *et al* 1994). The imbrices will be measured for an indication of the range of sizes used on the roofs.

Roman roof slate

The geological source of the tile should be ascertained. A closer study to be made of the tiles for traces of toolmarks or other markings.

Medieval pottery

The overall post-Roman assemblage is quite small, and little further work is required to bring it to publication standard, other than a discussion of the significance of the assemblage in regional terms, and a catalogue and small number of illustrations. The reliability of the ceramic dates will need to be checked against the stratigraphic matrix, and a few data tables generated to show the pattern of pottery use at the site over time.

Other finds

Despite small numbers of finds being recovered from Roman and late Saxon/medieval deposits, the range of finds is limited, it is dominated by nails and is therefore of little intrinsic value. A small number of datable finds were recovered, but with the exception of two 3rd/4th century coins from Roman layers and a Saxon pin-beater from Burial 158, most readily datable finds were residual in later deposits or unstratified in topsoil and subsoil deposits. All the finds have been catalogued, identified and described. No further work is required.

Human Bone

Although it is not possible to produce a specific research question for the Rothley skeletons, it is crucial that they are further studied to help build a picture of the medieval population of Leicestershire. This is vital in terms of palaeopopulation analysis and assessment of regional differences. Just under half (48%) of the Rothley material should therefore be analysed to produce a time-averaged picture of life during the medieval period in Rothley. This should then be compared with other sites both from Leicestershire and other regions, both rural and urban. A useful comparison can be made with nearby Northamptonshire and the relevant rural Raunds Furnells material.

The material should be recorded following standard osteological procedure as mentioned above. Where visible, evidence of disease and trauma should be noted and scored. If possible the results should be used to investigate the general health of the population. Ageing, sexing and metric analysis should be undertaken to explore whether the population follows the same trends as other rural medieval sites and assess how this compares to larger, more urbanised sites both secular and monastic.

Preservation and taphonomic analysis should take place to explore preservation patterns and how this compares to what would be expected in terms of bone density and survival.

No chemical analysis is recommended. Radiocarbon dating could be used to refine the date of the cemetery and be carried out on a small number of burials as follows (Fig 5):

Burial 248: south end (closer to church) of demonstrable complete row

Burial 38: north end (further from church) of same demonstrable complete row

Burial 293: south end of concentration (closer to church)

Burial 123: north end of concentration (further from church) and itself demonstrated as a secondary burial (ie secondary to a completed and totally dispersed row)

The above selection should provide a guide to the chronology of burials, while beginning to suggest the period at which initial graveyard planning began to break down. As the preservation is poor and disarticulated, it is not possible to single out any individuals who have received special burial treatment. Justification for stable isotope and DNA analysis is therefore limited.

Animal bone

A brief report on the Roman and medieval assemblages should be included in the final report.

Environmental samples

Overall, the limited recovery of seeds and their poor preservation from this excavation means

there is little worth in any further sampling in hopes of learning more about the economy of this site.

2.11 Storage and curation

The site archive is currently stored at the offices of Northamptonshire Archaeology. Following the completion of the project it is envisaged that it will be deposited with Leicestershire Museums Service, who have assigned an accession number XA.52: 2007. It comprises 552 context records, 76 plans, 71 section drawings, 13 black and white films, 13 colour slide films and 7 environmental samples. There are 62 standard cardboard archive boxes for bulk finds and three polythene seal-fresh boxes for finds of sensitive materials.

3 UPDATED PROJECT DESIGN SPECIFICATION

3.1 Background

The original objectives of the project, as expressed in the original project design, are set out above in section 1.3.

The project has recovered the plan of the site and assembled a body of evidence that will allow stratigraphic relationships between the main physical components of the site to be established. Assemblages of artefactual material comprising flint, pottery, slate and tile, metal finds and environmental evidence comprising human bone, animal bone and plant macrofossils have been recovered, quantified and assessed to establish their potential to address the aims and objectives of the project and contribute to regional research.

3.2 Summary statement of potential

Roman

The stratigraphic and morphological evidence, integrated with an appraisal of the ceramic dating, will ascertain the phasing and dating of the Roman features. The bulk of Roman building material, although large, is offset by the relative paucity of stratified occupation debris.

The cemetery

Study of the layout of the cemetery has the potential to look at questions of planning within the cemetery and why some areas appear to be less favoured than others. Radiocarbon dating will provide an idea of the period of use and suggest a date of disuse, in combination with finds data.

Comparison with similar and differing sites may offer a potential to discern period- and geographically-based preferences in graveyard planning and help establish a relative seriation across the region. Possible comparative sites may include Wing (Buckinghamshire), Raunds Furnells (Northamptonshire), Wallingford St Martins (Oxfordshire in prep) and Ketton (Rutland, in prep).

3.3 Updated aims and objectives

Aims and objectives of post-excavation research

To mitigate the effect of the development on the archaeology, through analysis and publication of the results in a suitable academic journal;

To present the significance of the site at local, regional and national levels.

Roman

Suggest locality and focus of Roman occupation

Summarise the nature of the Roman features which lay partly on the site

Late Saxon and medieval cemetery

To define the chronology of the cemetery

To analyse the organisation and development of the cemetery

To summarise the burial practices

To use osteology as a guide to the community, their age, health, diet and living conditions

To look at comparative sites to put the site into context

Medieval/post-medieval

To assess the nature of use

To assess whether and how it takes account of the former cemetery.

3.4 Publication and presentation

A client report, combining the results of this study will be prepared and distributed in accordance with the instructions set out in the project specification (CgMs 2007). Details of the project will be passed on to the OASIS database.

A summary publication report of a length and scope commensurate with the nature of the results will be prepared for publication in Leicestershire Archaeological Transactions or an alternative publication following consultation with the Leicestershire County Council Senior Planning Archaeologist.

Report synopsis

INTRODUCTION

Background

Geology and topography

Original aims and objectives

Methodology

ROMAN OCCUPATION

- The excavated evidence
- Possible structural remains
- Local context

THE LATE SAXON AND MEDIEVAL CEMETERY

- The origin and development of the cemetery
- Burial practices
- The human bone
- The medieval community, their age, health, diet and living conditions
- Comparative sites

MEDIEVAL AND POST-MEDIEVAL

- Nature of activity

THE FINDS

- Flint
- Roman pottery
- Roman building material
- Other Roman finds
- Medieval pottery
- Saxon, medieval and post-medieval finds
- Faunal remains and environmental evidence

DISCUSSION

BIBLIOGRAPHY

3.5 Resources and programming

Staffing and equipment

Overall project management will be undertaken by Iain Soden, Senior Project Officer, Northamptonshire Archaeology. Authorship will be by Tim Upson-Smith, Senior Project Supervisor, Northamptonshire Archaeology. Illustrations will be prepared by Richard Watts, Illustrations Manager, Northamptonshire Archaeology and his team.

Specialist reports will be prepared by those already responsible for assessment (above). See Appendix 6 for the proposed work timetable.

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Northamptonshire Archaeology

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APPENDIX 1: ROMAN POTTERY

Table 4: Roman Pottery

Context/ feature	sam	amp	Invcc/ wh	oxfrs	BB1	gy/ bw/ ox	shell	Tot No	Tot Wt (g)	Date
2	0	0	3	0	1	3	1	8	105	Roman
8	0	0	0	0	0	1	0	1	16	Roman
48	0	0	2	0	0	0	0	2	9	late C2+
50/ burial 39	0	0	0	0	0	1	0	1	31	Roman
55/ burial 44	0	0	1	0	0	2	0	3	101	Roman
59/ burial 46	0	0	0	0	0	0	1	1	713	Roman
61/ burial 47	0	0	0	0	0	1	0	1	6	Roman
80	0	0	1	0	0	0	0	1	10	late C2+
97/ layer	0	0	2	0	1	6	0	9	451	1C3-C4
98	0	0	3	0	0	0	0	3	166	C3+
101	0	0	0	0	0	2	0	2	11	Roman
103/ burial 71	0	0	1	0	0	1	1	3	45	C3+
131/ burial 95	0	0	0	0	0	1	0	1	6	Roman
133/ burial 96	0	0	0	0	0	1	0	1	37	Roman
142	0	0	0	0	0	1	0	1	12	Roman
144	0	0	0	0	0	1	0	1	16	Roman
150/ burial 112	0	0	0	0	0	1	0	1	11	Roman
169/ burial 129	0	0	1	0	0	0	0	1	3	3rd+
176	0	0	1	0	0	5	2	8	457	C2+
179	0	0	1	0	0	5	0	6	192	late C2+
219/218	1	0	0	0	0	0	0	1	16	late C2
220	0	1	15	1	0	33	15	73	4158	Med
221	0	0	0	0	0	1	0	1	66	Roman
222	0	0	0	0	0	0	1	1	10	C4
223	0	0	6	3	0	5	1	15	632	late C3- C4
233	0	0	1	0	0	0	0	1	24	C3+
240	2	0	4	1	0	28	3	44	1621	C4/?Sx
257	0	0	1	0	0	0	0	1	4	C3+
258	0	0	1	0	1	0	0	2	61	C3+
264	0	0	0	0	0	1	0	1	16	Roman
266	0	26	0	0	0	4	0	30	4121	C3+
271/ burial 141	0	0	0	0	1	0	0	1	38	late C2+
277	0	0	0	0	0	7	0	7	166	Roman
281	1	0	0	0	0	2	1	4	96	late C2+
304/ burial 151	0	0	0	0	0	2	0	2	65	C3-C4
319	0	21	0	0	0	0	0	21	3256	C1-C3

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Context/ feature	sam	amp	Invcc/ wh	oxfrs	BB1	gy/ bw/ ox	shell	Tot No	Tot Wt (g)	Date
332	0	0	2	0	0	2	0	4	146	C3
353/ burial 162	0	0	0	0	0	1	0	1	11	Roman
354/ burial 165	0	0	1	0	0	0	0	1	3	late C2+
373	0	0	1	0	0	0	0	1	10	C3+
378	0	0	2	0	0	0	0	2	16	late C2+
385/ burial 188	0	0	0	0	0	1	0	1	24	late C3- C4
391/ burial 193	0	0	0	0	0	1	0	1	16	Roman
393	0	0	0	0	0	9	0	9	214	Roman
416	0	0	0	0	0	8	1	9	415	C3-C4
447	0	0	0	0	0	1	0	1	16	Roman
449/ burial 224	0	0	1	0	0	0	0	1	1	late C2+
453	0	0	0	0	0	0	1	1	25	C2
457/ burial 228	0	0	0	0	0	1	0	1	35	Roman
466	0	0	0	0	0	1	0	1	12	Roman
469	0	0	0	0	0	1	0	1	18	Roman
483	0	0	1	0	0	2	1	4	68	C3+
485	0	0	0	0	0	1	0	1	20	Roman
495	0	0	0	0	0	1	0	1	12	Roman
505/ burial 272	0	0	0	0	0	2	0	2	8	Roman
508	0	0	1	0	0	2	0	3	18	late C2+
525	0	0	0	0	0	1	0	1	21	C3-C4
529	0	0	2	0	0	0	0	2	28	C3+
542	0	0	0	0	0	2	0	2	21	Roman
547	0	0	0	0	0	1	0	1	8	Roman
TOTAL	4	48	55	5	4	153	29	314	17912	

APPENDIX 2: ROMAN BUILDING MATERIAL

Ceramic tile

The total ceramic tile assemblage comprised 815 fragments, weighing 520.64kg, before discarding. The elements consisted of 175 tegulae, 142 imbrices, 100 brick type, 19 box flue tile and 379 body sherds (Tables 4-5).

When it was realised that the quantity of tile being recovered was going to be very large, the following retention/discard policy was applied. All brick and tile found during fieldwork was examined and recorded by the CBM specialist. A representative sample of form and fabric types was then selected for detailed analysis and retention in the site archive, according to the following criteria:

A representative sample of forms (tegula, imbrex, opus spicatum brick, lydion brick, box-flue tile, indeterminate)

A representative sample of fabric types

A representative sample of tiles retaining features such as middle, middle side, middle end, corner, edge, end, flange fragment or flange cutaways

A representative sample for condition, (fragmented, weathered, abraded, fresh, re-used, burnt)

Tiles that retained decoration such as combing or incised lines, graffiti, signature marks, tile stamps, tally marks, paw or other prints

The tile was quantified and sampled. There were large numbers of tile fragments from the eastern side of the site, slightly less in the north-west corner, with more along the eastern and western sides of the excavation. The tile appeared to be all of the same orange-red fabric. Table 4 Appendix 2 describes the tile discarded on site during fieldwork. All the box flue tile fragments were retained.

Altogether 522 tile fragments, weighing 137.29kg, were discarded. This comprised 57 fragments of tegulae, 76 fragments of imbrices and 72 fragments of brick, and 317 indeterminate bodysherds.

Retained tile

The assemblage retained for analysis comprises 360 tile fragments, weighing 240.05kg. The individual elements comprised 118 tegulae, 66 imbrices, 108 brick-type tiles, 19 box flue tiles and 49 body sherds. Thirty one tile fragments, or c 11% of the retained total, were examined for the assessment. Two particularly productive contexts were examined for the assessment; (layer 98, the spread of Roman tile in the west portion of the site) and (393, the fill of pit 392, cut through the north-east portion of the largest patch of metalling).

Fabric

The majority of the tile fabrics conformed to one type, that is a very hard, slightly coarse clay with sparse mineral and calcareous inclusions up to 2mm and with frequent tiny voids less than 1mm. The fabric has a tendency to laminate and the mixing was variable in quality. The tiles were fired generally to an orange red, sometimes with a brown surface, or just brown.

Tegulae

The bodies are typically 25-30mm thick, with a tendency to become thinner away from the flange. The flange is generally 20mm higher than the body, with a range of 17-27mm and 25-30mm thick, being occasionally broad and flat rather than tapering in to a narrower top. Of the thirteen tile fragments examined, nine had a cutaway feature, four with the top without a flange for 35mm and five with the diagonal cutaway on the bottom and the flange cut back to half its width for 40mm. One large fragment had irregular black scorch marks across the top.

From other contexts some nail holes had been noted, one tile still with the nail intact. Quite a few have various swirl marks across the surface, which have been interpreted as tally or tilers' marks,

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and other deliberate markings. A few body sherds have dog and cat footprints, and one that might be a deer slot.

Imbrices

The three fragments examined were 18mm and 20mm thick with very lightly corrugated top surfaces running back from the surviving end. A range of sizes were noted from other contexts, the largest of which might be part of a ridge tile.

Box flue

No box flue tile was found within the two assessment contexts but there were 19 fragments from elsewhere on the site. This may suggest that there has been some wall-heating and fume-extraction taking place in a building somewhere nearby, perhaps suggestive of villa-style living.

Brick

Of the ten examined fragments of brick/tile, nine were between 35-50mm thick. There was one end of a proper brick 85mm wide and 45-52mm thick. The tops were smooth but the undersides tended to be very rough and uneven. The top half of one side of a brick tile was smooth as if cut, while below it was rough as if broken, suggesting that a larger tile may have been partially cut to divide into smaller tiles after firing.

Most of the fragments are probably from *bessalis* and/or *pedalis* tiles, however, a complete *lydion* tile also survived. It may also be the case that some of the larger fragments are also from *lydion* tiles.

Table 5: Quantification of ceramic tile discarded on site

Context/feature	Tegula	Imbrex	Brick	Indet	Total tile	Weight (kg)
97 /	7	13	-	19	39	15.0
98 /	7	13	2	64	86	22.3
118/	12	24	3	56	95	22.0
179 /	4	6	17	8	35	13.2
219 /	1	1	2	6	10	4.5
220 /	12	10	24	23	69	28.6
Corner-NW	3	5	9	13	30	9.5
Subsoil, u/s	3	-	2	3	8	4.1
Totals	49	72	59	202	372	119.20

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Table 6: Quantification of ceramic tile discarded in office

Context/feature	Tegula	Imbrex	Brick	Indet	Total tile	Weight (kg)
1 /				10	10	0.9
8 /			1	4	5	0.3
55 /				2	2	0.1
87 /				4	4	0.2
98 /				1	1	0.25
103/ (burial 71)				1	1	0.5
176 /	1		1	8	10	1.15
179 /				1	1	0.3
182 /				4	4	0.1
226 /				9	9	0.825
238 /				1	1	0.02
240 /		1		2	3	0.195
253 /				3	3	0.35
258 /	5	3	11	26	42	9.05
259 /				19	19	1.75
262 /	1			4	5	0.3
266 /				1	1	0.1
277 /				1	1	0.1
281 /	1				1	0.02
326 /				5	5	0.275
330 /				3	3	0.75
332 /				5	5	0.275
549 /				14	14	0.28
Totals	8	4	13	128	150	18.09

Roman roof slate

The site collection policy was to retain and record all of the slate roof tile for the purposes of quantification and form and then to retain the complete or unusual tiles for further investigation and archival sampling. The tiles were examined to ascertain shape, dimensions, presence of perforations and any other details.

The total assemblage comprised 180 slate roof tiles, weighing 162.88kg (Appendix 2, Table 8). Measurements were made to the nearest 5mm and 50g. Ninety-two tiles were discarded during the initial quantification, with 88 retained.

The slate varies between two different colours. About one third, before discarding, are distinctly green, while the rest are a variant of blue or grey or reddish. Virtually all the complete tiles have single perforations, although in some cases the slate had broken at the perforation and another hole had been made below. This may have happened when the tile was being manufactured, but may also have been a repair at a later date.

The majority of the retained tiles are diamond-shaped. The others are triangles and either rectangles or more irregular but with one long straight edge, the latter probably used along the edges of the roof.

The quantities of the various shapes of slate are very similar to that of Causeway Lane, Leicester, with a large proportion of diamonds compared to a lot smaller number of the other shapes (Appendix 2, Table 7; Connor and Buckley 1999). There, Gnanaratnam (1999, 305) describes the manufacturing process by which the Swithland slates began as quarry blanks about 20mm to 30mm thick.

Discussion

The majority of the slates were residual in layers also containing medieval pottery, which may suggest that either the slates had been reused or there was enough Roman material lying about for it to be used as backfill.

Table 7: Comparison of roof tile with Causeway Lane, Leicester

	Causeway Lane, Leicester	Rothley, The Grange
Small tile	Up to 230 x 190mm	Up to 230mm x 180mm
Midsized tile	Towards 280mm x 230mm	Towards 280mm x 220mm
Midsized tile	Towards 300mm x 230mm	Towards 300mm x 215mm
Large tile	Up to 360mm x 300mm	Up to 360mm x 310mm

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APPENDIX 3: MEDIEVAL POTTERY

Table 8: Pottery occurrence by number and weight (g) of sherds per context by fabric type (continued below)

Context	F100		F205		F300		F301		F302		F303		Date
	No	Wt (g)	No	Wt (g)	No	Wt (g)	No	Wt (g)	No	Wt (g)	No	Wt (g)	
2					1	32							M17thC
71													19thC
87													L17thC
89													19thC
123											1	9	13thC
173													L17thC
181													12thC
190													19thC
206													19thC
212					1	7							12thC
215													19thC
226					8	325					3	106	13thC
234													L14thC
235											4	42	L14thC
240													12thC
250					1	26							12thC
253					1	26							12thC
257	1	30											M9thC
258			1	14	6	1158	1	10	1	4			M13thC
259					1	54							12thC
292													19thC
352			2	7	1	4							12thC
354													RB
407											1	8	13thC
460											2	90	13thC
469											3	63	13thC
478					1	33							12thC

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Table 8: Pottery occurrence by number and weight (g) of sherds per context by fabric type (continued)

Context	F330		F360		F403		F414		F426		F1000		Date
	No	Wt (g)	No	Wt (g)	No	W (g)	No	Wt (g)	No	Wt (g)	No	Wt (g)	
2							1	2					M17thC
71											1	2	19thC
87									1	42			L17thC
89									1	7	1	10	19thC
123													13thC
173					1	46			4	64			L17thC
181	1	18											12thC
190											1	1	19thC
206											1	6	19thC
212													12thC
215											1	269	19thC
226													13thC
234					1	12							L14thC
235					2	150							L14thC
240	1	19											12thC
250													12thC
253			4	28									12thC
257													M9thC
258													M13thC
259													12thC
292											3	13	19thC
352													12thC
354													RB
407													13thC
460													13thC
469													13thC
478													12thC

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APPENDIX 4 ANIMAL BONE

Table 9: Taxa by context: Animal bone from Roman contexts

Cut/fill	Feature	Horse	cattle	Sheep/ goat	Pig	Deer	Goose	Large ungulate	Small ungulate
097	Layer			2	1				
098	Layer	3		2					
177/176	Ditch		6	3	1		1		
203/179	Hollow	3	9	2				3	
303/223	pit		1					1	
240	Buried soil		6	1	1		1	4	1
276	layer	1							
282/281	Ditch		2	1					
382/383	Ditch		1						
415/416	Large pit		4		1			3	
438/437	Pit	1							
Total		8	39	14	7	2	2	20	3

Table 10: Animal bone from medieval contexts

Cut/fill	Feat.	Horse	Cattle	Sheep/ goat	Pig	Dog	Dom. fowl	Goose	Large ungulate	Small ungulate
303/220	Pit		10	3	3	2		9	2	303/220
227/226	Pit		1	1					2	
256/257	Well		2	6	4				1	1
256/258	well	1	7	6	19	1	2	2		6
Total		1	10	13	23	1	2	2	3	7

Table 11: Animal bone from burials

Cut/fill	Burial	Horse	Cattle	Sheep/ goat	Pig	Deer	Large ungulate
012	5		1				
035/021	14		1				
042	34	1					
063	40					1	
123	87		1				
125	89		1				
151/305	Dump		1				
308	155		1				
335	158	1					
384	186		1				
393	150						1
465/468	234		1				
496/495	264		2	2			
538	291	1			2		
Total		3	10	2	2	1	1

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Table 12: Animal bone from post-medieval and modern features

Cut/Fill	Feature	Horse	cattle	Sheep/ Goat	Goose	Large ungulate	Small ungulate
213/212	Pit	1		1			
214/215	Construction cut			1	1		
270/269	Well					1	
515/514	Pit		1			1	1
Total		1	1	2	1	2	1

Table 13 Unphased

Cut/Fill	Feature	Horse	Cattle	Sheep/goat	Pig	Large ungulate
184/185	Pit		3			
280/279	Gully					1
430/429	Pit		2		1	
549		3	13	1		
Total		3	18	1	1	1

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APPENDIX 5 ENVIRONMENTAL SAMPLES

Table 14: Seed Quantification

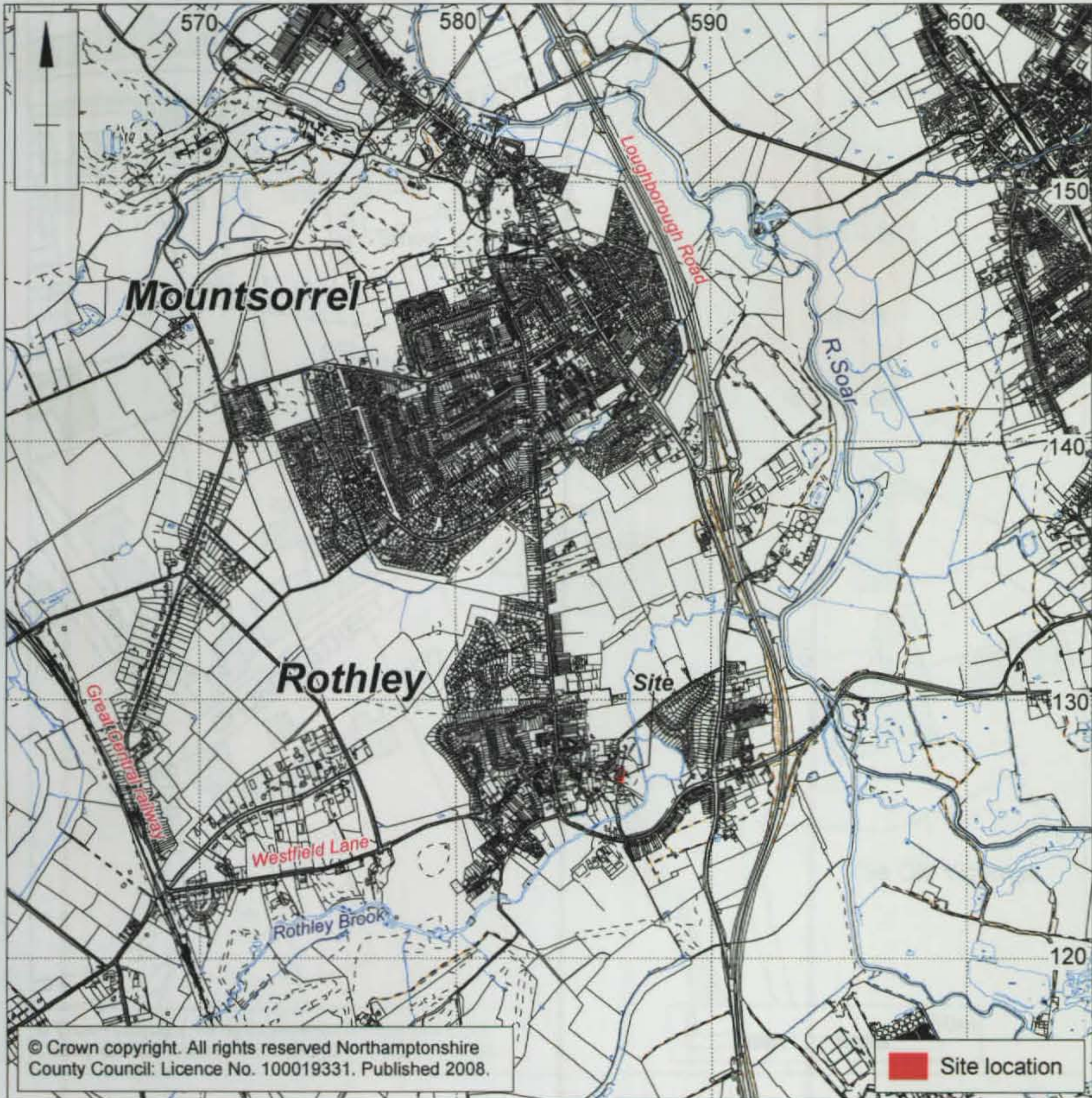
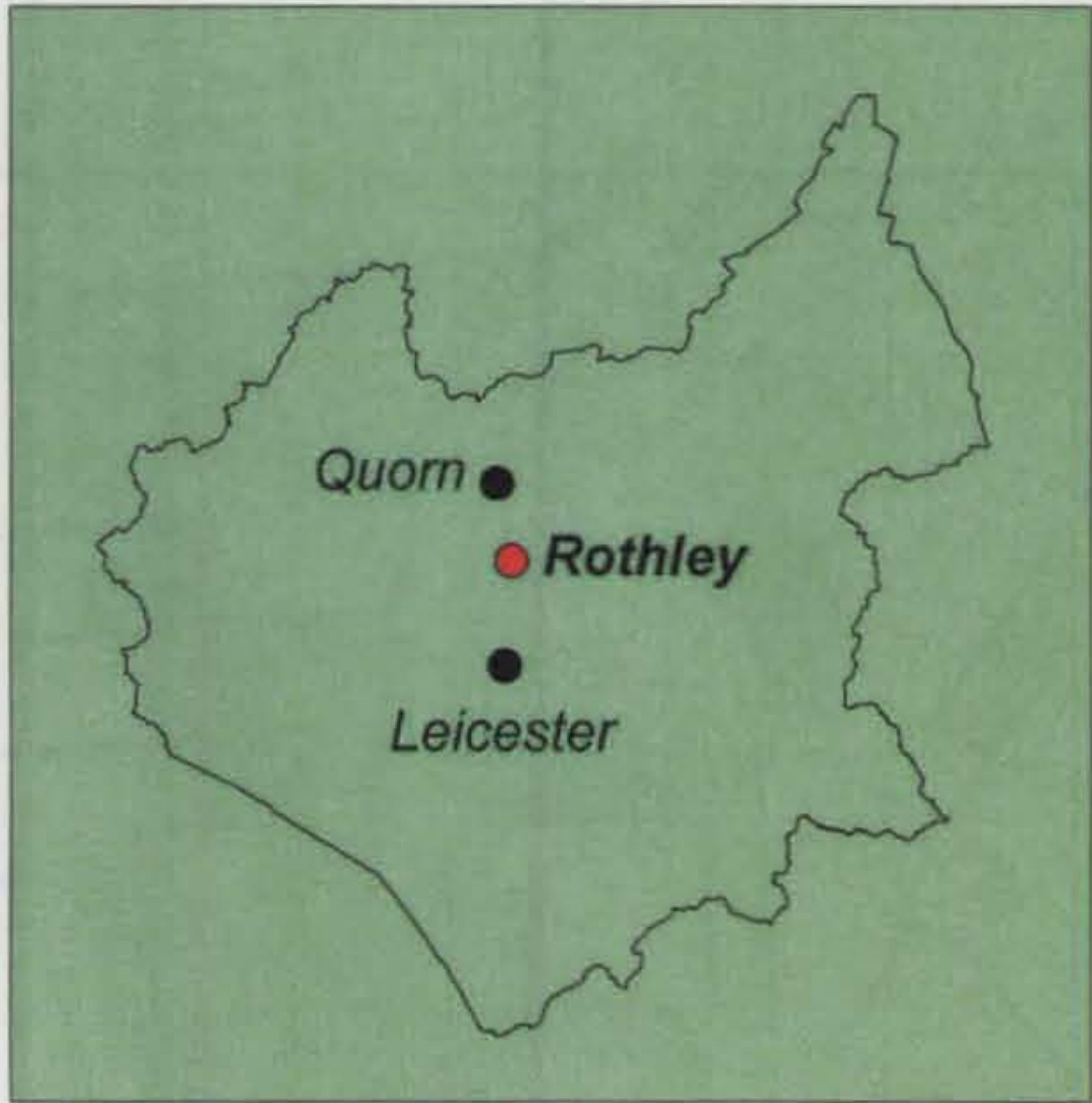
Sample	2	3	4	5	6	7
Context Number	220	223	257	258	259	240
Feature and Date	13th-15thC layer	10thC pit	12th - 14thC well	12th - 14thC well	14thC well	Roman layer
Volume of Sample (litres)	20	10	10	20	10	20
Wheat - <i>Triticum aestivum</i>	2	1	4	8	1	7
Spelt - <i>Triticum Spelta</i>						7
Spelt- <i>Triticum Spelta</i> (glume bases)						3
Barley - <i>Hordeum sp.</i> (hulled)	2				1	1
Barley - <i>Hordeum sp.</i> (naked)					1	1
Barley - <i>Hordeum sp</i> (rachis fragment)						1
Six-rowed Barley- <i>Hordeum vulgare</i>						4
Oat- <i>Avena Sativa</i>		1				2
Indet Cereale	60		3	5	6	24
Cereal total	64	2	7	13	9	50
Daisy family - <i>Asteraceae sp</i>	4					
Stinking Mayweed - <i>Anthemis cotula</i>				1	6	2
Carrot type - <i>Apiaceae sp</i>						
Wild Radish - <i>Raphinus Raphistrum</i>	1					
Cabbages type - <i>Brassica sp</i>						3
Common Chickweed - <i>Stellaria media</i>	1					
Goose Foot type- <i>Chenopodium sp</i>	3	1				1
Sedges type - <i>Carex sp</i>				1		1
Pea Family - <i>Fabaceae sp</i>			1			
Bromes type - <i>Bromus sp</i>	8			2	4	13
Grass Family - <i>Poaceae sp.</i>					1	
Dock type - <i>Rumex sp</i>	2					2
Knotweed type - <i>Persicaria sp</i>	2					
Buttercup Family - <i>Ranunculaceae sp</i>	1					
Indet seeds	6			6	3	11
Total seeds	91	13	9	24	23	83

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APPENDIX 6 TIMETABLE

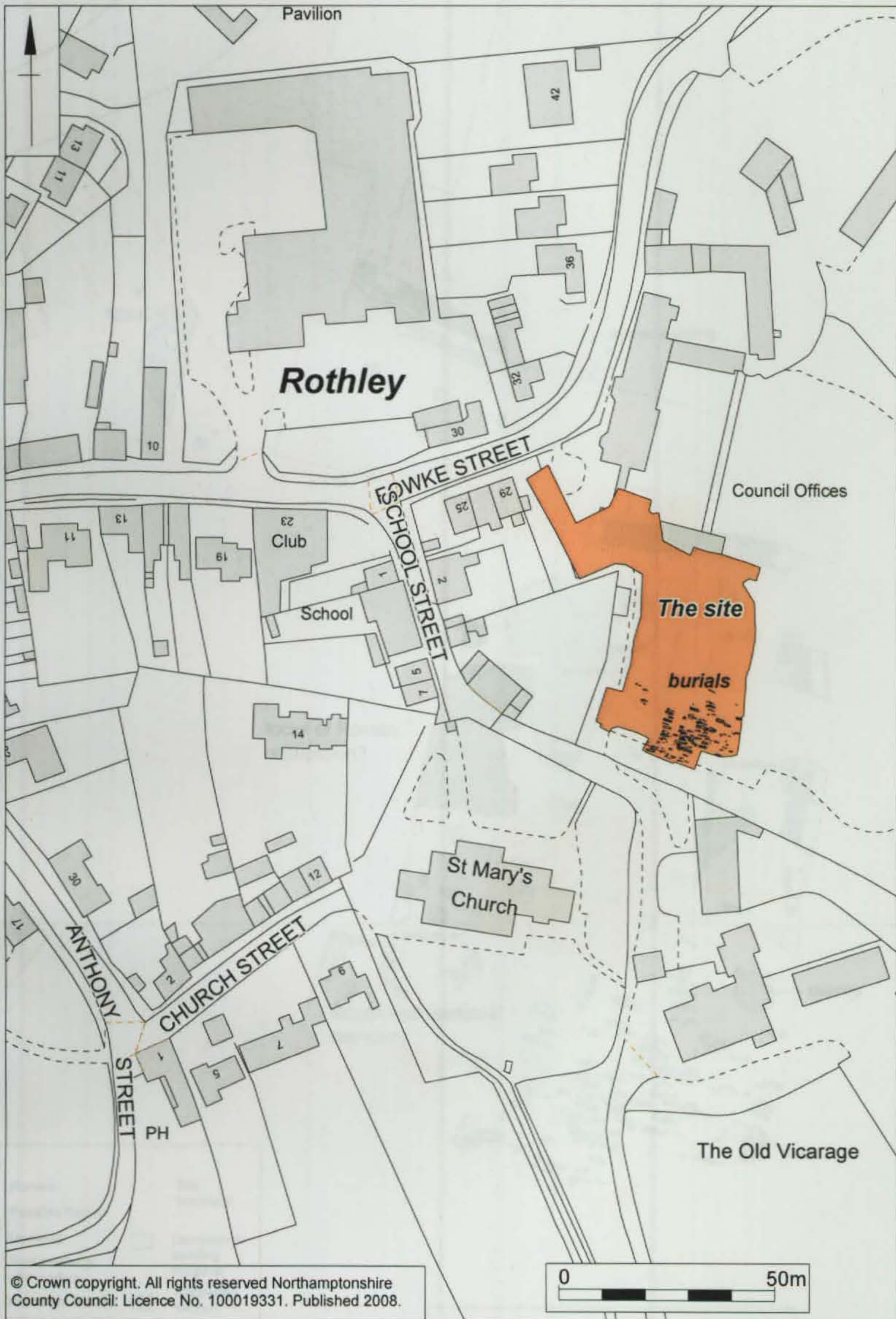
Task	Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Stratigraphic analysis																	
Production of site narrative																	
Specialist analysis																	
Illustration																	
Integration of reports																	
Comparative work																	
Discussion																	
Internal editing																	
Submission of draft																	

Work at Week 1 will begin within 6 weeks of approval of this document and the concomitant commission.



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Site location Fig 1

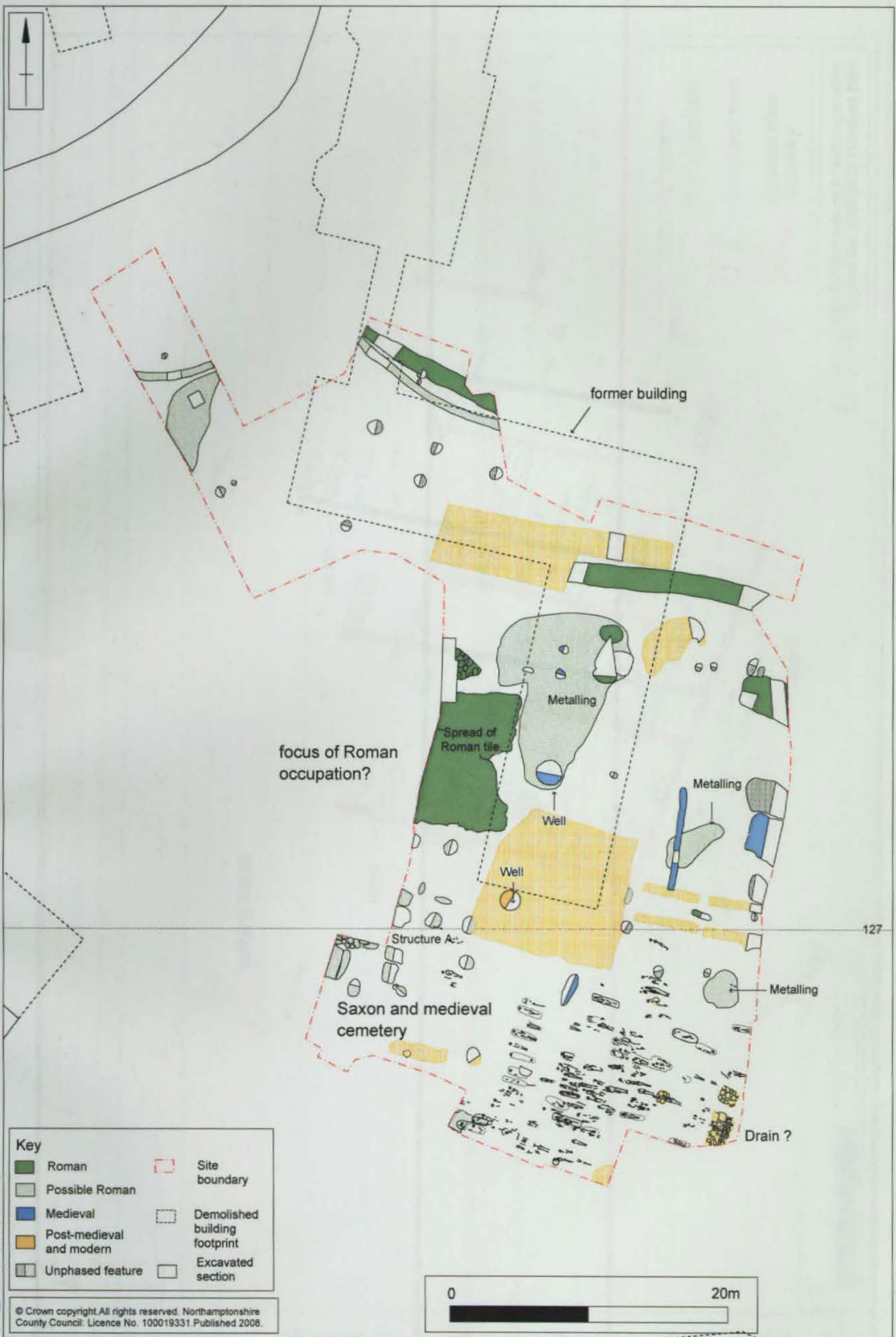


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The excavated area and its environs Fig 2

Scale 1:250



Key			
	Roman		Site boundary
	Possible Roman		Demolished building footprint
	Medieval		Excavated section
	Post-medieval and modern		
	Unphased feature		

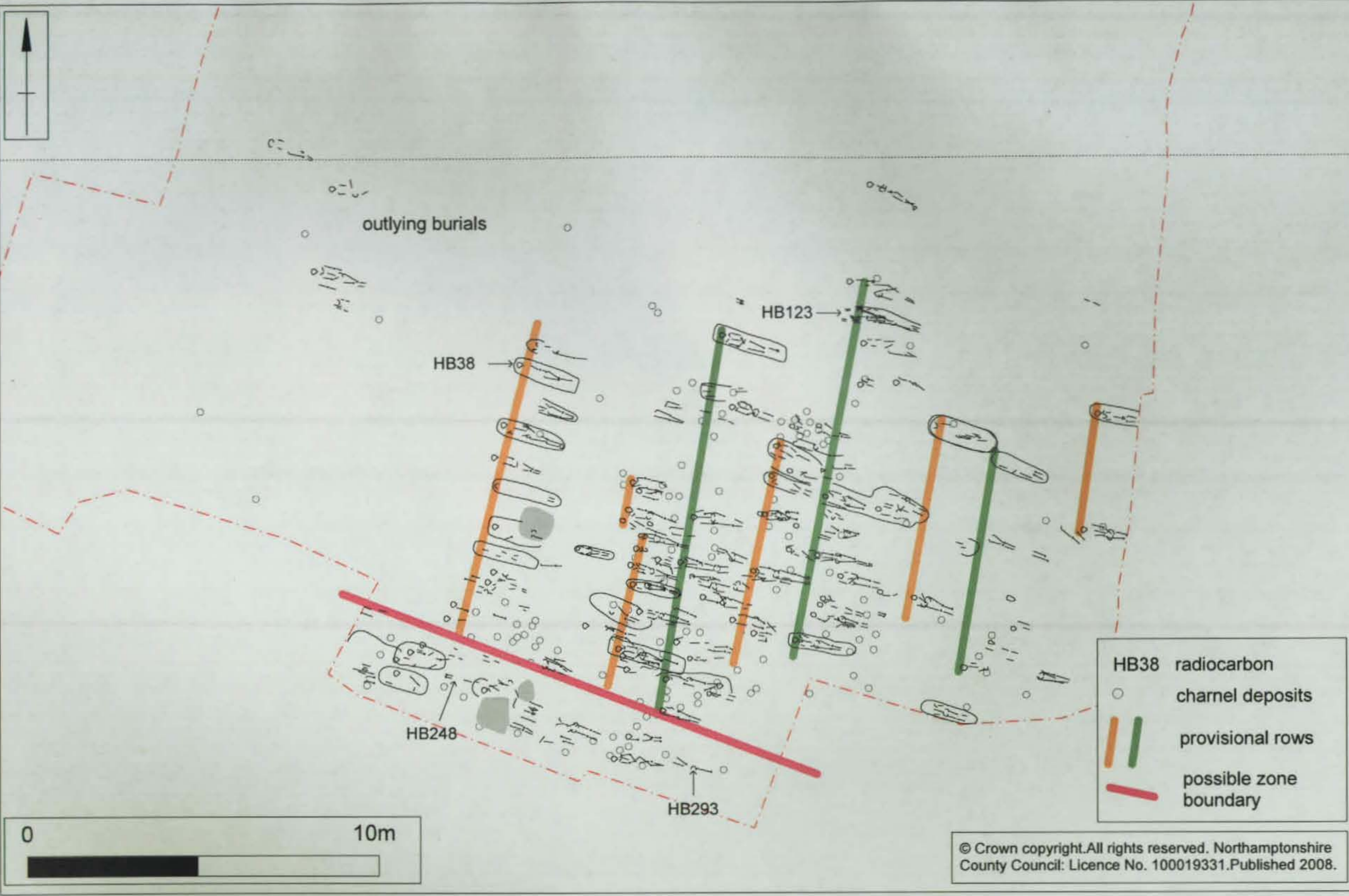


General site plan Fig 3

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Scale 1:150



General plan of cemetery, with provisional row structure Fig 4