



UNIVERSITY OF
LEICESTER

Archaeological Services

**An evaluation and strip, plan and sample excavation at
Church Farm, 83 Main Street,
Higham on the Hill,
Leicestershire
CV13 6AH**

SP 38228 25516

Claire LaCombe



**ULAS Report No: 2021-077
©2021**

Site Name: Church Farm, 83 Main Street, Higham on the Hill, Leicestershire. CV13 6AH

Grid Ref: SP 38228 25516

Author: Claire LaCombe

Client: Mr & Mrs Baggot

Planning Ref. 18/00920/FUL

ULAS Report Number: 2021-077

Accession Number: X.A14.2021

Filename/Version	Checked by	Date
2021-077_Higham on the Hill_Church Farm DRAFT.v1.docx	C. LaCombe	14.05.2021
2021-077_Higham on the Hill_Church Farm FINAL.v2.docx	C. LaCombe	26.05.2021

This Report has been prepared solely for the person/party and project for which it has been commissioned and should not be relied upon or used by any other person/party or for any other project without the written consent of ULAS. No part of this report is to be copied in any way without prior written consent. While every effort has been made to provide detailed and accurate information, however, ULAS cannot be held responsible for errors or inaccuracies contained within this report

University of Leicester, Archaeological Services,
University Rd., Leicester, LE1 7RH
Tel: (0116) 2522848
www.le.ac.uk/ulas

© ULAS 2021

OASIS RECORD

PROJECT DETAILS	Oasis No	universi1-421206		
	Project Name	Church Farm, Higham on the Hill		
	Start/end dates	01/02/2021 to 11/02/2021		
	Previous/Future Work	No/ Not known		
	Project Type	Evaluation and Strip, plan and sample excavation		
	Site Status	None		
	Current Land Use	Garden		
	Monument Type/Period	Medieval Ditch, Medieval pits and post holes		
	Significant Finds/Period	Medieval Pottery/ Medieval Animal Bone /		
	Reason for Investigation	NPPF		
	Position in the Planning Process	Planning condition		
	Planning Ref.	18/00920/FUL		
PROJECT LOCATION	County	Leicestershire		
	Site Address/Postcode	83 Main Street, Higham on the Hill, Leicestershire CV13 6AH		
	Study Area	815m ²		
	Site Coordinates	SP 38228 25516		
	Height OD	112m OD		
PROJECT CREATORS	Organisation	ULAS		
	Project Brief Originator	Local Planning Authority: Hinckley and Bosworth District Council		
	Project Design Originator	ULAS		
	Project Manager	John Thomas		
	Project Director/Supervisor	Claire LaCombe		
	Sponsor/Funding Body	Mr & Mrs Baggot		
PROJECT ARCHIVE		Physical	Digital	Paper
	Recipient	Leicestershire Museums Service	Leicestershire Museums Service	Leicestershire Museums Service
	ID (Acc. No.)	X.A14.2021	X.A14.2021	X.A14.2021
	Contents	Ceramic pottery finds	Photographs	Report/Watching brief sheets, photo index.
PROJECT BIBLIOGRAPHY	Type	Grey Literature (unpublished)		
	Description	Developer Report A4 pdf		
	Title	An evaluation and strip, plan and sample excavation at Church Farm, 83 Main Street, Higham on the Hill, Leicestershire, CV13 6AH		
	Author	C. LaCombe		
	Other bibliographic details	ULAS Report No 2021-077		
	Date	2021		
	Publisher/Place	University of Leicester Archaeological Services / University of Leicester		

Contents

Summary	1
Introduction.....	1
Site Location, Geology and Topography	2
Historical and Archaeological Background	3
Aims and Objectives	5
Research Objectives	6
Methodology	6
Results.....	8
The Medieval Boundary Ditch.....	10
Pits and post holes	14
Animal Burials / Bone Pit	18
Large mammals.....	18
Bone pit.....	28
Modern Features.....	29
Modern Post Holes / Pits.....	29
Modern animal burial.....	31
The Pottery Finds.....	31
The Animal Bones	32
The Environmental Sample.....	49
Conclusion	50
Acknowledgements.....	51
Archive and Publication.....	51
References.....	51

Figures

Figure 1: Site location.....	2
Figure 2: Site location within Higham on the Hill (red). Provided by client.....	3
Figure 3: Plan of proposed development. Provided by client.....	5
Figure 4: Proposed trench plan, with and without development proposal. Scale 50.0m.....	6
Figure 5: Photograph showing the proposed area for development looking south east.	7
Figure 6: Work in progress.	7
Figure 7: Photograph looking south east showing Trench 1. Scale 1.0m.....	8
Figure 8: Photograph looking east showing Trench 2. Scale 1.0m.	9
Figure 9: Plan of fully stripped area showing the location of features and those sampled. Scale 10.0m.	10
Figure 10: Plan and section drawing of the northernmost sample of the ditch [11] and [15]. Scale 2.0m.....	11
Figure 11: Photograph looking south at the north facing section of the ditch [13] [15] (recut/terminus) and [11] (northernmost sample). Scale 1.0m.	12
Figure 12: Plan and section drawings of the central sample of the ditch [35] and [37]. Scale 2.0m.	12
Figure 13: Photograph looking south at the north facing section of the ditch [35] [37] (central sample). Scale 1.0m.	13
Figure 14: Plan and section drawings of the southern sample of the ditch [27]. Scale 1.0m.13	

Figure 15: Photograph looking north at the south facing section of the ditch [27] and post hole [29] (southern sample). Scale 1.0m. 14

Figure 16: Plan and section drawings of pit [3], and post holes [7] and [31]. Scale 5.0m. ... 15

Figure 17: Photograph looking west showing east facing section of the pit [3]. Note that the pit is not fully excavated due to the sides collapsing. Scale 1.0m. 15

Figure 18: Photograph looking west showing east facing section of post hole [7]. Scale 0.3m. 16

Figure 19: Photograph looking north showing south facing section of post hole [31]. Scale 0.5m. 16

Figure 20: Plans and section drawings of post holes [48] and [50]. Scale 2.0m. 17

Figure 21: Photograph looking north showing south facing section of post hole [48]. Scale 0.5m. 17

Figure 22: Photograph looking east showing west facing section of the post hole. Scale 0.5m. 18

Figure 23: Plan showing the locations of all the animal burials [21] [24] [34] [52] [55] and the bone pit [40]. Scale 5.0m. 19

Figure 24: Photograph looking west at the cattle burial [21]. Note the lack of long bones and that it is buried on its back. Scale 1.0m. 20

Figure 25: Photograph looking east at the large mammal bones (26) within pit [24]. This mammal was buried with a calf. Scale 1.0m. 21

Figure 26: Photograph showing the location of the calf (33) buried alongside the adult (26). Scale 0.05m. 21

Figure 27: Photograph showing the calf bones (33) buried alongside the adult mammal. Scale 0.5m. 22

Figure 28: Photograph showing the pit cut [24] which contained large mammal (26) and calf (33). Scale 1.0m. 22

Figure 29: Photograph looking west showing partial excavation of large mammal (54) within pit cut [52]. Scale 1.0m. 23

Figure 30: Photograph looking north showing partial excavation of large mammal (54) within pit cut [52]. Scale 0.5m. 23

Figure 31: Photograph showing partial excavation of large mammal (54) within pit cut [52]. Scale 1.0m. 24

Figure 32: Photograph looking east showing pit cuts [52] and [58]. Scale 1.0m. 24

Figure 29: Photograph looking east showing pit cut [58] with the large mammal (60). Scale 1.0m. 25

Figure 34: Photograph showing part of a young cow burial pre-excavation. Scale 0.5m. 26

Figure 35: Photograph showing young cow burial post excavation. Scale 0.5m. 26

Figure 36: Photograph showing pit cut of animal burial [34]. Scale 0.5m. 27

Figure 37: Photograph looking east showing pit [55] containing part of a calf pre-excavation. Scale 0.5m. 27

Figure 38: Photograph showing remains of a calf (56) during excavation within pit [55]. Scale 0.5m. 28

Figure 39: Photograph taken during excavation of bone pit [40] looking east. Scale 0.5m. 28

Figure 40: Photograph of the bone pit post excavation. Scale 1.0m. 29

Figure 41: Plan and section drawings of the modern post hole feature [1]. Scale 1.0m. 29

Figure 42: Photograph looking west at the modern 'Post hole' feature [1] located within Trench 1. Scale 0.5m. 30

Figure 43: Plan and section drawings of the modern post hole feature [5]. Scale 1.0m. 30

Figure 44: Photograph looking west at the modern post hole / pit feature [5] filled with tile located within Trench 1. Scale 0.5m. 31

Figure 45: ABG 23 <i>in situ</i> . Sale 1.0m.....	34
Figure 46: Pathological changes to 2nd phalanx.	35
Figure 47: Pit 24, showing ABG 26. Scale 1.0m.....	35
Figure 48: Close up of ABG 33. Scale 0.5m.	36
Figure 49: Pit 52, showing pelvis and hind leg of ABG 54a. Scale 1.0m.	37
Figure 50: Pit 58, with ABG 60a <i>in situ</i> . Scale 1.0m.....	38
Figure 51: Close-up of ABG 57 in feature [55].....	38
Figure 52: Pathological changes around the alveolar bone, associated with periodontal disease, (ABG 23).	39
Figure 53: Skull of ABG 23, showing saw mark.....	41
Figure 54: View of skull of ABG 54a, showing missing part of skull.	41
Figure 55: Right side of skull (ABG 54a) showing saw mark.....	42
Figure 56: Butchery on ankle joint of ABG 54, showing saw striations.	42
Figure 57: View from the bottom of the astragalus and calcaneum showing the angle of butchery.....	43

Tables

Table 1: Trench 1 detail.	9
Table 2: Trench 2 detail.	9
Table 3: Pottery occurrence by number and weight (in g) of sherds per context by fabric type	32
Table 4: Tooth and mandible wear stages after Grant (1982) and assigned age categories after O'Connor (2003).....	40
Table 5: Distribution of adult skeletal elements in each feature.....	44
Table 6: Distribution of juvenile skeletal elements in each feature.....	45
Table 7: Minimum Number of Elements (MNE) and Minimum Number of Individuals (MNI) based on zoned bones (after Serjeantson 1996).....	46
Table 8: Withers height from long bone measurements based on the multiplication factors of Maltolsci (1970).....	47
Table 9: Measurements on astragalus as defined by Payne and Bull (1988) and atlas, axis and pelvis as defined by von den Driesch (1976).....	47
Table 10: Skull measurements as defined in Von den Driesch (1976).....	47
Table 11: Long bone measurements as defined by von den Driesch (1976).....	48
Table 12: Metapodial measurements after Davis (1992).....	48
Table 13: Tooth measurements.	48
Table 14: The charred plant remains found in the sample.....	49

An evaluation and strip, plan and sample excavation at Church Farm, 83 Main Street, Higham on the Hill, Leicestershire, CV13 6AH.

Claire LaCombe

Summary

This report covers the results of an archaeological evaluation and a strip, plan and sample excavation that was carried out by University of Leicester Archaeological Services at Church Farm, 83 Main Street, Higham on the Hill, Leicestershire CV13 6AH (NGR: SP 38228 25516), on behalf of Mr & Mrs Baggot during groundworks associated with the construction of a new detached dwelling and garage.

The site lies on the northern side of Main Street within the historic medieval core of Higham on the Hill. The development area consists of a grassy garden area to the rear of the existing property. The proposed area for development lies to the west of the cemetery of St Peters Church and south west of the Church itself – originally Saxon with a Norman tower dating to 1130AD.

Recent archaeological evaluation undertaken nearby had revealed evidence for medieval ditches dated c. 1250-1400AD. A boundary feature to the north of the site was previously recorded as an earthwork which apparently marked the western extent of a series of medieval crofts and tofts on the west side of the lane leading from Main Street to the Church. These earthworks which were surveyed in 1989 are no longer visible and are now occupied by a ménage and stables.

The archaeological work revealed medieval ditches, several cattle burials (adult and calf), pits and post holes. Pottery sherds dating from AD1200 – AD1475 were retrieved along with some slightly later sherds from within excavated features.

The archive for the project will be deposited with Leicestershire Museums Service with accession number X.A14.2021.

Introduction

In accordance with National Planning Policy Framework (NPPF) Section 16 *Conserving and Enhancing the Historic Environment* (MHCLG 2019) this document forms the report for a strip, plan and sample excavation at Church Farm, 83 Main Street, Higham on the Hill, Leicestershire CV13 6AH (NGR: SP 38228 25516).

Planning permission had been obtained for a proposed residential development of one property on the site (18/00920/FUL) which included a condition for archaeological work.

The work was carried out by University of Leicester Archaeological Services on behalf of Mr & Mrs Baggot.

The application site lies within the historic settlement core of Higham on the Hill, directly to the west of St Peters Church and recent archaeological test-pitting undertaken to the immediate west of the application site had revealed evidence for use of the land during the Anglo-Saxon and medieval periods as well as a large quantity of Roman pottery. As a consequence of this, the Planning Archaeologist initially recommended mitigation by trial trench evaluation (two trenches) across the footprint of the proposed development. Based on the archaeological

features that were discovered during the trial trenching, the Planning Archaeologist requested that the full footprint of the proposed development should be stripped, excavated and recorded (preservation by record), so as to record any archaeological deposits which may be impacted upon by development prior to development commencing.

Site Location, Geology and Topography

The village of Higham on the Hill is located approximately 3km to the north-east of Nuneaton and 4km to the north-west of Hinckley, close to the Leicestershire-Warwickshire border (Fig. 1). The assessment area is located on the northern side of Main Street south-west of the church (Fig. 2).



Figure 1: Site location.

Contains OS data © Crown copyright [and database right] 2021.

The proposed site sits within the garden area of the former Church Farm House. The farmhouse originally dates from the 1888 and was extended during the 1990s to the front of the property to form the current residential dwelling. The site currently is laid to lawn with some shrubs and small trees. An old barn lies at the northern edge of the site and will be demolished prior to the development. The proposed development area covers 815m² and lies at a height of 112m aOD.

The British Geological Website indicates that the underlying geology is likely to be Mercia Mudstone overlain by Dunsmore Sand and Gravel.

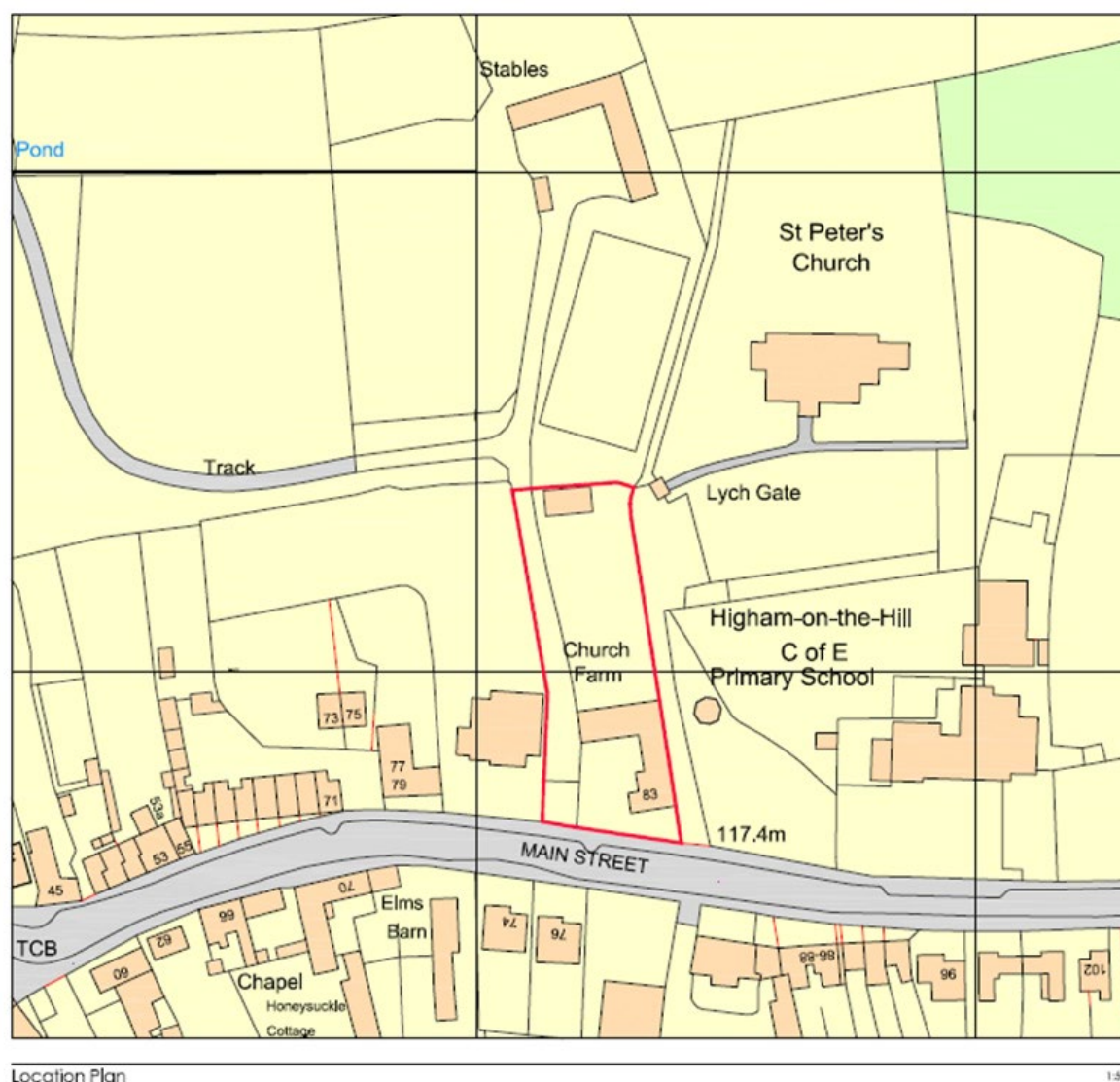


Figure 2: Site location within Higham on the Hill (red). Provided by client.

Historical and Archaeological Background

The parish of Higham-on-the-Hill contains the village of Higham plus the two deserted hamlets of Lindley and Rowden.

The name Higham is Anglo-Saxon in origin and refers to ‘the high farm or enclosure’ (Mills 2003). The settlement itself is situated on the highest point in the area. The village of Higham does not appear in the Domesday survey of 1086, though the lost village of Lindley is mentioned. St Peter's Church was built between 1130 and 1180 and the Norman (Romanesque) tower remains. Other parts of the present church were added in the 18th and 19th centuries.

Although the village is not mentioned in the Domesday Survey is thought to have been included as part of one of the surrounding lordships, probably as part of the holdings of Hugh de Grantemesnil, before passing to the Earls of Leicester and Winton. In the Itinerary of 1280,

Higham, Stoke and Upton answered collectively as one village. Edmund, earl of Lancaster, was found to hold land in Higham at the time of his death in 1297.

The manorial descent of the village is hard to ascertain accurately as the land appears to have been divided into parcels: in the 14th and 15th centuries, the de Ferrers and the Greys of Groby appear to have been significant landowners in the area.

In 1564 there were 29 families recorded in the village. In 1591, Humphrey Adderley took tenancy of part of the manor of Higham for a period of 21 years, paying a rent of 70s. In 1585, a second parcel of land, worth 53s 4d, was leased to Sir Robert Constable for another period of 21 years. In 1588, another portion of the manor of Higham was leased by Queen Elizabeth to Thomas Berry.

Mr Burton writing in 1622 describes the lordship as being '*large and extensive, in proportion square; the soil is good but better for grass than corn. The lordship is of four manors and contains within it 40 yard-lands amounting to near 2000 acres of ground. The manor of Higham anciently belonged to the family of Astley from whom it came, through marriage to the Greys. It is now the inheritance of Henry lord Grey of Groby*'.

The common fields of Higham were enclosed in 1632. In 1722, 19 freeholders were polled from Higham, with 17 freeholders recorded in 1775. In 1790, Thomas Fisher is recorded as lord of the principal manor of Higham, with Robert Abney esq., Rowland Okeover esq., and William Hurst in possession of the other manors in the village.

The Plague reached Leicestershire in 1348 killing probably a third of the population. It was a contributory cause to the desertion of Lindley, along with the enclosure of the open fields for sheep rearing in the 16th century (Cox 2002). A directory of 1863 shows a large variety of trades and professions within the village including 2 bakers, a wheelwright, a blacksmith, 2 millers, 2 carpenters, 4 shoemakers, 2 tailors and 3 other shops. Dr. G.F Fisher, later the Archbishop of Canterbury, was born in Higham in 1887 (Leicester Advertiser c. 1960). In 1870-72, John Marius Wilson's *Imperial Gazetteer of England and Wales* described Higham on the Hill thus:

...a village and a parish in Hinckley district, Leicester. The village stands near the Ashby-de-la-Zouch canal, Watling street, the boundary with Warwickshire, and the Leicester and Nuneaton railway, 2½ miles NE of Nuneaton; and has a post office under Hinckley. The parish contains also the hamlets of Lindley and Rowden. Acres, 2, 880. Real property, £5, 245. Pop., 559. Houses, 123. The property is divided among a few. The manor belongs to the Rev. J. Fisher. Lindley Hall was occupied by John Hardwick, who led the Earl of Richmond to Bosworth field; was the residence of William Burton, the first historian of Leicestershire; and is now the seat of Vincent Eyre, Esq.

By Return to Parliament in 1800, Higham contained 81 houses, in which were 97 families, consisting of 218 males and 213 females, of whom 104 were chiefly employed in agriculture, and 32 employed in trade, manufacture etc. (Clarke, S. 2012).

Aims and Objectives

The aims and objectives of the evaluation and strip, plan and sample excavation were defined as follows:

- To identify the presence/absence of any archaeological deposits.
- To establish the character, extent and date range and significance of any surviving archaeological deposits.
- To record any archaeological deposits to be affected by the ground works.
- To establish the ecofactual and environmental potential of any archaeological deposits and features encountered.
- To record any archaeological deposits and produce an archive and report of any results.

Within the stated project objectives, the principal aim of the recording was to establish the nature, extent, date, depth, and significance of the heritage assets within their local and regional context.

All mitigation work was considered in light of the East Midlands Research Framework (Cooper ed. 2006) and strategy (Knight et al. 2012), along with targeting national research aims. Details of the specific objectives can be found in the Written Scheme of Investigation produced by ULAS prior to the work taking place (Hunt 2021).

The development proposal was for a new detached dwelling with attached garage to be located in the garden area of 83 Main Street, north of the existing building (Fig. 3).



Figure 3: Plan of proposed development. Provided by client.

Research Objectives

While the nature, extent and quality of archaeological remains within the area of investigation for the project remain unknown until archaeological work is undertaken, it is possible to determine some initial objectives derived from *The Archaeology of the East Midlands: An Archaeological Resource Assessment and Research Agenda*, *Leicester Archaeology Monograph 13*, (ed. Cooper 2006), and *East Midlands Heritage: An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands* (ed. Knight et al 2012), and updated here: <https://archaeologydataservice.ac.uk/researchframeworks/eastmidlands/wiki/>:

Iron Age/Early Roman

4.5.3: How may nucleated and other settlements have developed in the Roman period?

4.6.1: Can we shed further light upon the development of field and boundary systems?

High Medieval

7.7.1: Can we shed further light upon the origins and development of the open-field system and its impact upon agricultural practices?

7.2.4: Can we clarify further the processes of settlement desertion and shrinkage, especially within zones of dispersed settlement?

Methodology

The work followed the methodological statement set out in the *Written Scheme of Investigation* (WSI) for the project (Hunt 2021).

All work will be carried out in accordance with the Chartered Institute for Archaeologists (Cifa) Standard and Guidance for Archaeological Field Evaluation (2020) and adhere to their Code of Conduct (2014a. Rev 2019).



Figure 4: Proposed trench plan, with and without development proposal. Scale 50.0m.

Initially, two trenches (15m x 1.6m) were excavated to evaluate the development area (Figs. 4, 7-8), however, after inspection by the LCC Planning Archaeologist, a full excavation of the development area was required. The designated area for the strip, map and sample excavation was the footprint of the new building covering around 200m². The work involved the removal of overburden under the supervision of an experienced professional archaeologist to determine the presence/absence of any archaeological remains.



Figure 5: Photograph showing the proposed area for development looking south east.



Figure 6: Work in progress.

Results

The archaeological work was carried out between 01/02/2021 and 11/02/2021 during a very cold and snowy period. Although the natural substrata comprised of orange sand and gravel excavation at times was challenging with the frozen ground and time constraints.

The area was stripped using a 360° tracked excavator fitted with a flat-bladed ditching bucket.

The topsoil across the area was a dark grey loam ranging from 0.20m to 0.50m in depth, containing few inclusions such as rounded stones with grass covering the surface. Under this lay light orange-brown subsoil soft sand with > 20% loam inclusions. The subsoil ranged in depth from 0.30m to 0.60m. The natural sub-stratum was orange-brown soft sand with gravelly patches to the north and was located at and between 0.70m and 0.90m in depth. Mr & Mrs Baggot suggested that some of the topsoil had been ‘made up’ in recent years after the removal of a shed structure in order to level the ground for use as a garden.

The work began with the excavation of Trench 1 (Fig. 7). A pit, a post hole and two larger, rectangular features were located. Trench 2 was then excavated (Fig. 8), revealing what appeared to be two parallel ditches to the east of the trench aligned north-south. Excavation of the features within the trenches revealed; two large mammal burials, a pit and what appeared to be a re-cut medieval ditch.

The excavation area revealed what appeared to be several more archaeological features including post holes, another pit, two more large animal burials, and a two juvenile animal burials (Fig. 9).



Figure 7: Photograph looking south east showing Trench 1. Scale 1.0m.

Table 1: Trench 1 detail.

Trench 1	Alignment	Total length	Width	Area	Min depth	Max depth
	N-S	14.7m	1.9m	28.00m ²	0.73m	0.90m
	From N end 3m	6m	9m	12m	To S end 14.4m	
Topsoil depth	0.25	0.23	0.40	0.30	0.35	
Subsoil depth	0.55	0.50	0.50	0.40	0.40	
Top of natural substratum	-	-	-	0.05	0.05	
Base of Trench	0.80	0.73	0.90	0.75	0.80	



Figure 8: Photograph looking east showing Trench 2. Scale 1.0m.

Table 2: Trench 2 detail.

Trench 2	Alignment	Total length	Width	Area	Min depth	Max depth
	E-W	15.3m	2.0m	30.60m ²	0.70m	0.90m
	From E end 3m	6m	9m	12m	To W end 15m	
Topsoil depth	0.20	0.24	0.40	0.50	0.40	
Subsoil depth	0.50	0.60	0.45	0.40	0.30	
Top of natural substratum	-	0.05	0.05	-	-	
Base of Trench	0.75	0.89	0.90	0.90	0.70	

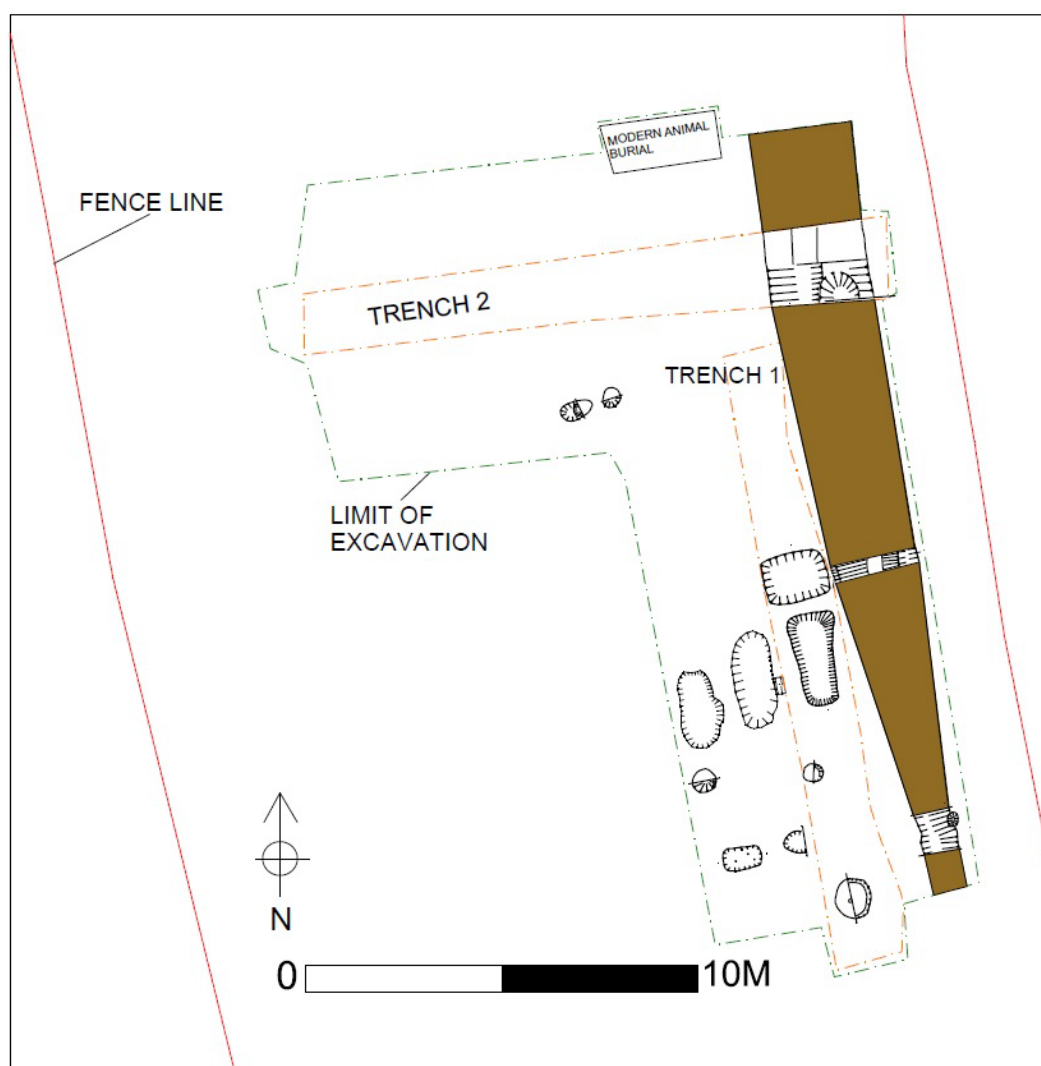


Figure 9: Plan of fully stripped area showing the location of features and those sampled. Scale 10.0m.

The Medieval Boundary Ditch

Extending along the eastern side of the site and aligned approximately north – south was a substantial medieval ditch feature, possibly the original boundary marker for the plot of land which is currently marked by a fence line. The ditch, located against the property boundary and access road for the church, was overlain slightly by debris from the construction of the new improved access road.

The sampled evidence suggests that the ditch was modified and re-excavated at times probably due to the sandy nature of the natural ground which would have slumped over time, and filled with general debris.

Within the excavated area of the ditch to the north of the site, the ditch feature was initially noted by the observation of two darker linear features (12) and (14) which comprised of a mid-blackish grey silty sand separated by re-deposited natural orange sand (18).

Below these fills evidence for two ditches was discovered; [11] to the west and [13] to the east. Also located was a terminus of what appeared to be another ditch [15] which was truncating [13] and partially truncating [11]. This ditch [15] could possibly have been a re-cut of [13]

given that the natural substrata was soft orange sand which can cause slumping into a ditch, therefore causing it to fill slowly over time, preventing the ditch from its original use (fig 10-11). This feature lies at a height of 116.7m aOD. Two sherds of 13th Century pottery were recovered from fill (16) and also two from (20) therefore indicating that the ditch was medieval in date.

The area of the ditch sampled at the centre of the site, revealed evidence of two parallel ditches [37] and [35]. Ditch [37] appeared to be a continuation of [11], albeit slightly wider, and [35] a continuation of [13]. This feature lay at a height of 116.7m aOD. The section drawing showed evidence of the sides of the ditches slumping (Figs. 12-13). One sherd of 13th Century pottery was found within fill (44) and another in (46) giving an accurate date to the ditch proving it to be medieval or earlier in its construction. An environmental sample was taken from [37] (44) showing a residual scatter (charred plant remains) from food waste spillage or cereal preparation waste which had become burnt on a hearth. The ashes from the hearth would have formed a general scatter on the site and collected in open features such as the ditch.

The southernmost sample of the ditch revealed only one very shallow ditch [27] with a post hole [29] slightly truncating the edge of the ditch on the east side. This ditch seemed to share characteristics with [35] and [13] being quite shallow (Figs. 14-15). This feature lies at a height of 116.7m aOD

It can only be assumed that within the space between the southern and central samples that one of the ditches observed to the north either terminates, or turns eastwards towards the church.

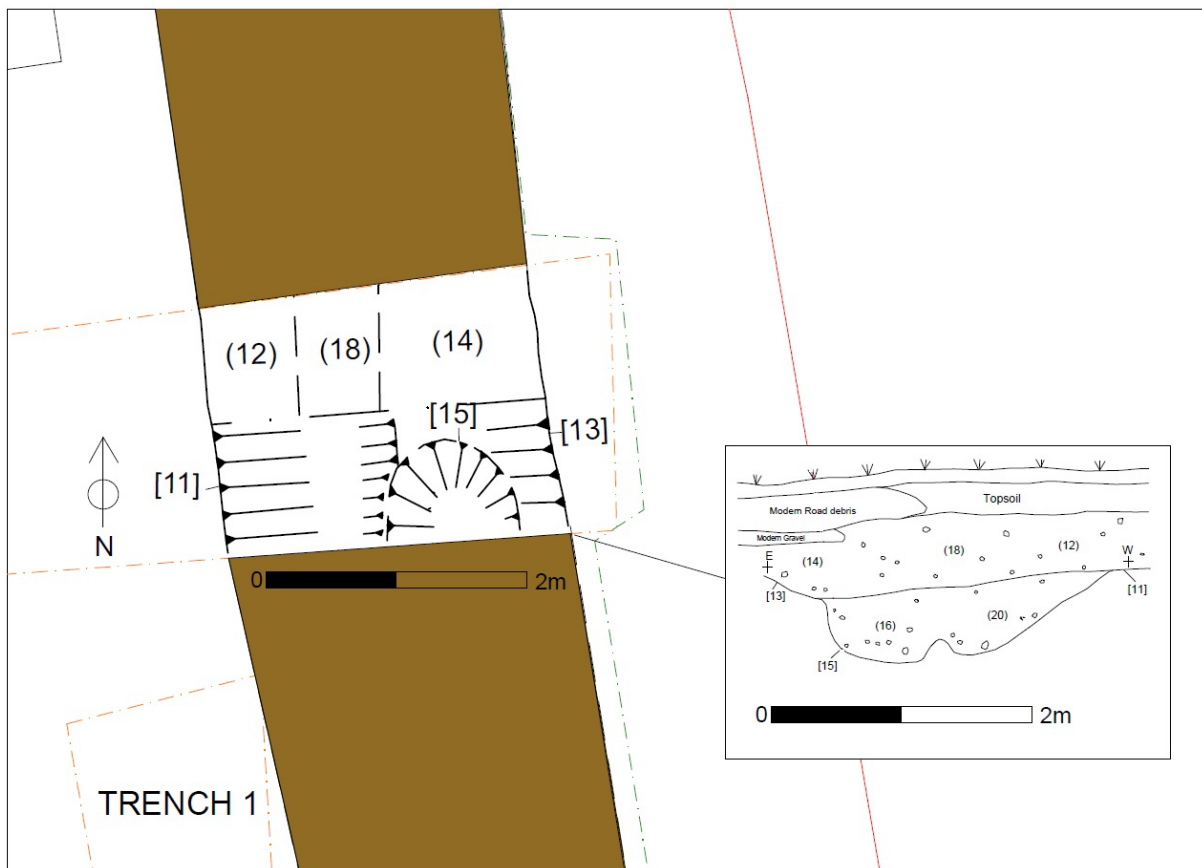


Figure 10: Plan and section drawing of the northernmost sample of the ditch [11] and [15]. Scale 2.0m.



Figure 11: Photograph looking south at the north facing section of the ditch [13] [15] (recut/terminus) and [11] (northernmost sample). Scale 1.0m.

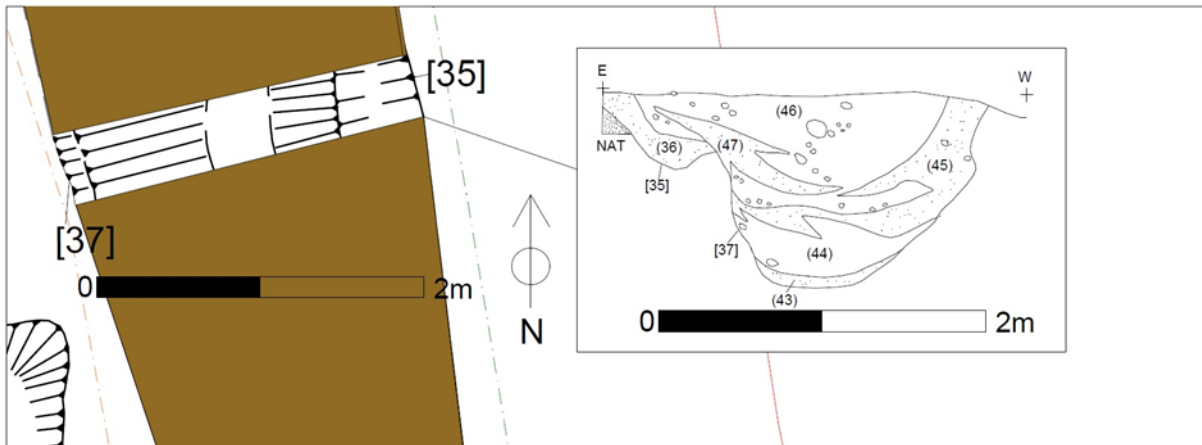


Figure 12: Plan and section drawings of the central sample of the ditch [35] and [37]. Scale 2.0m.



Figure 13: Photograph looking south at the north facing section of the ditch [35] [37] (central sample). Scale 1.0m.

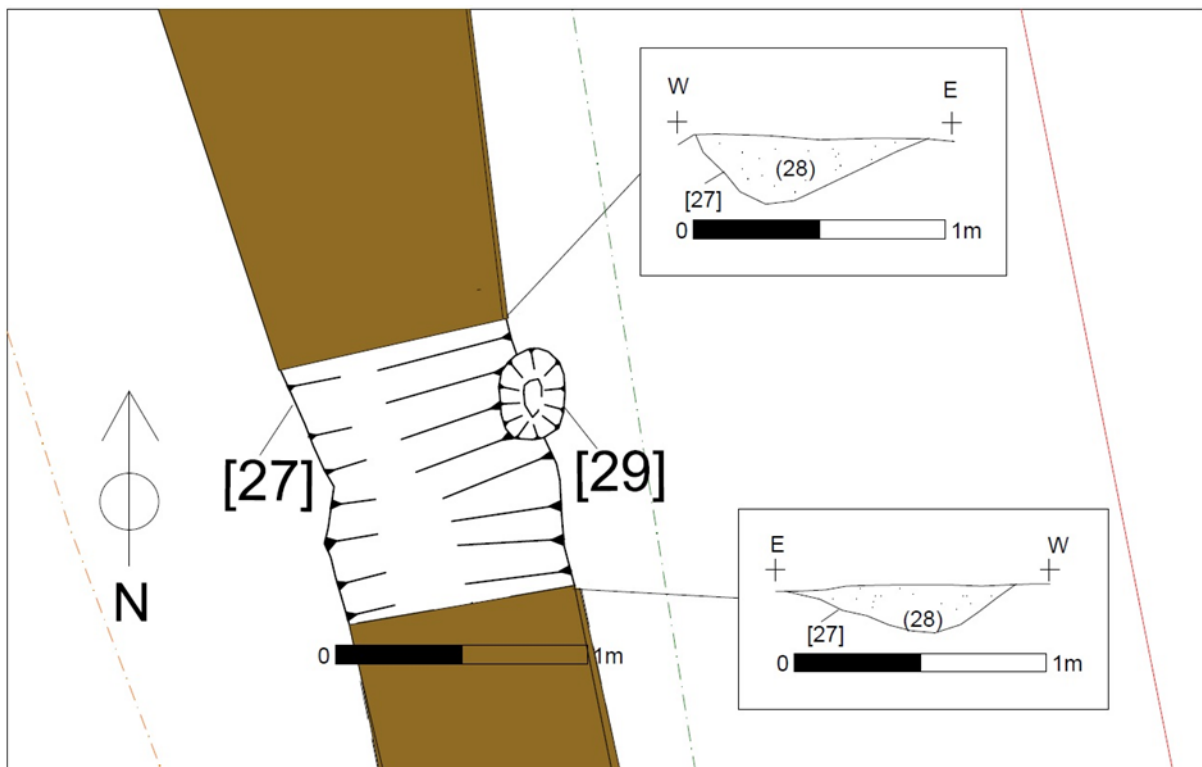


Figure 14: Plan and section drawings of the southern sample of the ditch [27]. Scale 1.0m.



Figure 15: Photograph looking north at the south facing section of the ditch [27] and post hole [29] (southern sample). Scale 1.0m.

Pits and post holes

A large pit [3] was located at the southernmost point of the site, initially within trench one. It had vertical sides and was cut into the natural sandy substrata (Figs. 16-17). The pit was circular in plan and measured approximately 1.1m in diameter. Two sherds of late 17th century pottery were recovered from the greyish brown loamy / sandy fill (4), but excavation was restricted by the sides collapsing. An auger was used to determine the actual depth of the pit (0.8m).

Post holes [7] and [31] were sampled to the south west of the site (Figs. 16-18, 19). Both post holes had a similar fill to the large pit [3] and were circular in plan. Post hole [7] measured 0.45m in diameter and was 0.18m in depth with shallow to moderately sloping sides and an irregular base. This feature lies at a height of 116.5m aOD. No finds were recovered from this feature. Post hole [31] measured 0.60m in diameter and was 1.25m in depth with moderate to steep sloping sides and a concave base. This feature lay at a height of 116.8m aOD.

Post holes [48] and [50] were located south of Trench Two, towards the northern end of the site (Figs. 20-22). Both post holes were slightly irregular in plan. Post hole [48] measured 0.5m x 0.48m and was 0.16m in depth. It had moderately sloping sides and a concave base. The fill (49) consisted of a mid orange – brown sandy silt with <5% rounded pebble inclusions. This feature lies at a height of 116.8m aOD. Post hole [50] measured 0.87m x 0.45m in plan and was 0.35m in depth. It has steep sides and a concave base. The fill (51) consisted of dark brown clay silt with <1% rounded pebble inclusions. This feature lay at a height of 116.9m aOD. Some residual flint was recovered from this feature.

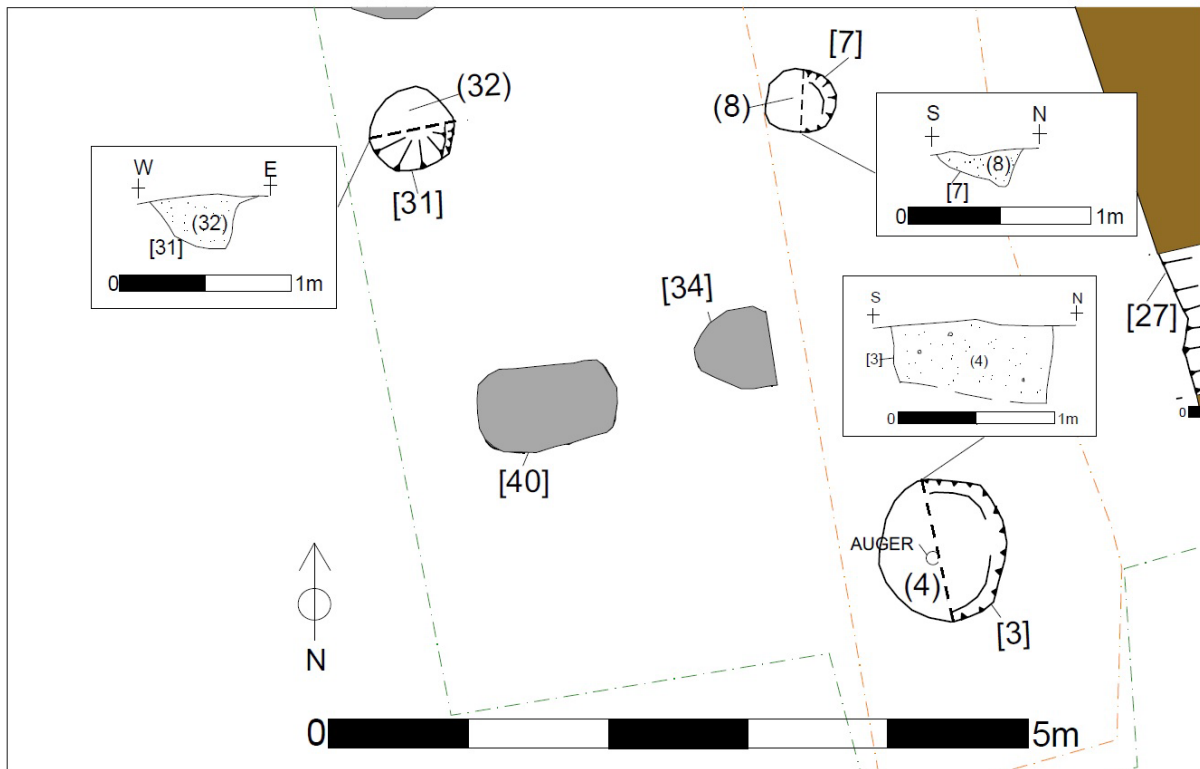


Figure 16: Plan and section drawings of pit [3], and post holes [7] and [31]. Scale 5.0m.



Figure 17: Photograph looking west showing east facing section of the pit [3]. Note that the pit is not fully excavated due to the sides collapsing. Scale 1.0m.



Figure 18: Photograph looking west showing east facing section of post hole [7]. Scale 0.3m.



Figure 19: Photograph looking north showing south facing section of post hole [31]. Scale 0.5m.

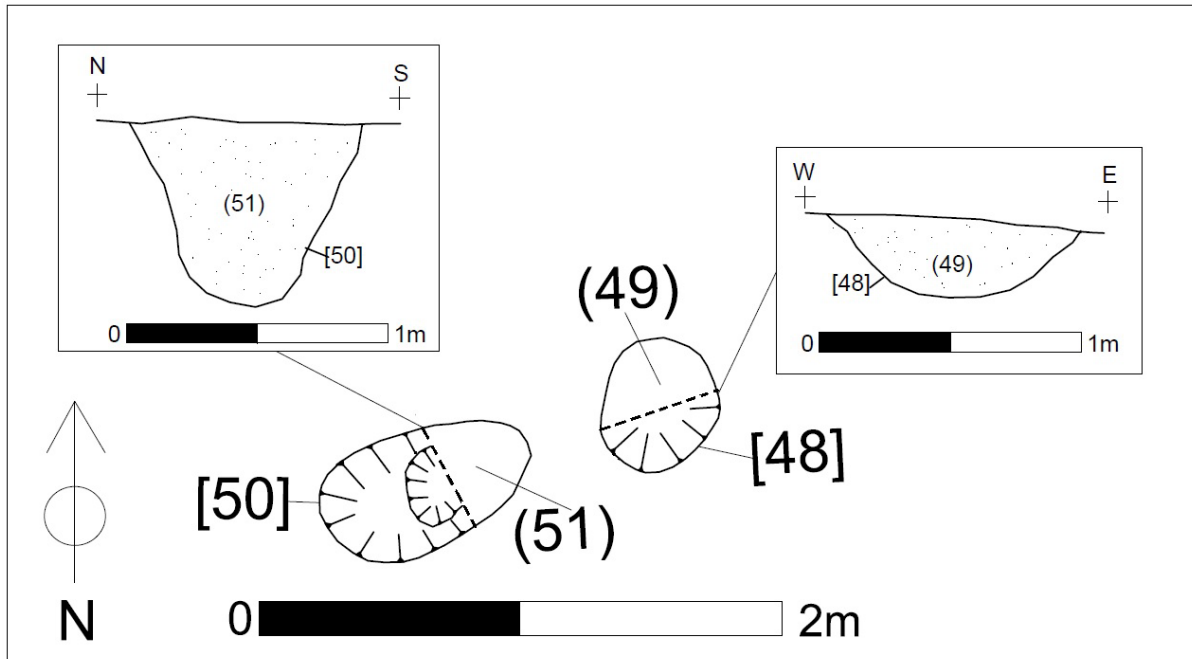


Figure 20: Plans and section drawings of post holes [48] and [50]. Scale 2.0m.



Figure 21: Photograph looking north showing south facing section of post hole [48]. Scale 0.5m.



Figure 22: Photograph looking east showing west facing section of the post hole. Scale 0.5m.

Animal Burials / Bone Pit

In total thirteen Articulated Bone Groups (ABGs) were identified however, not all of the animals were complete (Fig. 13). Taking into account the number and size of all elements recorded, the assemblage derives from a minimum of nine animals, based on the right distal femur. All of these mammals were subsequently identified as cattle.

Large mammals

Initially two cattle burials were located within Trench 1 [21] (23) and [24] (26). Both animal burial pits respected the location of the boundary ditch suggesting that it was still in use at the time of the burials and the features were contemporary.

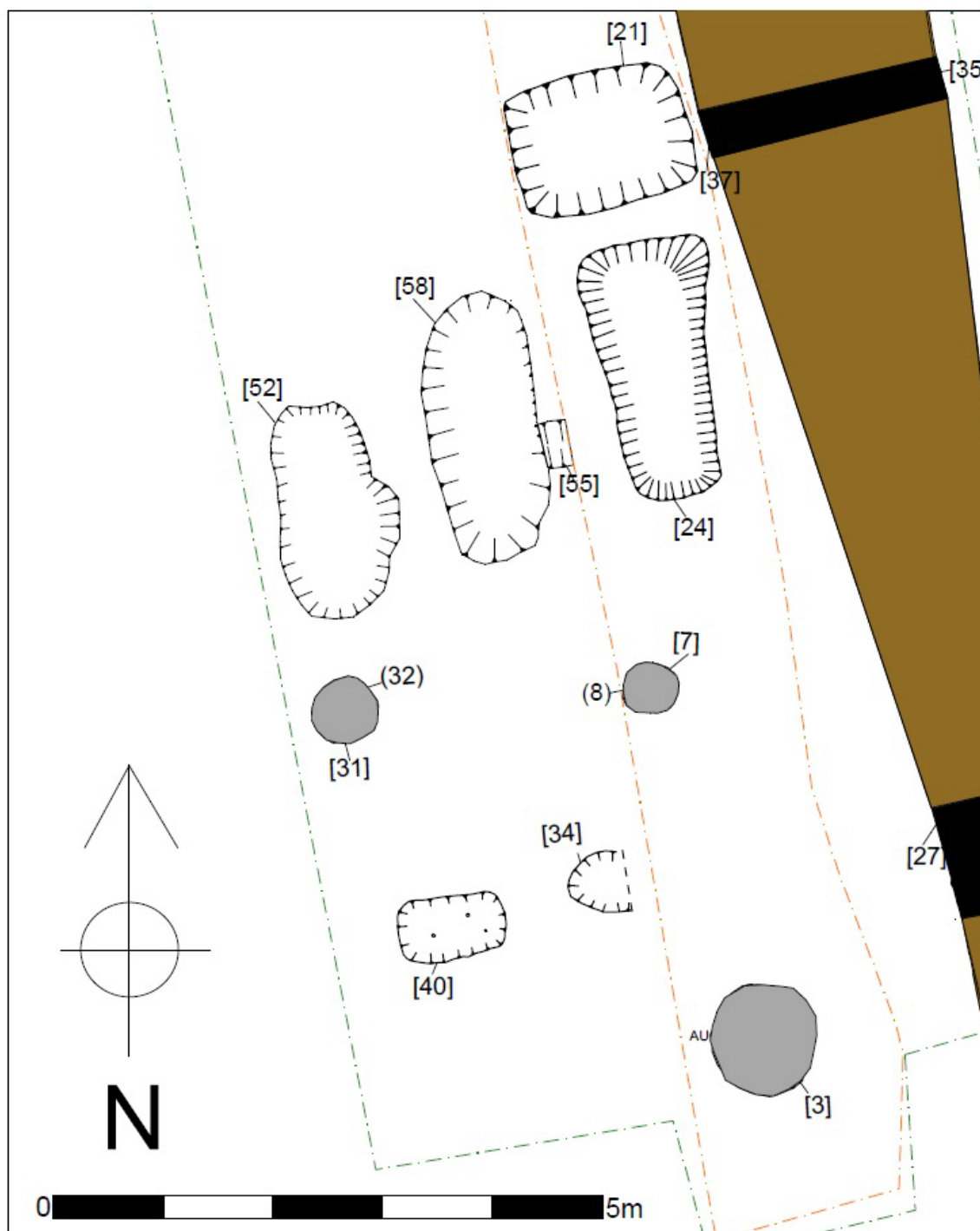


Figure 23: Plan showing the locations of all the animal burials [21] [24] [34] [52] [55] and the bone pit [40]. Scale 5.0m.

Pit 21

One of the cattle burials [21] (23) had no leg bones. The photographic evidence (fig 24) shows that the animal was buried on its back with its neck and head bent over its shoulders (aligned east west). It had been placed or thrown in a broadly rectangular pit which was too small for it. The legs would have been at a higher level to the torso when buried. This pit measured 1.85m x 1.3m and was 0.2m – 0.4m in depth. It had moderate - steep sloping sides and a flat base. It was backfilled with redeposited natural orange sand at a height of 116.9m aOD. One

sherd of 13th Century pottery was found within the fill surrounding the animal bone, indicating a medieval date to the burial.



Figure 24: Photograph looking west at the cattle burial [21]. Note the lack of long bones and that it is buried on its back. Scale 1.0m.

Pit 24

The second burial to be excavated was also located within Trench 1 [24] (26), was located directly south of [21], but aligned north-south. This cow was buried respectfully on its side with its legs bent to fit in its burial pit (Figs. 25, 26 and 28) and was the most complete of all of the excavated mammals. During excavation, as the redeposited natural fill was removed, it was observed that this animal had been buried with a calf [24] (33) below its front legs. Part of the calf's skull was visible, some long bones and some vertebrae. The bones were very delicate and small, not easily identified in the photographic evidence (Figs. 26-27). The pit was broadly rectangular and had been dug to perfectly accommodate the animal (Fig. 28).

The pit measured 2.41m x 1.20m and was ultimately 0.5m in depth. It had steep sloping sides and a flat base. The pit had been backfilled after burial with redeposited natural orange sand at a height of 116.6m aOD. One sherd of 13th Century pottery was found within the fill surrounding the animal bone, giving further evidence that the burial group was medieval in origin.



Figure 25: Photograph looking east at the large mammal bones (26) within pit [24]. This mammal was buried with a calf. Scale 1.0m.



Figure 26: Photograph showing the location of the calf (33) buried alongside the adult (26). Scale 0.05m.



Figure 27: Photograph showing the calf bones (33) buried alongside the adult mammal.
Scale 0.5m.



Figure 28: Photograph showing the pit cut [24] which contained large mammal (26) and calf (33). Scale 1.0m.

Pit 52

This cattle burial pit [52] (54) was located in line with pits [24] and [58] and was also aligned north south (Figs. 29-32). The adult cow was laid respectfully in a pit which was dug for its size (Figs. 30-32). The pit contained a minimum of two animals identified during post excavation analysis.

The pit measured 2.01m x 1.16m and was approximately 0.30m in depth. It had moderate – steep sloping sides and a flat base (Fig. 33). It had been backfilled immediately after burial with redeposited natural bright orange sand at a height of 116.9m aOD. It contained a minimum of two animals – an adult cow and a calf.



Figure 29: Photograph looking west showing partial excavation of large mammal (54) within pit cut [52]. Scale 1.0m



Figure 30: Photograph looking north showing partial excavation of large mammal (54) within pit cut [52]. Scale 0.5m.



Figure 31: Photograph showing partial excavation of large mammal (54) within pit cut [52]. Scale 1.0m.



Figure 32: Photograph looking east showing pit cuts [52] and [58]. Scale 1.0m

Pit 58

This large pit [58] was located after the whole footprint of the development had been stripped. It lay directly to the west of [24]. Like [24] the animal had been buried respectfully on its side in a pit dug for its size. This pit contained an adult cow and a calf located within (59).

The animal burial was aligned north south. It measured 2.43m x 1.01m and was approximately 0.30m in depth. It was broadly rectangular with moderate to steep sloping sides and a flat base (Fig. 33). It had been backfilled immediately after burial with redeposited natural bright orange sand at a height of 116.9m aOD.



Figure 33: Photograph looking east showing pit cut [58] with the large mammal (60). Scale 1.0m

Pit 34

This burial [34] was located to the south of the larger animal burials (Figs. 34-35). It was located close to the bone pit [40]. Only a small part of the vertebrae remained with one long bone. Post excavation analysis revealed that this represented parts of a young cow.

The fill (35) was a greyish sandy clay mix, quite different to the fill surrounding the large animal burials. This burial measured 0.54m x 0.56m and had a depth of 0.08m (Fig. 36). It sat at a height of 116.7m aOD.



Figure 34: Photograph showing part of a young cow burial pre-excitation. Scale 0.5m.



Figure 35: Photograph showing young cow burial post excavation. Scale 0.5m.



Figure 36: Photograph showing pit cut of animal burial [34]. Scale 0.5m

Pit 55

This burial [55] was located adjacent to and on the east side of the large animal burial [58] (Figs. 37, 38). This small pit cut had truncated the burial pit of the large mammal and had a slightly greyish fill sandy clay fill (57), suggesting that this animal burial was of a later date than the large mammal [58] (Figs. 37, 38). Post excavation analysis revealed this was the partial remains of a calf.

The pit had shallow sloping sides and measured 0.46m x 0.36m and had a depth of 0.26m. This burial sat at the same height as the large mammal at 116.9m aOD. One sherd of modern pottery was found within the fill surrounding the animal bone providing an indication of date for the burial and proving that it had been buried as part of a different, more recent phase of activity at the site.



Figure 37: Photograph looking east showing pit [55] containing part of a calf pre-excavation. Scale 0.5m.



Figure 38: Photograph showing remains of a calf (56) during excavation within pit [55].
Scale 0.5m.

Bone pit

Caution was taken when beginning to excavate this pit [40] as some bone was evident within the fill (Fig. 39). The bone soon proved to be disarticulated, and the pit was full of it from top to bottom. The remains of two claws of different sizes were identified during post excavation analysis.

The pit measured 1.0m x 0.6m (Fig. 40). The pit had steep sides and a flat bottom at 0.31m in depth. This pit lay at a height of 116.8m aOD.



Figure 39: Photograph taken during excavation of bone pit [40] looking east. Scale 0.5m.



Figure 40: Photograph of the bone pit post excavation. Scale 1.0m.

Modern Features

Modern Post Holes / Pits

Information provided by Mr and Mrs Baggot during the excavation suggested that when they moved into the property some time ago, part of the proposed area for development had a large shed type building over it. The two modern pit / post hole features were located during the initial excavation of Trench 1 and would certainly tie in with this information as they are cut into the ground from within / just below the line of topsoil and contained a great deal of pottery packing / fill and were contained a dark loamy soil mix (Figs. 41-44).

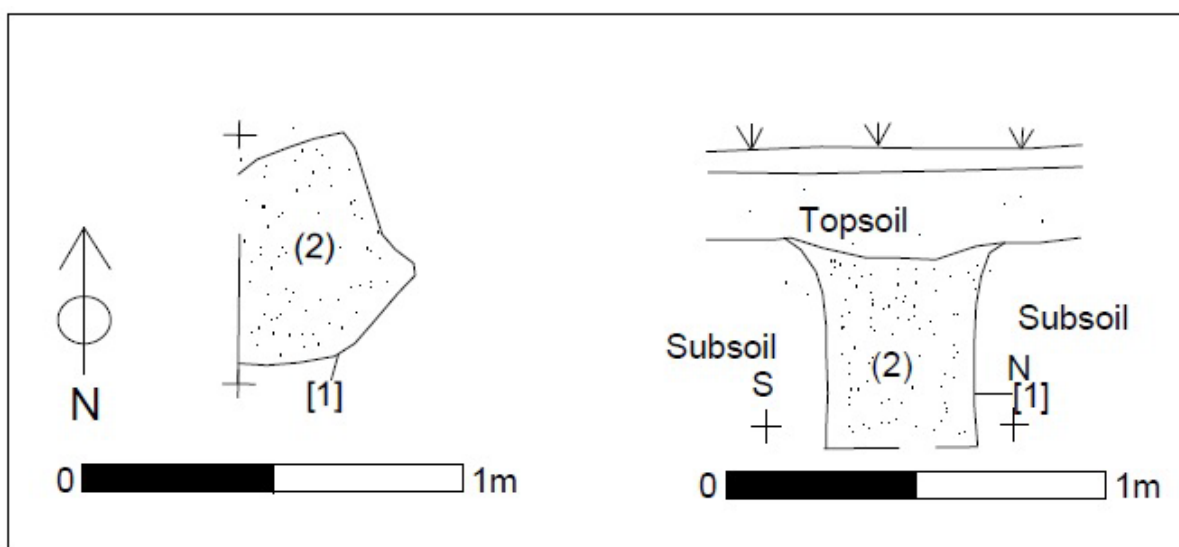


Figure 41: Plan and section drawings of the modern post hole feature [1]. Scale 1.0m



Figure 42: Photograph looking west at the modern 'Post hole' feature [1] located within Trench 1. Scale 0.5m.

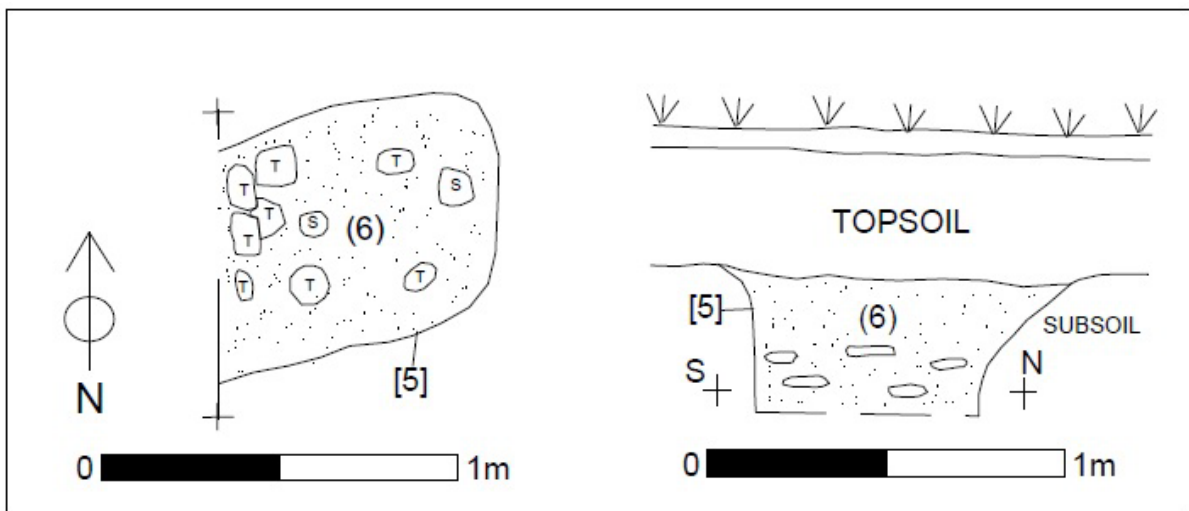


Figure 43: Plan and section drawings of the modern post hole feature [5]. Scale 1.0m



Figure 44: Photograph looking west at the modern post hole / pit feature [5] filled with tile located within Trench 1. Scale 0.5m.

Modern animal burial

A large mammal burial was located at the northern extent of the site (Fig. 9). This was a modern burial based on its height within the subsoil, just below the topsoil. This feature was not excavated, photographed or drawn, just location plotted with GPS.

The Pottery Finds

Paul Blinkhorn

The pottery assemblage comprised 36 sherds with a total weight of 718g. It was all medieval or later, and was recorded using the conventions of the Leicestershire County type-series (Sawday 1994), as follows

CC1: Chilvers Coton 'A' Ware,	AD1200-1400.	9 sherds, 107g.
CC2: Chilvers Coton 'C' Ware,	AD1200-1475.	24 sherds, 458g.
EA2: Iron-Glazed Earthenware,	late 17 th – 19 th century.	2 sherds, 51g.
EA10: Modern Earthenwares,	1800+.	1 sherd, 2g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 3. Each date should be regarded as a *terminus post quem*. The range of fabric types is typical of contemporary sites in the region.

The medieval material consisted entirely of fragments of jars, bowls and jugs, which is very typical of the earlier part of the period. The sherds are, in the main, fairly large and fresh and appear to be reliably stratified.

Table 3: Pottery occurrence by number and weight (in g) of sherds per context by fabric type.

Context	CC1		CC2		EA2		EA10		Date
	No	Wt	No	Wt	No	Wt	No	Wt	
4					2	51			L17thC
16	2	24							13thC
20	2	32	8	17 9					13thC
22			1	54					13thC
24			1	12					13thC
44	2	36	4	51					13thC
46	3	15	10	16 2					13thC
57							1	2	MOD
Total	9	10 7	24	45 8	2	51	1	2	

The Animal Bones

Jennifer Browning

Introduction

A substantial animal bone assemblage was recovered during the excavations at Church Farm. The majority of this material was articulated, deriving from animal burials identified during the excavation. The stratigraphy and available dating evidence suggest that the burials could date to the medieval period.

Methodology

Specimens were identified with reference to comparative modern and ancient skeletal material held at the School of Archaeology and Ancient History, University of Leicester. Information was compiled directly into a spreadsheet with facility for recording data on taxa, bone element, state of epiphyseal fusion and completeness to elicit information on species proportions, skeletal representation and age. Where possible, the anatomical parts present for each skeletal element were 'zoned' according to Serjeantson's definitions (1996), with additional zones ascribed to mandibles based on Dobney and Reilly (1988) and a simple system applied to skulls (four commonly found recordable points were defined on each side of the skull: pre-maxilla; upper and lower orbit; and occipital condyle. Condition was assessed on a 4-point scale based on Harland et al (2003). Joining fragments were re-assembled and the resulting specimen counted as a single fragment. Articulating elements were identified and recorded together. The location and nature of modifications such as burning, gnawing and pathologies were also recorded. Butchery marks were located by zone if possible, categorised, using simple codes, and described. Measurements were taken, as appropriate, following von den Driesch (1976) and Davis for metapodials. Only fused (adult) bones were measured. When pairs of bones were recovered, only one side was measured, usually the best preserved. Tooth wear was recorded using Grant's (1982) method and categorised using data from O'Connor (2003, table

31). When paired mandibles were present, both were examined but only one tooth-row was recorded to avoid duplication.

Description

Overview and preservation

Cattle was the only identified taxa in the assemblage and the majority of bones showed evidence for articulation. In the following text they are referred to as Articulated Bone Groups (ABGs) and it was possible to identify different individuals within pits 21; 24; 40; 52; 55 and 58. Thirteen ABGs were identified (Table 5 and Table 6) however not all of the animals were complete. Taking into account the number and side of all elements recorded, the assemblage derives from a minimum of nine animals, based on the right distal femur (Table 7).

In addition to the articulated groups, a very small amount of bone was recovered from contexts 44 and 46, which were both fills of ditch 37. These were shaft and rib fragments that were unfortunately undiagnostic to taxa but derived from large mammals (such as cattle or horse).

The state of preservation was generally good or fair according to Harland's (2003) categories, which are defined as 'lacks fresh appearance but solid; very localized flaky or powdery patches' and 'surface solid in places, but flaky or powdery on up to 49% of specimen'. However, many of the surfaces were actively laminating and deteriorated when handled. Many of the bones, particularly juvenile examples, were lightweight, and porous. Some fragmentation had occurred during lifting of the skeletons.

Pit 21

ABG 23 within context 22 appeared to have been placed on its back, with the head folded back and the pelvis upwards (Fig. 45). The skeleton was represented by the skull, mandibles, both scapulae, the spine, the right fore and hind limb and the left pelvis and femur and four phalanges. There were no unfused bones and the animal had adult dentition.



Figure 45: ABG 23 *in situ*. Scale 1.0m.

Pit 24

Pit 24 contained the remains of two animals, an adult cow (ABG 26) and a calf (ABG 33), within fill 25. ABG 26 was the most complete animal. The axial skeleton, encompassing the skull and mandibles, vertebrae and ribcage, was present. All four limbs were recorded and a number of the smaller bones such as caudal vertebrae, phalanges, carpals and tarsals, were also represented. Further phalanges and carpals were recovered from amongst the bones of ABG 33, which was found close to the forefeet of AGB 26.

All of the major limb bones were fused and the full adult tooth dentition was in place. The phalanges had lipping around the articular margins and small bony spurs (osteophytes) were observed on a couple of examples (Fig. 46).



Figure 46: Pathological changes to 2nd phalanx.

ABG 33 was recovered from the same cut, close to the front right foot of ABG26 (Figs. 47-48). The axial skeleton was largely complete, including the fragmented skull, vertebrae and ribs. The mandibles and both sides of the pelvis were also recovered. However, the ribs were under-represented and the upper parts of the left and right forelimb and left hind limb were recovered but not the feet. The right hind limb included small ankle bones, such as the astragalus and calcaneum. None of the bones were fused and the dentition was deciduous.



Figure 47: Pit 24, showing ABG 26. Scale 1.0m.



Figure 48: Close up of ABG 33. Scale 0.5m.

Pit 34

ABG 39 represented part of a young cow, consisting of a series of articulating vertebrae, part of a pelvis, a femur and a patella. The pelvis was fusing and the femur was completely unfused (juvenile).

Pit 40

The remains of two calves of different sizes, ABG 42a and ABG 42b, were recovered from the fill, 41, of pit 40. Both were represented by all four legs and all of the long bones were unfused. It was not possible to separate all the vertebrae or skull fragments from the two individuals; the bodies and arches of the vertebrae were unfused and the skulls were fragmented. Part of both mandibles belonging to the smaller calf, ABG 42b, were retrieved but only one belonging to the larger, ABG 42a, was recovered. However, it was possible to record the eruption and attrition of the teeth in both jaws.

Pit 52

This pit contained a minimum of two animals within fill 53: ABG 54a (an adult cow) and ABG 54b (a calf). ABG 54a was fairly well represented, with the skull, spine and ribs *in situ* (Fig. 49). The scapula and humerus of the left forelimb were recorded but the complete left hind limb were present. On the right side, both the fore and hind limb were recovered. Phalanges were present but under-represented. All the limb bones were fused and all permanent molars were in wear.

In addition to the adult skeleton, the left hind leg of a calf were also recovered. The bones were small, had a porous texture consistent with juvenile animals and none were fused.



Figure 49: Pit 52, showing pelvis and hind leg of ABG 54a. Scale 1.0m.

Pit 58

ABG 60a (an adult cow) and ABG 60b (a calf) were present within fill 59. Most of the upper part of ABG60a was recovered, including the skull and mandibles, spine and ribcage (Fig. 50). The right forelimb from the scapula to the 2nd phalanges was also present. The right pelvis and part of the left hind leg, including the joint, consisting of left distal femur, patella and proximal tibia was recovered. Epiphyses were fused in all cases and the animal had adult dentition with all three permanent molars in wear.

Very fragmentary remains of a calf (ABG 60b) included left and right ischium (part of the pelvis), with unfused acetabulum. A fragment of femur shaft and an unfused epiphysis were also recovered. The bodies and neural arches of the associated vertebrae were also unfused.

A feature described as a post hole, 29 contained a complete articulated left foreleg, some fragments of sternum and parts of a right femur and tibia. These have been recorded as ABG 30, however the element representation and measurements suggest that they may belong to ABG 60a.



Figure 50: Pit 58, with ABG 60a *in situ*. Scale 1.0m.

Pit 55

Fill 56 produced ABG 57, which comprised the semi-articulated remains of a calf (Fig. 51), consisting of the right pelvis, both femora, vertebrae, ribs (x7), the left ulna and several unfused epiphyses from the forelimbs. Part of a 3rd phalanx of adult morphology was also recovered.



Figure 51: Close-up of ABG 57 in feature [55].

Discussion

Features

The cattle were mostly deposited into individual burial pits, which judging from their size and shape appear to be purpose-dug, although some seem a little small. The animals were placed into the pits in articulation, retaining the anatomical order of the bones, suggesting that they were still fleshed. There was little evidence for inter-cutting between the features, with the exception of pit 55, containing ABG 57, which was later than pit 58 and also contained modern pottery.

Skeletal representation

The evidence suggests that the animals were deposited into the pits as whole or partial carcasses. Although most of the major bones are present, there is an under-representation of small bones, such as carpals, tarsals and phalanges, which are more likely to be missed during excavation and recovery. Differential survival of bones within the soil may account for the absence of some elements, particularly in the case of porous juvenile bones. Truncation may also account for some taphonomic loss, for example, if bones are not buried deeply, they may be displaced by later activities, with those at the top of a feature especially vulnerable.

A comparison was made between the presence or absence of skeletal elements represented in each feature, suggested that the right leg labelled as ABG 30 was in fact part of ABG 60. This was supported by the measurements taken, which show a close similarity.

Age

The animals represent two distinct age groups. The first group include the mature adult skeletons or partial skeletons recovered from burial pits 21 (ABG 23); pit 24 (ABG 26); pit 52 (ABG 54) and post hole 29 (ABG 30). In all cases, the limb bones were fused, suggesting ages in excess of 42-48 months (Silver 1969, table 1). The dental evidence shows that the third molar was in wear on all three cusps and, in three cases, was heavily worn, suggesting the cattle were mature or elderly adults.

Changes to the alveolar bone in both the upper and lower jaws were noted, where the appearance of porotic bone is indicative of low-level periodontal disease. A condition such as this may be caused by chronic gingivitis and can be associated with over-grazing in ruminants (Bartosiewicz and Gál, 2013, 177-8).



Figure 52: Pathological changes around the alveolar bone, associated with periodontal disease, (ABG 23).

Foot pathologies.

A second age group were under six months of age and were recovered from pit (ABG60). The second group are characterised by their small size and unfused bones, including early fusing bones such as the pelvis, which indicates that they are younger than c.7-10 months at death (Silver 1969, table 1). In most cases, associated the vertebral bodies were as yet unfused with the arches, which is believed to occur soon after birth (Silver 1969, 285, table A). The youngest calf (ABG 42b in Pit 40) possessed metacarpals as yet unfused down the sagittal line, suggesting that it died soon after birth. This is corroborated by tooth eruption in the mandible, which contained a half erupted deciduous 4th premolar, indicating that that the animal was barely a couple of weeks old. The two other calf mandibles, ABG 42a and ABG 33 were from slightly older animals with light wear on the deciduous 4th premolar and an erupting 1st molar, suggesting they were within their first 6 months of age (Grigson 1982 quoted in Hillson 2005, 233).

Table 4: Tooth and mandible wear stages after Grant (1982) and assigned age categories after O'Connor (2003).

Context (ABG)	dp4	m1	m2	m3	Mandible Wear Stage	Age Category
42	H				4	Neonatal
33	b	C			8	Juvenile
42	a	C			9	Juvenile
23		k	g	g	39	Adult 3 (mature)
26		m	l	l	49	Elderly
54		k	j	j	43	Elderly
60		l	k	k	46	Elderly

Size and shape

Naturally-polled cattle have been found on numerous archaeological sites subsequent to the Iron Age and no skulls with horn cores were identified in the assemblage. But closer examination of the less fragmented skulls shows consistent damage to the frontal where the horns are usually located. Butchery marks were seen on the skulls of ABG 23. ABG26 and ABG 54a (see below). The frontal of ABG 23 had a fairly complete frontal but and only small missing areas where the frontal met the parietal. Therefore, if this animal did have horn cores, they were probably small.

A variety of measurements have been taken on complete adult bones and are detailed in Table 9 to Table 13. Complete long bones have provided a range of possible withers heights (using multiplication factors of Matolcsi 1970). These have been averaged for each skeleton, resulting in five estimations of stature; AGB 26 is the shortest with a withers height of 1.21m, while ABGs 23, 54, 30 and 60 have heights of 1.28m, 1.30m and 1.30m respectively. Size and shape are known to vary from breed to breed. A comprehensive analysis of the measurements has not been undertaken for this report, however, the cattle are large compared with examples from medieval and post-medieval Leicester, where withers heights tend to be less than 1.20m (Gidney 1991a-c and 1992 and authors unpublished data).

Butchery

The bones were examined for butchery marks under a strong light but most bones were unaffected. A chop mark was observed on the back of the skull of ABG 26, which was angled obliquely through the left temporal crest. The purpose of this seemed initially obscure, but in

the light of the evidence from other skulls, it may have occurred during the removal of the horns. An axially-aligned saw mark was noted on ABG 23, similarly located on the border of the right frontal, behind the eye socket (Figure 53). The skull of ABG 54 was also sawn axially, along the right edge of the frontal (Figure 54 and Figure 55). The use of saws is not widespread and generally associated with craft rather than food butchery prior to the modern period (Grant 1987, 55).



Figure 53: Skull of ABG 23, showing saw mark.



Figure 54: View of skull of ABG 54a, showing missing part of skull.



Figure 55: Right side of skull (ABG 54a) showing saw mark.

Saw marks lined up on three articulating bones from ABG 54, the calcaneum, astragalus and tibia, indicating that the left leg was sawn through the ankle joint. Once again the reason is not clear, since the corresponding parts of the lower leg- the navicular cuboid and metatarsal were also recovered. It is possible that this was carried out to fit the carcass into the pit but since the burial occurred in sandy soils, it would surely be easier to widen the pit with a shovel.



Figure 56: Butchery on ankle joint of ABG 54, showing saw striations.



Figure 57: View from the bottom of the astragalus and calcaneum showing the angle of butchery.

Conclusion

The animal bone assemblage was of a very specific character. All bones recovered belonged to cattle, most were part of articulated groups and two distinct and diverse age groups were represented.

The combination suggests that these are farm animals and specifically from a dairy herd. A dairy herd would be dominated by adult females, along with a bull and only enough immature animals needed to maintain the herd (Campbell 1992, 110). The calves may be therefore be natural mortalities or unwanted calves, possibly males. The adult females may have been retained for milking to a substantial age. There is little published information concerning the longevity of cattle, however in the 19th and 20th centuries, dairy cattle of between 12 and 15 were not uncommon (Jones and Sadler 2012, 8-9). Apart from minor skeletal changes, possibly age related, there is no sign of disease on the skeletons, although many infectious diseases can progress too rapidly to result in changes to the bones.

The high levels of articulation and minimal butchery marks indicate that, for reasons unknown, the cattle have not been processed for consumption. It is possible that cost of transport or processing would be greater than the return from the transaction. However, it does appear likely that the horns have been removed, which therefore must have had a value. Assuming that the saw marks on the skulls do represent removal of horns, this follows a different pattern to that often seen in medieval tanneries in Leicester, where a portion of the frontal bone usually remained attached to the horn core.

Although there is colloquial evidence of archaeological farm burials, this is not an area that has been extensively reported on in zooarchaeological studies. An excavated farm burial site in

Ireland forms an interesting parallel (Rathbone et al 2016), although not a comparison, since it dated from the 19th century, while the evidence points to a potential medieval date for the current site. Nevertheless, the activities described are probably part of long tradition and there are some similarities, such as the individual deposition of animals in pits dug for the purpose. The small juvenile animals would be a simple prospect to deposit. However, in some traditions, large animals are slaughtered while standing in the pits, so that their bodies collapse into place, rather than the necessity to manoeuvre a heavy corpse into a small feature (quoted in Rathbone et al 2016, 132).

Table 5: Distribution of adult skeletal elements in each feature.

Key: A=axial; L=left and R=right

	Adult cattle	23			26			54a			30			60a		
		A	L	R	A	L	R	A	L	R	A	L	R	A	L	R
AXIAL																
	Skull and maxilla	1			1			1						1		
	Mandible		1	1		1	1		1	1					1	1
	Atlas	1			1			1						1		
	Axis	1			1			1						1		
	Cervical vertebrae				5			5						5		
	Thoracic vertebrae	11			13			13						13		
	Lumbar vertebrae	6			6			5						6		
	Sacrum	1			1			1						1		
	Caudal vertebrae	1			2			3								
	Rib (head)	17			22			26						22		
FORELIMB	Scapula		1	1		1	1		1	1		1				1
	Humerus			1		1	1		1	1		1				1
	Ulna			1		1	1			1		1				1
	Radius			1		1	1			1		1				1
	Metacarpal					1	1		1	1		1				1
HINDLIMB	Pelvis		1	1		1	1		1	1						1
	Femur			1		1	1		1	1			1		1	
	Tibia			1		1	1		1	1			1		1	
	Astragalus					1	1		1							
	Calcaneum					1	1		1	1						
	Metatarsal					1	1		1	1						
FEET	Phalanx 1				6							1			2	
	Phalanx 2				5										4	
	Phalanx 3				3			1							1	

Table 6: Distribution of juvenile skeletal elements in each feature.
Key: A=axial; L=left and R=right.

Juvenile cattle	33			42a			42b			39			54b			57			58			60b					
	A	L	R	A	L	R	A	L	R	A	L	R	A	L	R	A	L	R	A	L	R	A	L	R			
AXIAL																											
Skull and maxilla				1																							
Mandible						1		1	1																		
Atlas																											
Axis																											
Cervical vertebrae																		14**									
Thoracic vertebrae																					2						
Lumbar vertebrae										5																	
Sacrum																											
Caudal vertebrae																											
Rib (head)	3			29*														7			1						
FORELIMB																											
Scapula					1	1		1	1																		
Humerus					1	1		1	1																		
Ulna					1	1		1	1									1									
Radius					1	1		1	1																		
Metacarpal					1	1		1	1												1						
HINDLIMB																											
Pelvis					1	1		1	1		1							1			1				1	1	
Femur					1	1		1	1		1							1	1	1	1				1		
Tibia					1	1		1	1					1				1									
Astragalus														1							1						
Calcaneum														1													
Metatarsal					1	1		1	1					1	1												
FEET																											
Phalanx 1	1			2									2														
Phalanx 2	1			2									1														
Phalanx 3	1			1																							

29 * some of these are 42b
14** unfused vertebral bodies

Table 7: Minimum Number of Elements (MNE) and Minimum Number of Individuals (MNI) based on zoned bones (after Serjeantson 1996).

Element	ZONE								MNE	MNI= 9
	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		
skull	2	3	5	4	3	2	4	3	5	
atlas	3	4	3	4	3	4	3	4	4	
axis	4	4	4	4	4	4	4	4	4	
sacrum	4	3	3	3	3	3	3	3	4	
astragalus										
l	3	3	3	3	3	3	3	3	3	
r	2	2	2	2	2	2	2	2	2	
calcaneum										
l	2	3	1	1	1	1	1	1	3	
r	2	3	2	3	3	3	2	2	3	
femur										
l	3	3	7	6	7	7	4	4	7	
r	5	3	8	8	9	9	4	4	9	
unsided					1	1			1	
humerus										
l	3	3	6	6	6	6	3	3	6	
r	4	4	7	7	7	7	4	4	7	
mandible										
l	5	5	4	6	6	5	4	5	6	
r	6	5	5	4	4	5	5	5	5	
metacarpal										
l	3	3	5	5	5	5	3	2	5	
r	4	4	6	6	6	6	4	4	6	
unsided	1		1	1	1	1			1	
metatarsal										
l	4	4	6	5	5	5	2	2	6	
r	2	2	4	4	4	4	2	2	4	
unsided					1	1		1	1	
pelvis										
l	7	7	6	6	3	2	7	4	7	
r	9	8	8	8	3	1	9	4	9	
unsided						1	1		1	
radius										
l	2	2	5	5	4	4	2	2	5	
r	4	4	6	6	6	6	4	4	6	
unsided	1	1							1	
scapula										
l	4	5	6	6	6	6	4	5	6	
r	4	5	7	7	5	6	5	5	7	
tibia										
l	3	3	7	7	6	6	1	2	7	
r	3	3	6	6	6	6	3	3	6	
unsided			1	1			1	1	1	
ulna										
l	2	5	5	5	5	2	2	2	5	
r	4	5	5	5	4	3	2	2	5	

Table 8: Withers height from long bone measurements based on the multiplication factors of Maltosci (1970).

Context (ABG)	Element	GL (mm)	Multiplication factor Maltosci (1970)	Withers (m)	Average per ABG
23	femur	396	3.22	1.28	1.28m
23	radius	292	4.4	1.28	
23	metacarpal	211	6.05	1.28	
26	metacarpal	204	6.05	1.23	1.21m
26	radius	275	4.4	1.21	
26	humerus	298	4.14	1.23	
26	metatarsal	232	5.28	1.22	
26	tibia	344	3.56	1.22	
26	femur	368	3.22	1.18	
26	metatarsal	235	5.28	1.24	
54	tibia	360	3.56	1.28	1.27m
54	humerus	306	4.14	1.27	
54	radius	296	4.4	1.30	
54	metacarpal	208	6.05	1.26	
54	femur	388	3.22	1.25	
30	humerus	310	4.14	1.28	1.30m
30	radius	299	4.4	1.32	
30	metacarpal	216	6.05	1.31	
60	humerus	308	4.14	1.28	1.30m
60	radius	299	4.4	1.32	
60	metacarpal	214	6.05	1.29	

Table 9: Measurements on astragalus as defined by Payne and Bull (1988) and atlas, axis and pelvis as defined by von den Driesch (1976).

Context	Element	GL	Bd	GLI	GLm	LA	H	BFcr	LCDe
26	astragalus		40.3	65.5	59.7				
54	astragalus		42.9	64.7					
23	atlas						89.7	113	
26	atlas	97					78	93.4	
26	atlas	94					81.7	102.2	
23	axis							95.1	
26	axis							88.9	112.5
23	pelvis					80.4			
54	pelvis					74.1	6.7		
60	pelvis					79.8			

Table 10: Skull measurements as defined in Von den Driesch (1976).

Context	Element	(26) Greatest breadth of occipital condyle	(28) greatest breadth of the foramen magnum	(33) Greatest breadth across the orbits	(34) Least breadth between the orbits
23	skull	97.4	37.7		
26	skull	89.2	33.4	209	167
54	skull	96.1	36.6		

Table 11: Long bone measurements as defined by von den Driesch (1976).

Context	Element	GL	Bp	Bd	SD	GLP	SLC	Bt	HTC	DC	BFd
26	calcaneum	134									
23	femur	396		91.0	37.9					50.9	
26	femur	368	115	89	35.8					44.8	
54	femur	388	113	94	37.8					46.5	
30	femur			102						52.5	
23	humerus							74.7	35.4		
26	humerus	298						71.6	31.1		
54	humerus	306						75.9	32.3		
30	humerus	310		84	36.7			76.2	34.3		
60	humerus	308			36.7			77.4	34.2		
23	radius	292		79.2							
26	radius	275	76.5								
54	radius	296	82.1								70.7
30	radius	299	81.8								75.4
60	radius	299	84.5								68.4
23	scapula					71	53.1				
26	scapula					72.7	51.6				
54	scapula					70.2	53.1				
30	scapula					81.1	56.1				
60	scapula					81.9	58.8				
26	tibia	344	92.2	60.6	41.8						
54	tibia	360	93.5	60.9	40						
30	tibia		106								

Table 12: Metapodial measurements after Davis (1992).

Context	Element	GL	Bp	Bd	SD	BFd	1	2	3	4	5	6	a	b
23	metacarpal	211	60.2	63.1	35.9	62.8	26	33.2	29.4	22.5	31.7	30.6	29.9	27.9
26	metacarpal	204	57.7	58	34.1	57.2	24.7	31.2	28.2	21.6	29.7	21.2	27.7	26.3
26	metatarsal	232	48.5	52.1	29.6	52.4	22.6	30.4	27.5	21.9	29.8	27.8	23.2	24.3
54	metatarsal	235	50.1	54.7	28.6	55	24.1	32.8	29.4	22.4	31.8	29.4	25.9	26
54	metacarpal	208				60.3	26.1	32.7	29	23	31.3	29.8	29	28.1
30	metacarpal	216	61.8	61.8	34.5	62.1	25.9	33.6	29.8	23.7	32.8	30.5	28.9	28.4
60	metacarpal	214	61.6		34.6			32.5	29.9	24.1	32.4	29.6	28.6	

Table 13: Tooth measurements.

Context (ABG)	Lower molar	Length	Breadth
26	lm1	22.2	16.9
26	lm2	24.8	17.6
26	lm3	36.9	17.6
54	lm1	20.8	14.5
54	lm2	25.7	15.6
54	lm3	39.1	15.6
60	lm1	20.9	15.3
60	lm2	23.3	16.8
60	lm3	37.5	16.7

The Environmental Sample

Adam Santer

Introduction

A single bulk soil sample was taken for the analysis of charred plant remains. The sample was taken from the fill (44) of 13th-15th Century AD ditch [37]. The results of the analysis are presented here, together with a discussion of what potential there is for further work at the site.

Methodology

The sample consisted of a dark brownish grey fine sand was processed in a York tank using a 0.5mm mesh with flotation into a 0.3mm sieve. The flotation fractions (flots) were sorted for plant remains and other artefacts under an x10-40 stereo microscope. The residues were air-dried and the fractions over 4mm were sorted in their entirety whilst the fraction under 4mm was only scanned for remains. Plant remains were identified by comparison to modern reference material available at ULAS and their names follow Stace (1991). Each whole grain or those representing over 60% of the specimen were counted as one item.

Results

The sample (table 14) contained a low density of charred plant remains (fourteen items at 0.58 items per litre). This consisted of five barley grains (*Hordeum vulgare* L.), seven indeterminate cereal grains (which were too poorly preserved to be identified to genus) and two vetch seeds (*Vicia* sp.)

Table 14: The charred plant remains found in the sample

Sample	1	
Context	44	
Cut	37	
Feature	Ditch	
Date	13th-15th C. Ad	
Cereal		
<i>Hordeum vulgare</i> L.	5	Barley
Indeterminate cereal	7	Indeterminate cereal
Seeds		
<i>Vicia</i> sp.	2	Vetch
Total	14	
Soil volume	24	
Items per litre	0.58	

Conclusion and statement of potential

The specimens that were present likely represent residual scatter from food waste spillage or cereal preparation waste which had become burnt on a hearth. The ashes from the hearth would have formed a general scatter on the site and collected in open features. Due to the small sample size and lack of plant remains found in the samples it was not possible to learn anything about diet, crop husbandry strategies or environment at the site.

Conclusion

Higham on the Hill has its origins in the Anglo-Saxon period containing the village of Higham plus the two deserted hamlets of Lindley and Rowden. The name Higham is Anglo-Saxon in origin and refers to 'the high farm or enclosure' (Mills 2003). The settlement itself is situated on the highest point in the area with extensive views across the landscape to the north. The village of Higham does not appear in the Domesday survey of 1086, though the lost village of Lindley is mentioned. St Peter's Church, which is situated directly to the east of the proposed area for development was built between 1130 and 1180 and the Norman (Romanesque) tower remains. Other parts of the present church were added in the 18th and 19th centuries. The village is not mentioned in the Domesday survey, although it is thought to be included as part of one of the surrounding lordships.

Archaeological interventions close to the site have located and revealed medieval ditches and earthworks dating from approximately 1200AD. Some of these features are located directly adjacent to the site to the west and were found during excavation as recent as 2020 (Finn 2020). A boundary feature to the north of the site was previously recorded as an earthwork which apparently marked the western extent of a series of medieval crofts and tofts on the west side of the lane leading from Main Street to the Church. These earthworks which were surveyed in 1989 are no longer visible and are now occupied by a ménage and stables built and owned by Mr & Mrs. Baggot.

The initial trial trenching revealed a double medieval ditch and also a pit and large mammal burials. On inspection, the county archaeologist made the decision to extend the excavation to cover the full footprint of the proposed development to ensure that all remaining archaeology was recorded in full.

The ditch at the northern end was formed of two distinct cuts and probably formed the original boundary marker for the plot, and the earliest phase within the site. The sampled evidence suggests that the ditch was modified and re-excavated at times probably due to the sandy nature of the natural ground which would have slumped over time, and filled with silt and general debris. An environmental sample was taken showing a scatter of charred plant remains from food waste or cereal preparation waste which had become burnt on a hearth. The ashes from the hearth would have formed a general scatter on the site and collected in open features such as the ditch suggesting activity very close to the ditch. Two sherds of 13th Century pottery was found within the ditch giving an accurate date proving it to be medieval or earlier in its construction. This would be the first phase of archaeology within the site.

More animal burials were located after extending the stripped area. All bones recovered belonged to cattle, most were part of articulated groups and two distinct and diverse age groups were represented. The combination suggests that these are farm animals and specifically from a dairy herd which would be dominated by adult females along with a bull and only enough immature animals needed to maintain the herd. The calves may be therefore be natural mortalities or unwanted calves, possibly males. The dating evidence found within the grave pits suggested that most of the animal burials were Medieval in date. There was also two modern animal burials, one of which was not excavated. Interestingly, post excavation analysis of the bone showed some evidence of butchery marks possibly from horn removal, and some other saw marks which are generally associated with craft rather than food butchery. The animal burials respected the location of the ditch suggesting that they were slightly later date to the ditch which was probably still in use at the time therefore constituting a second phase to the site.

Several other features were located during the excavation including pits and post holes which varied in date and included late 17thC pottery and forming a third phase to the site.

The modern pits / post holes and animal burials which were located just below the topsoil constituted a fourth phase to the site.

The small-scale excavations within the village core of Higham on the Hill have given a tantalising glimpses of the development of the medieval settlement of the village and this present work, although very small in scale, has served to illuminate this further. The remains suggest activity over several centuries. The evidence contributes to a growing corpus of data relating to medieval village core development in the East Midlands.

Acknowledgements

ULAS would like to thank the clients Mr & Mrs Baggot for their support during the work and for providing the machine. The excavation was carried out by Claire LaCombe, Joseph Peters, Georgia Day and Chris Naisbit and the project was managed by John Thomas. Pottery analysis was undertaken by Paul Blinkhorn, analysis of the animal bone by Jennifer Browning and the charred plant remains were analysed by Adam Santer.

Archive and Publication

Since 2004 ULAS has reported the results of all archaeological work through the *Online Access to the Index of Archaeological Investigations* (OASIS) database held by the Archaeological Data Service at the University of York.

The archive for the project will be deposited with Leicestershire Museums with accession number X.A14.2021. The archive consists of the following:

- 1 Unbound copy of this report (2021-077)
- 2 Context record index sheets
- 49 Context sheets
- 2 Permatrace sheets of primary drawings
- 1 Drawing record index sheet
- 1 Photographic record index sheet
- 1 CD of digital photographs

References

Bartosiewicz, L and Gál, E 2013, *Shuffling Nags, Lame Ducks: The Archaeology of Animal Disease* Oxford: Oxbow Books

Campbell B. M. S. 1992. 'Commercial dairy production on medieval English demesnes: the case of Norfolk', in Grant A. (éd.), *Les animaux et leurs produits dans le commerce et les échanges. Actes du 3^{ème} Colloque international HASRI, Oxford, 8-11 novembre 1990.* *Anthropozoologica* 16: 107-118.

CIfA (Chartered Institute for Archaeologists) 2014a. Revised 2019 *Code of Conduct*.

CIfA (Chartered Institute for Archaeologists) 2014a updated 2020. *Standard and Guidance for Field Evaluation*.

CIfA (Chartered Institute for Archaeologists) 2014c. *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives.*

Cooper, N., (Ed.) 2006. *The Archaeology of the East Midlands: An Archaeological Resource Assessment and Research Agenda.* Leicester Archaeological Monographs No. 13. University of Leicester Archaeological Services: Leicester.

Clarke, S., 2012. *An archaeological desk-based assessment for land off Hilary Bevins Close, Higham on the Hill, Blaby, Leicestershire (SP 379 956).* ULAS Report 2012-081

Cox, M. 2002. *The Story of Higham-on-the-Hill, the Centre of England* Hinckley and District Museum.

Davis, S.J.M., 1992 *A rapid method for recording information about mammal bones from archaeological sites* Ancient Monuments Laboratory Report 19/92

Dobney, K and Reilly, K. 1988. 'A method for recording archaeological animal bones: the use of diagnostic zones' *Circaea* 5, 79-96

Finn, N. 2020. *Archaeological Investigation on land to the north of Fox House, 81 Main Street, Higham on the Hill, Leicestershire CV13 6AH.* Report No. R-0102

Gidney, L. 1991a. *Leicester; the Shires 1988 Excavations: The animal bones from the post-medieval deposits at St. Peters Lane.* AML Report 131/1991

Gidney, L., 1991b. *Leicester, the Shires, 1988 excavations: the animal bones from the medieval deposits at Little Lane* AML Report 57/91

Gidney, L., 1991c. *Leicester, the Shires, 1988 excavations: the animal bones from the medieval deposits at St. Peter's Lane* AML Report 116/91

Gidney, L. 1992 *Leicester; the Shires 1988 Excavations. The animal bones from the post-medieval deposits at Little Lane.* AML Report 24/1992

Grant, A., 1987 'Some observations on butchery in England from the Iron Age to the medieval period.' *Anthropozoologica. Premier Numero Special.*, 53-58

Grant, A., 1982 'The use of toothwear as a guide to the age of domestic ungulates', in Wilson, B., Grigson, C., and Payne, S., (eds) *Ageing and Sexing Animal Bones from Archaeological Sites* Oxford: BAR British Series 109, 91-108

Grigson, C. 1982 'Sex and age determination of bones and teeth of domestic cattle: a review of the literature' in Wilson, B., Grigson, C., and Payne, S., (eds) *Ageing and Sexing Animal Bones from Archaeological Sites* Oxford: BAR British Series 109, 7-73

Hillson, S., 2005 *Teeth* 2nd Edition Cambridge Manuals in Archaeology Cambridge: Cambridge University Press

Hunt, L. 2021 *Written Scheme of Investigation (WSI) for Archaeological Field Evaluation: Land to the rear of Church Farm, 83 Main Street, Higham on the Hill, Leicestershire CV13 6AH* ULAS

Jones G. and Sadler, P., 2012 'A review of published sources for age at death in cattle', *Environmental Archaeology*, 17:1, 1-10, DOI: 10.1179/1461410312Z.0000000001

Knight, D., Vyner, B., and Allen, C., 2012. *East Midlands Heritage: An updated research agenda and strategy for the Historic Environment of the East Midlands*. University of Nottingham and York Archaeological Trust.

Matolcsi, J., 1970 Historische Erforschung der Körpergrösse des Rindes auf Grund von ungarischem Knochenmaterial. *Z. Tierzuchtg. Zuchtgsbiol.* 87, 89-137

Mills, A. D., 2003, 'Higham' in *A Dictionary of British Place-Names*. Oxford University Press. Oxford Reference Online. Oxford University Press.

O'Connor, T. P., 2003. *The Analysis of Urban Animal Bone Assemblages* The Archaeology of York: Principles and Methods Vol 19/2 York Archaeological Trust London: Council for British Archaeology

Payne, S., and Bull, G., 1988 'Components of variation in measurements of pig bones and teeth, and the use of measurements to distinguish wild from domestic pig remains' *Archaeozoologia* Vol II/1,2, 27-66

Rathbone, S., Blauvelt, D. and McDonald, T. 2016 'Excavation of a farm animal burial ground at Dooagh Beach, Achill Island, Co. Mayo' *The Journal of Irish Archaeology*, Vol. 25 (2016), 123-140

Sawday, D., 1994. The post-Roman pottery in P Clay and R Pollard *Iron Age and Roman Occupation in the West Bridge Area, Leicester. Excavations 1962-71*. Leics. Museums

Serjeantson, D. 1996. 'The animal bones' in S. Needham and T. Spence 1996 *Refuse and Disposal at Area 16 East Runnymede* Vol. II Runnymede Bridge Research Excavations. London: British Museum Press, 194-223

Silver, I. A. 1969. 'The ageing of domestic animals', in D. Brothwell, and E.S. Higgs 1969 *Science in Archaeology*. London: Thames and Hudson, 283-302

Stace, C., 1991. *New Flora of the British Isles*. Cambridge: Cambridge University Press.

von den Driesch, A 1976 *A guide to the measurement of animal bones from archaeological sites*. Cambridge, Mass., Peabody Museum of Archaeology and Ethnology, Bulletin no. 1.

Claire LaCombe 11.05.2021



UNIVERSITY OF
LEICESTER

Archaeological Services

University of Leicester
University Road
Leicester LE1 7RH
UK

t: +44 (0)116 252 2848

f: +44 (0)116 252 2614

e: ulas@le.ac.uk

