

# Northamptonshire Archaeology

Archaeological evaluation of land at  
Chelveston Renewable Energy Park,  
Chelveston Airfield, Bedfordshire,  
September 2013



## Northamptonshire Archaeology

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Northamptonshire  
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Report 13/221

November 2013



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**OASIS REPORT FORM**

<b>PROJECT DETAILS</b>		<b>OASIS 174363</b>	
Project title	Archaeological evaluation of land at Chelveston Airfield		
Short description	In September 2013, an archaeological trial trench evaluation was carried out by Northamptonshire Archaeology, on behalf of CgMs Consulting acting for Chelveston Renewable Energy Limited. The works identified a series of ditches and a pit spanning the middle to late Iron Age to early Roman periods as well as traces of medieval ridge and furrow. Evidence for use of the land as an American airbase was also identified.		
Project type	Trial trench evaluation		
Previous work	Watching brief		
Current land use	Arable		
Future work	Unknown		
Monument type & period	Ditch, pit. Middle to late Iron Age and early Roman		
Significant finds	Pottery		
<b>PROJECT LOCATION</b>			
County	Bedfordshire		
Site address	Chelveston Airfield		
Easting Northing	500629, 268051		
Area (sq m/ha)	c. 10 hectares		
Height aOD	90.00mAOD		
<b>PROJECT CREATORS</b>			
Organisation	Northamptonshire Archaeology (NA)		
Project brief originator	CgMs Consulting		
Project Design originator	CgMs Consulting		
Director/Supervisor	Jason Clarke (NA)		
Project Manager	Mike Dawson (CgMs) and Ian Meadows (NA)		
Sponsor or funding body	Chelveston Renewable Energy Limited		
<b>PROJECT DATE</b>			
Start date	10/09//2013		
End date	24/09/2013		
<b>ARCHIVES</b>	<b>Location (Accession no.)</b>	<b>Contents</b>	
Physical	BEDFM.2013.49	Flint, pottery, animal bone	
Paper		Site records (1 archive box)	
Digital		Client report PDF. Survey Data, Photographs	
<b>BIBLIOGRAPHY</b>			
Title	Archaeological evaluation of land at Chelveston Renewable Energy Park, Chelveston Airfield, Bedfordshire		
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Author(s)	Jason Clarke & Mo Muldowney		
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**ARCHAEOLOGICAL EVALUATION OF LAND AT  
CHELVESTON RENEWABLE ENERGY PARK, CHELVESTON AIRFIELD  
BEDFORDSHIRE  
SEPTEMBER 2013**

**Abstract**

*In September 2013, an archaeological trial trench evaluation was carried out by Northamptonshire Archaeology, on behalf of CgMs Consulting acting for Chelveston Renewable Energy Ltd. The works identified a series of ditches and a pit spanning the middle to late Iron Age to early Roman periods as well as traces of medieval ridge and furrow. Evidence for use of the land as an American airbase was also identified.*

**1 INTRODUCTION**

In September 2013, an archaeological trial trench evaluation was carried out by Northamptonshire Archaeology (NA) at Chelveston Renewable Energy Park, Chelveston Airfield, Bedfordshire. The work was commissioned by CgMs Consulting, on behalf of Chelveston Renewable Energy, and was undertaken to inform planning consent for solar photovoltaic panels.

The scope of works was outlined and detailed in the Written Scheme of Investigation prepared by Northamptonshire Archaeology (NA 2013). The objectives of the evaluation were to determine the presence of any archaeological features or deposits within the application area and to date and characterise their extent, depth of burial and state of preservation.

**2 BACKGROUND**

**2.1 Location and geology**

**Location**

The development site comprises c 10ha of land in the former military airfield, to the south east of Chelveston, Bedfordshire and centred on NGR TL 00629 68051 (Fig 1). The village of Chelveston lies approximately 15km east of Wellingborough in the County of Northamptonshire.

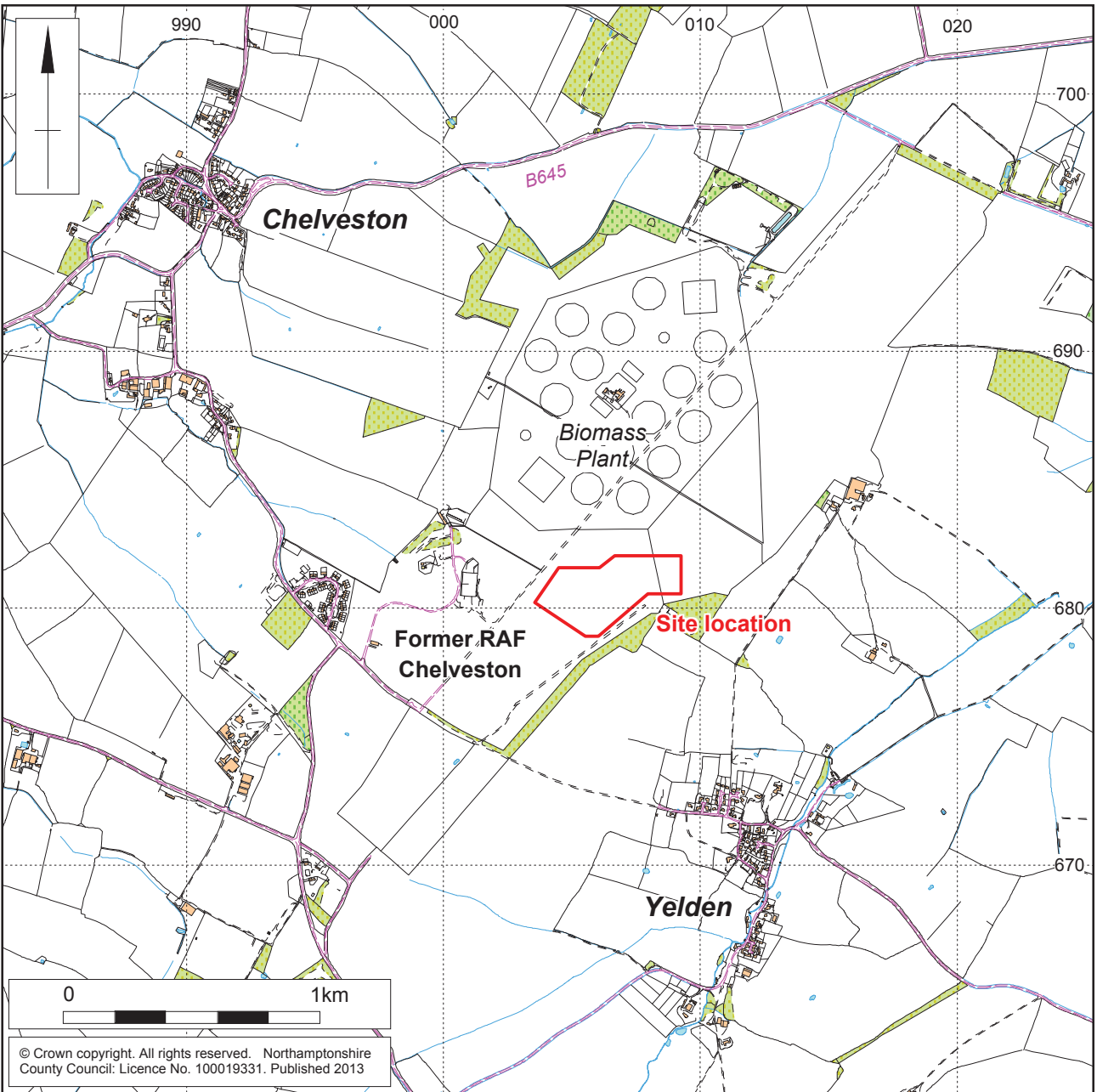
**Geology**

The underlying geology has been mapped by the British Geological Survey of Great Britain as comprising Oxford Clay with Kellaway Beds of Jurassic date (BGS Geotitles <http://www.bgs.ac.uk/geotitles>).

The site lies on the watershed between the catchment of the River Nene which flows to the northwest, and the River Great Ouse at about 90m aOD.

**2.2 Historical and archaeological background**

Chelveston Airfield was built in 1940-1 and opened on 15 August 1941. The airfield comprised a standard RAF 'A' pattern airfield and its fully developed form is recorded in contemporary plans and photographs (Chelveston Record Site Plan Site No1 [Airfield Site] October 1941). In mid-1942 the airfield was established as the base for the USAAF 301<sup>st</sup> Bomb Group, replaced in December by the 305th Bomb Group.



Scale 1:25,000

Site location Fig 1



During the winter months of 1942/43 the airfield's runways and dispersal areas were expanded to accommodate the B17s of the 305th Bomb Group. At the end of the war the airfield was returned to the RAF and from October 1945 to May 1947 it remained a sub-site of 25 Maintenance Unit.

The Second World War Airfield officially closed in 1947, but in 1951 it was re-commissioned to accommodate USAF B-47 bombers capable of carrying nuclear weapons. This required the construction of a rectangular concrete apron, headquarters building and crash tender shed and a new control centre in addition to a new runway, dispersal and taxiways. On 1<sup>st</sup> December the base was handed over to the USAF Third Air Force. Between 1951 and 1954 the airfield was almost entirely re-built. The former runways and taxi-paths partially removed to accommodate the new designs (Smith 2006, 58, 60, 65). The airfield remained under the jurisdiction of the USAF until 1<sup>st</sup> August 1962. In 1977 the runways and most of the perimeter tracks were removed to be used as hardcore in the development of Milton Keynes. Inspection of the area exposed beneath the runways revealed features containing early Iron Age pottery and part of a quern (NAS 1978). Later in the year the airfield site was re-commissioned (B/TP/75/1492/A) as a Radio Transmitter site under the 81st Signals Unit. Eighteen aerial masts were erected on the site of the former airfield and remained in use until December 2003.

Previous archaeological work comprises desk-based assessment (Dawson 2013), watching briefs (Dawson and Leigh 2013) and the recording of Nissen huts (Upson-Smith 2012).

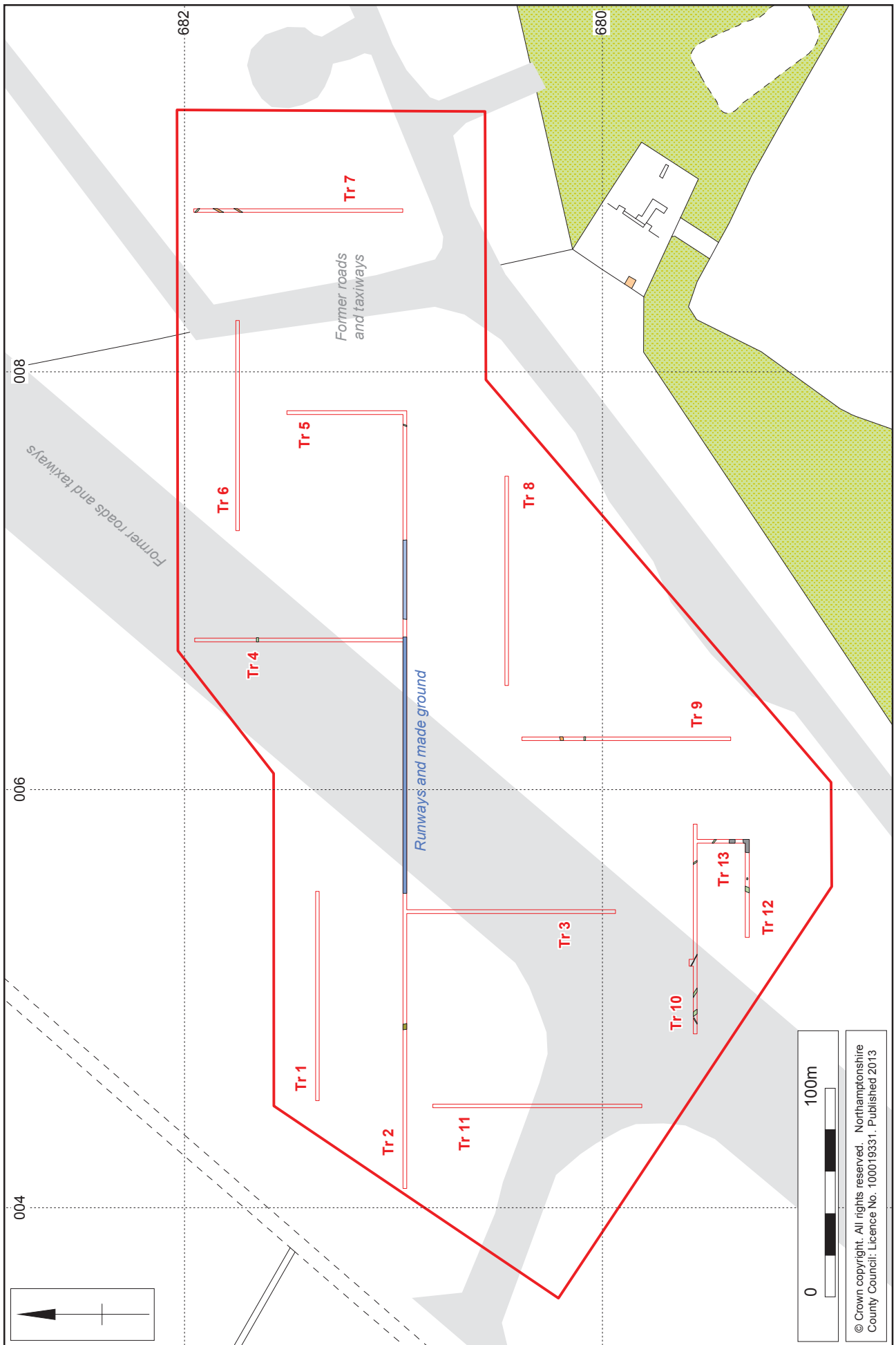
### 3 METHODOLOGY

Eleven trial trenches were excavated in accordance with a trench plan prepared by CgMs Consulting and approved by Vanessa Clarke (Senior Archaeological Officer, Bedford Borough Council) (Fig 2).

Nine of the trenches were 100m long, one 50m long and one 400m long and 1.8m wide, totalling 1350m, amounting to approximately 3%. Trenches were positioned using a Leica system 1200 GPS.

As part of the contingency two additional trenches were excavated, one 25m long and one 45m long (Fig 2).

A 360° tracked mechanical excavator fitted with a 2m-wide ditching bucket was used to remove overburden to archaeological levels or the natural substrate, whichever was encountered first. The trenches were cleaned sufficiently to enable the identification and definition of archaeological features. A hand-drawn plan of all archaeological features was made at scale 1:50 or 1:100 and was related to the Ordnance Survey National Grid. Archaeological deposits were examined by hand excavation to determine their nature. Recording followed standard NA procedures as described in the *Fieldwork Manual* (NA 2011). Deposits were described on *pro-forma* sheets to include measured and descriptive details of the context, its relationships, interpretation and a checklist of associated finds. Context sheets were cross-referenced to scale plans, section drawings and photographs. Photography was with 35mm black and white film, supplemented with digital images. Sections were drawn at scale 1:10 or 1:20, as appropriate and related to Ordnance Survey datum. Spoil heaps and features were scanned with a metal detector to maximise the recovery of metal objects.



Scale 1:2,500 (A4)

The excavated trenches Fig 2

All works were conducted in accordance with the Institute for Archaeologists' *Code of Conduct* (IfA 2010) and *Standard and Guidance for Archaeological Field Evaluation* (IfA 2008).

## **4 THE EXCAVATED EVIDENCE**

### **4.1 General stratigraphy**

The underlying geology of clay was encountered between 0.6-2.2m below the modern ground surface. This occurred as brownish-yellow sandy clay with occasional angular to sub-angular pebbles and chalk. Buried soil from the former plough horizon was present in trenches 1, 2, 5, 6, 8, 9, 10, 11 and 12. This occurred as mid brown sandy clay 0.20-0.40m thick. Made ground resulting from the construction of the airfield was present in trenches 1, 2, 5, 6, 8, 9, 10, 11 and 12. This comprised re-deposited clay, brick, tile and metal, 0.50-0.80m thick. The topsoil was mid greyish-brown sandy clay. All trenches were truncated by ceramic land drains and modern service trenches associated with airbase activities.

Archaeological features cut into the natural geology were found in six of the thirteen trenches (Trenches 2, 4, 7, 10, 12 and 13). Remnant furrows from ridge and furrow cultivation were encountered in Trenches 5 and 7.

### **4.2 The trial trenches (Figs 3 - 5)**

The trench locations are shown in Figure 2 (above) and an inventory of contexts is provided in Appendix 1.

#### **Iron Age**

##### ***Trench 4***

Trench 4 was 100m long and aligned north to south (Fig 3). It was located on the former runway of the American airbase, the construction of which had caused severe truncation to the deposits identified within. One ditch was found and produced Iron Age pottery and animal bone.

##### ***Ditch [405]***

In the middle of the trench was ditch [405], aligned east to west, 1.10m wide and 0.30m deep, with a V-shaped profile (Fig 4, section 1). The fill of dark grey-black clay (404) contained late to middle Iron Age pottery and animal bone. The ditch had been truncated by the construction of the runway leaving only the base.

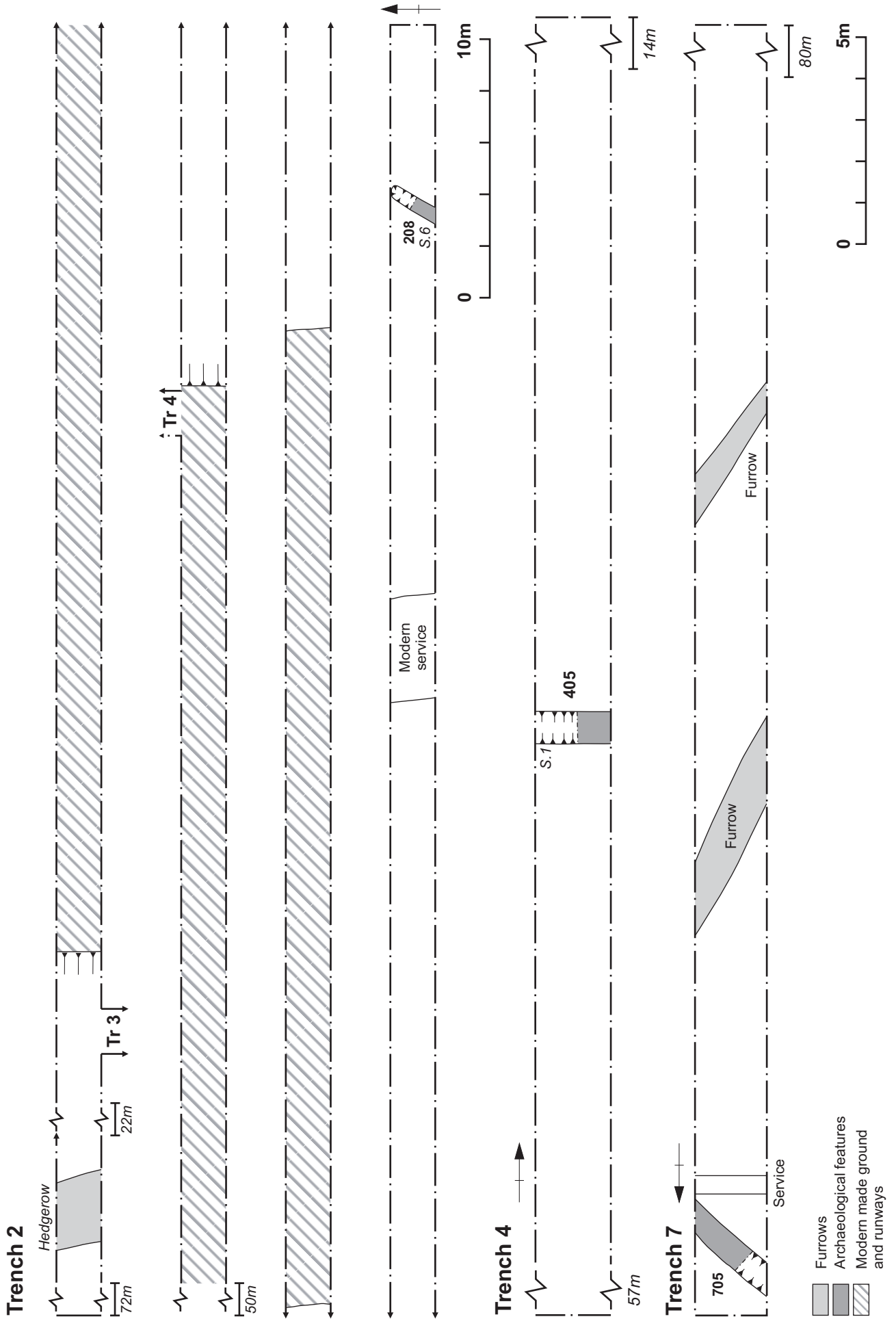
#### **Roman**

##### ***Trench 2***

Trench 2 was 400m long and aligned east to west (Fig 3). The trench transected the made ground to the east and west and the former American runway through the middle. One ditch was present at the east of the trench and produced Roman pottery.

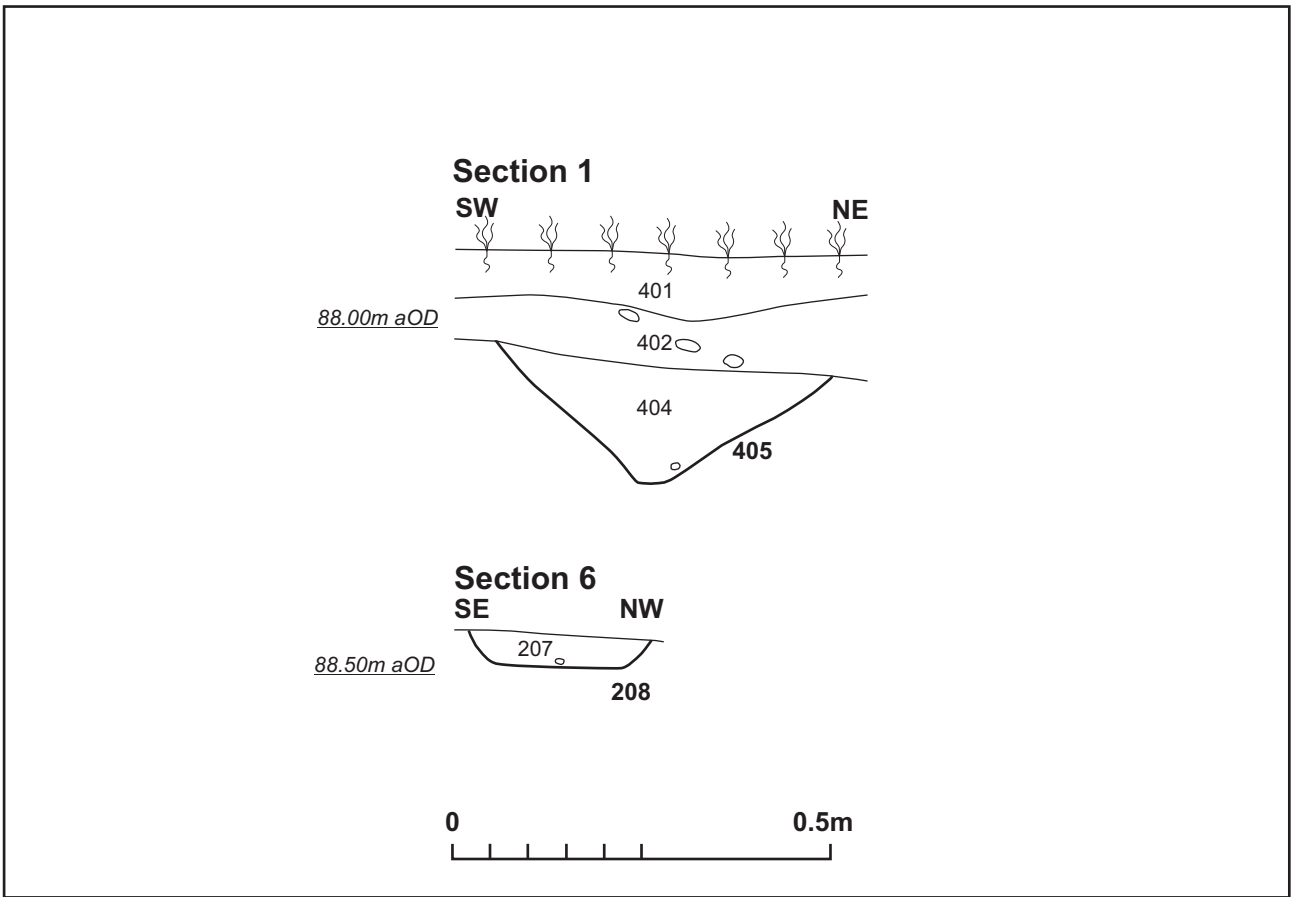
##### ***Gully [208]***

At the east end of the trench was a gully [208], aligned north-east to south-west, 0.50m wide and 0.10m deep with a shallow U-shaped profile (Fig 3, section 6). The fill of mid grey-brown sandy clay (207) contained Roman pottery. The gully terminated to the north-east.



Scales 1:125 & 1:200

Plans of trenches 2, 4 and 7 Fig 3



Scale 1:10

Sections of features in trenches 2 and 4 Fig 4

**Trench 7**

Trench 7 was 100m long, aligned north to south (Fig 3). At the north end of the trench was a ditch that produced Roman pottery. Also within the trench were furrows, ceramic land drains and modern services.

*Ditch [705]*

At the north end of the trench was ditch [705], 0.75m wide and 0.28m deep with a steep U-shaped profile. The fill of mid grey-brown sandy clay (704) contained Roman pottery.

**Trench 10**

Trench 10 was 100m long, aligned east to west (Fig 5). At the west of the trench were four ditches that produced Roman pottery and animal bone. Another ditch at the east end of the trench produced Roman pottery and animal bone. The features at the west end had been truncated during the construction of the runway for the American airbase.

*Ditch [1005]*

At the west end of the trench was ditch [1005], 0.60m wide and 0.08m deep with a shallow U-shaped profile. The fill of dark grey-brown sandy clay (1004) contained Roman pottery and animal bone.

*Ditch [1007]*

Located to the east of ditch [1009] was ditch [1007], 0.44m wide and 0.11m deep with a shallow U-shaped profile. The fill of mid grey brown sandy clay (1006) contained Roman pottery and animal bone.

*Ditch [1009]*

To the west of ditch [1007] was a ditch [1009], 1m wide and 0.23m deep with a shallow U-shaped profile. The fill of dark grey-brown sandy clay (1008) contained Roman pottery and animal bone.

*Ditch [1012]*

Located between ditches [1009] and [1005] was ditch [1012], 2.20 m wide and 0.70m deep with a deep V-shaped profile. The primary fill of mid orange-grey clay (1013) contained no finds and was overlain by mid grey-brown sandy clay (1011) which contained Roman pottery and animal bone. An environmental soil sample taken from the latter deposit contained wind-derived burnt cereal processing waste. The upper fill of dark black-grey sandy clay (1010) contained Roman pottery and animal bone.

*Ditch [1017]*

At the east end of the trench was ditch [1017], 0.75m wide and 0.30m deep with a U-shaped profile. The primary fill of mid brown-grey sandy clay (1016) contained no finds; it was overlain by dark brown-black silty clay (1015), which contained Roman pottery.

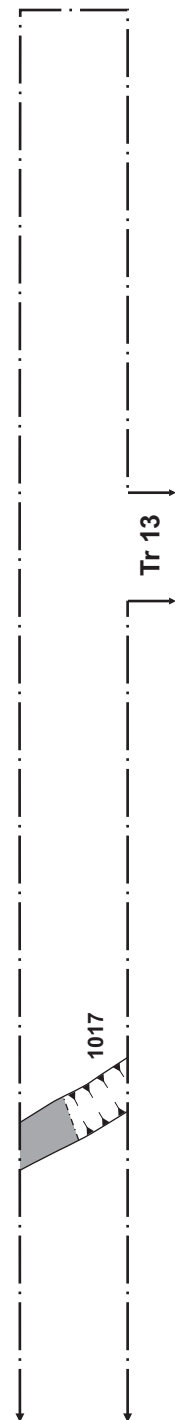
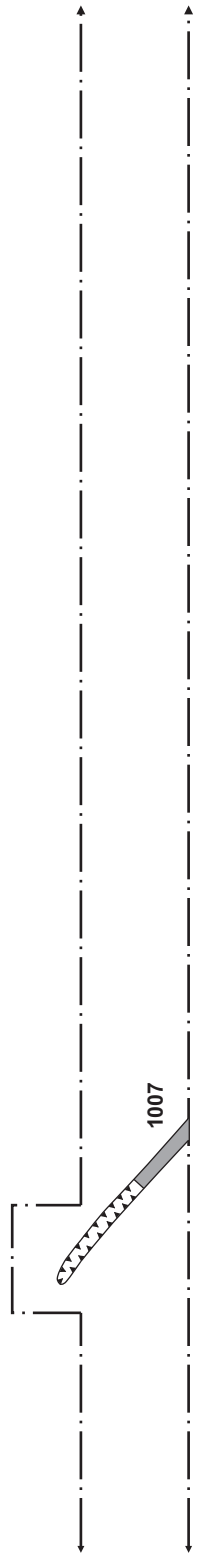
**Trench 12**

Trench 12 was 45m long, aligned east to west (Fig 5), in the middle of the trench was a ditch and pit which produced Roman pottery and animal bone.

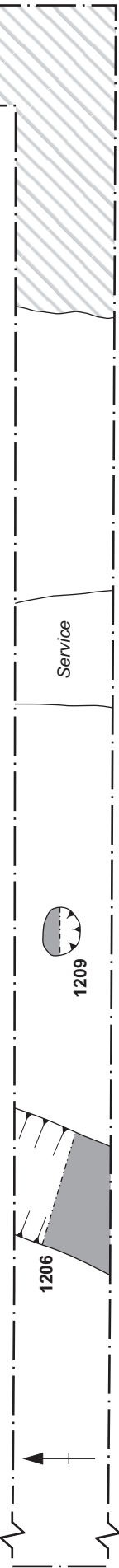
*Ditch [1206]*

In the middle of the trench was a ditch [1206], 2.00m wide and 0.47m deep with a broad U-shaped profile. The primary fill of light brown clay (1207) contained Roman pottery. It was overlain by dark black-brown silty clay (1205), which also contained Roman pottery as well as animal bone and iron nails.

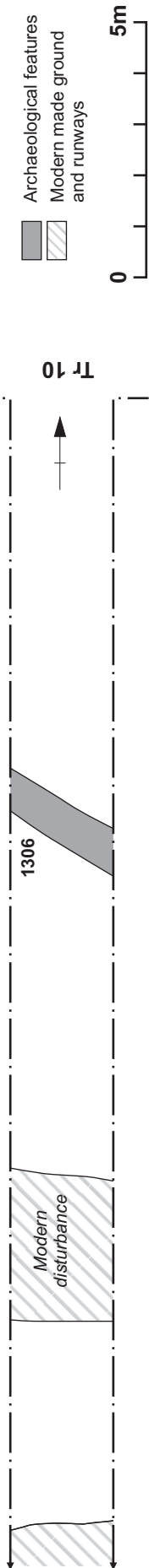
**Trench 10**



**Trench 12**



**Trench 13**



Archaeological features  
Modern made ground  
and runways



*Pit [1209]*

To the east of ditch [1206] was a sub-circular pit [1209], 0.73m in diameter and 0.12m deep, with a fill of light brown clay (1208) which contained Roman pottery.

**Trench 13**

Trench 13 was 25m long, aligned east to the west (Fig 5), in the middle of the trench was a ditch.

*Ditch [1306]*

Ditch [1306] lay on a similar alignment to, and is thought to be a south-eastward continuation of ditch [1017], which was excavated in Trench 10 (see above). The exposed fill was light brown grey sandy clay (1305). The ditch was unexcavated due to health and safety concerns. No finds were recovered.

**4.3 Later features**

The remains of medieval ridge and furrow ploughing aligned east to west and running downslope were present in all trenches although they did not appear to have impacted greatly upon the underlying Roman archaeology.

**5 THE FINDS AND ENVIRONMENTAL EVIDENCE****5.1 The Iron Age pottery** by Andy Chapman

The fill (404) of ditch [405] produced six large sherds of hand-built pottery, weighing 410g, with an average sherd weight of 68g.

There are three body sherds from large thick-walled jars, 10-12mm thick, with fabrics containing dense inclusions of crushed shell, with frequent pieces up to 5mm long. They have grey to grey-brown cores with dark brown to grey-brown inner surfaces but variable outer surface colours from bright orange-red, light brown to grey-brown. These variations may suggest that they are from different vessels, but surface colours can vary widely across a single large jar. There is a sherd from a flat base in the same fabric, but the body is slightly thinner at 8mm thick, while the base is 12mm thick. There is a rim sherd, also in the same fabric, with red to grey outer surface, 10mm thick, with a simple rounded and slightly everted rim above a rounded body with no defined neck. These five sherds are all from large thick-walled jars, possibly a single jar, typical of the later middle and late Iron Age, 2nd and 1st centuries BC.

There is a single body sherd in a finer fabric, containing sparse, finely-crushed shell, dark grey-black throughout, with smoothed surfaces, from a globular bowl typical of late Iron Age assemblages, 1st century BC.

The assemblage can be dated to the late middle to late Iron Age, 2nd-1st centuries BC.

**5.2 Roman pottery** by Ed McSloy

A total of 308 sherds of pottery weighing 4314g was recorded (6.11 EVEs). With the exception of a small and abraded post-medieval sherd from a Trench 10 furrow, the assemblage dates to the Roman period.

The pottery has been fully recorded; sorted by fabric type (Table 1) and within context (Table 2) and quantified according to sherd count, weight and rim EVEs (Estimated Vessel Equivalents). A fabric coding system developed for large Romano-British pottery assemblages from Northamptonshire (summarised in Perrin 2006) has been



used and a concordance provided with the Bedfordshire pottery type series (summarised in Parminter and Slowikowski 2004) and also the National Roman Fabric Reference Collection (Tomber and Dore 1998).

*Table 1: Pottery summary quantification by type with concordances*

Fabric	Description	BPTS*	NRFC**	No	Weight (g)	EVEs
A	Grog-tempered	F06	-	25	446	.27
AB	Grog with shell	F05	-	5	116	.44
AC	Grog with quartz	F03	-	3	158	-
D46	Fine grog/silty type wares	-	-	7	64	-
A1	Hard cream grogged	-	-	30	177	-
B	Shell	R13	-	61	940	.21
B4	Shell (Harrold)	R13	HAR SH	13	284	.83
C	Reduced	R06	-	1	6	-
C1	Lower Nene greyware	R06a	-	4	24	.07
C4	Standard Upper Nene grey	-	-	24	155	.17
C10	Coarse greyware	R06b	-	1	49	-
C11	Dark grey with pale core	-	-	11	234	.25
C15	Grey with reddish yellow core	-	-	6	94	.22
C16	Grey with grey/reddish yellow 'sandwich' core	-	-	2	23	-
C17	Grey with cream/pale grey 'sandwich' core	-	-	31	221	.25
C19	Dark grey/black coarse	R07	-	5	135	.10
C20	Grey throughout	-	-	11	178	.28
D	Oxidised	-	-	4	28	-
D1	Lower Nene colour-coated	R12b	-	44	794	1.24
D2	Lower Nene/Midlands self-coloured	R03c	-	8	106	.70
D21	Lower Nene self-coloured (creamware)	R12c	LNV WH	1	14	-
D24	Lower Nene colour-coated (orange)	R12b	LNV CC	2	22	1.0
D4	Oxford red slipped ware	R11d	OXF RS	2	10	-
D9	Gritty whitewares (Upper Nene?)	R03b	-	4	20	.08
D40	Central Gaulish samian (Lezoux)	R01a	LEZ SA	2	14	-
<i>Sub tot.</i>				307	4312	6.11
PMGRE	Glazed red earthenware (post-medieval)	-	-	1	2	-

\* Bedfordshire pottery type series (summarised in Parminter and Slowikowski 2004)

\*\* National Roman Fabric Reference Collection (Tomber and Dore 1998)

The condition of the group is good, with little abrasion apparent among material from stratified deposits. Average sherd weight is high for a Roman group (14g) and there are several vessels represented as joining sherds which can be reconstructed to below shoulder level.

#### *Assemblage composition/dating*

The overall composition and context-level quantification and dating are set out in tables 1–2. Grogged pottery types (fabric A, AB, AC), 'silty type' wares (Fabric D46) and a proportion of the shell-tempered wares are representative of pottery which spans the Late Iron Age/early Roman period or the early to middle 1st century AD. Such types are present from deposits 207, 1004 and 1015, although some material is clearly residual. Identifiable vessel forms include large, necked storage jars (gully fill 207) and a girth beaker with hollow cordons (ditch fill 1004).

A number of context groups (207, 1006, 1008 & 1205) include reduced coarsewares of various types, which are representative of Upper Nene valley greywares. Such types are known to be produced at kilns to the east of modern Northampton (Johnston 1969) across the later 1st to 3rd centuries AD. Forms are mainly necked jars, with single examples of platter (gully fill 207) and plain-rimmed dish (ditch fill 1006).

Shell-tempered wares (fabrics B and B4) are present in most context groups and most or all can be considered local. Type B4 can be identified with the major kiln sites at Harrold, north Bedfordshire, where production is attested throughout the Roman period

(Brown 1994). Medium-mouthed jars with rilled surfaces and squared rims (unstratified from Trench 10) can be paralleled among the 3rd or 4th-century products of the Harrold kiln (*ibid* figs 29 and 34). Large, necked, storage jars with rolled-over rims (ditch fill 1207) are also recorded and are less certainly from this source (*ibid* fig 22).

Table 2: Pottery quantification by context (with context spot-date)

Context	Fabric	Sherds	Weight (g)	EVEs	Spot-date
207	A	2	107	.20	Late 1st-2nd century
	A1	3	21	-	
	A3	27	156	-	
	C15	3	13	-	
	C17	31	221	.25	
	C19	2	16	.10	
704	D2	8	106	.70	Mid 2nd-3rd century
Trench 10 U/S	B	9	186	.05	-
	B4	13	284	.83	
	C10	1	49	-	
	C11	5	26	-	
	C16	1	13	-	
	C20	2	6	.01	
	C21	1	9	-	
	C4	1	21	.07	
	D1	11	121	.10	
	D21	1	14	-	
	D24	1	20	1.0	
	D	2	23	-	
	PMGRE	1	2	-	
	1004	A	1	3	-
D46		3	46	-	
1006	A	3	90	-	Mid –late 2nd century
	AC	1	19	-	
	B	16	199	-	
	C11	3	165	.25	
	C16	1	10	0	
	C19	1	15	0	
	D1	7	13	.15	
	D9	4	20	.08	
1008	A	7	108	-	Late 1st-2nd century
	B	13	129	.09	
	C15	1	7	-	
	C4	23	134	.10	
	D46	1	1	-	
1015	A	12	138	.07	Mid to late 1st century 4th century intrusive?
	AB	5	116	.44	
	AC	2	139	-	
	B	9	98	-	
	D	2	5	-	
	D1	1	13	.15	
	D4	2	10	-	
	D46	3	17	-	
1205	B	13	172	-	4th century
	C	1	6	-	
	C1	4	24	.07	
	C11	3	43	-	
	C15	2	74	.22	
	C20	9	172	.27	
	D1	25	647	.84	
	D24	1	2	-	
	D40	1	13	-	
1207	B	1	156	.07	2nd century +
	D40	1	1	-	
1208	C19	1	95	-	RB

British finewares present in the assemblage are all products of the Lower Nene valley and Oxfordshire industries. A Lower Nene valley colour-coated ware (fabric D1) bag-shaped/cornice-rimmed beaker (ditch fill 1006) is representative of the earliest production phase and probably dates to the second half of the 2nd century AD. Most or all of the remaining material dates to the later Roman period, probably to the 4th century AD. The majority occurs from ditch fill 1205 and consists of late 'coarseware' forms in Lower Nene valley colour-coated ware (jars, conical flanged bowls and plain-rimmed dish). Curved-wall/bead rim bowl forms (Howe *et al* 1980, fig 7, 80) also occur in this ware from deposit 1205 and among the unstratified material. A second jar in this type and two sherds of Oxford red slipped ware (fabric D4) were recorded from ditch fill 1017, although these appear to be intrusive within an early-Roman dated group.

A single mortarium sherd in Lower Nene valley white/creamware (fabric D21) was recorded as an unstratified (Trench 10) find. Flagons occur in creamware fabric D2, of uncertain Nene Valley or Midlands origin. A vessel in fabric D2 from ditch fill 704 is of unusual two-handle form with cup-like rim. It probably dates to the later 2nd or 3rd centuries.

Gaulish samian occurs as bodysherds (ditch fills 1205 and 1207) which are indeterminate of form and dateable only broadly to the 2nd century AD.

#### *Summary*

For a small group the Chelveston assemblage is diverse in terms of its date range and supports activity at the site which is probably domestic in nature and extends across the Roman period. The group is fairly representative of pottery supply patterns in the area, with a range of coarsewares originating from mainly local sources and finewares/specialist wares (mortaria) coming from mainly regional sources. The group is too small for conclusions to be drawn with regard to economic status or function.

The assemblage has been fully recorded and merits no further work. Should further excavation be undertaken at this site, the records of the pottery from the evaluation and excavation phases should be integrated, and the assemblage considered together.

### **5.3 Animal bone** by Philip Armitage (Appendix 2: Tables)

#### *Methodology*

Basic NISPs (number of identified specimens) data were collected for species/taxon and anatomical determinations, carried out using the author's modern comparative collections and with reference to standard published osteological/zooarchaeological works (including Schmid 1972 and Getty 1975). Wherever possible, sheep and goat bones and teeth were differentiated following Boessneck *et al* (1964) and Payne's (1985) criteria. Although no positive identifications of goat were made and all elements with diagnostic features proved to be sheep, it remained a possibility there may have been a few unrecognised goats among the broken elements. All ovicaprid material in this report is therefore referenced as sheep/goat, except where specific mention is made to positively identified sheep elements. Measurements (in mm) were taken on selected elements using a Draper dial calliper (graduated 0.02 mm); following the systems of von den Driesch (1976) and Levine (1982).

#### *Numbers of identified specimens present (NISP) and species represented – Table 3*

The assemblage from the combined Roman ditch deposits totalled 142 specimens of which 61 (43%) are identified to species and anatomy and 81 (57%) remain as unidentified fragments (Table 4). Five mammalian species are represented in the Roman material: horse *Equus caballus* (domestic); cattle *Bos* (domestic); sheep *Ovis* (domestic); pig *Sus* (domestic); dog *Canis* (domestic). *Bos* (domestic) is also

represented by an isolated scapula from the Iron Age ditch [405]. No bird, fish, amphibian or reptile species are present in the submitted samples.

*Table 3: Iron Age and Roman ditches: Number of identified specimens/elements (NISP) by taxonomy and context*

<b>Trench</b>	<b>4</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>12</b>	<b>Totals</b>	<b>%</b>
<b>Context</b>	<b>404 (a)</b>	<b>1004</b>	<b>1006</b>	<b>1008</b>	<b>1015</b>	<b>1205</b>		
<b>Feature</b>	<b>405</b>	<b>1005</b>	<b>1007</b>	<b>1009</b>	<b>1017</b>	<b>1206</b>		
<b>Date</b>	<b>IA</b>	<b>RB</b>	<b>RB</b>	<b>RB</b>	<b>RB</b>	<b>RB</b>		
Horse				1			1	1.6
Cattle	1	14	5	2	9	1	32	51.6
Sheep/goat		1	8	12	4		25	40.3
Pig			1				1	1.6
Dog			3				3	4.9
<b>Totals</b>	<b>1</b>	<b>15</b>	<b>17</b>	<b>15</b>	<b>13</b>	<b>1</b>	<b>62</b>	

*Table 4: Iron Age and Roman ditches: unidentified bone fragments by context*

<b>Trench</b>	<b>4</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>12</b>	<b>Totals</b>
<b>Context</b>	<b>404 (a)</b>	<b>1004</b>	<b>1006</b>	<b>1008</b>	<b>1015</b>	<b>1205</b>	
<b>Feature</b>	<b>405</b>	<b>1005</b>	<b>1007</b>	<b>1009</b>	<b>1017</b>	<b>1206</b>	
<b>Date</b>	<b>IA</b>	<b>RB</b>	<b>RB</b>	<b>RB</b>	<b>RB</b>	<b>RB</b>	
Cattle-sized fragments			9		4	3	16
Sheep/goat-sized fragments			19				19
Indeterminate (a)					8	38	46
<b>Totals</b>		<b>0</b>	<b>28</b>	<b>0</b>	<b>12</b>	<b>41</b>	<b>81</b>

(a) Highly fragmented/"scrappy" bone material

*Taphonomy and condition of the bone*

The general condition/state of preservation of the bones is assessed as fair to good but with an especially high proportion of fragmented material. Owing to the brittle condition of many of the bones, breakages had apparently occurred during excavation and/or during post-excavation handling. Such recent breakage is evident in the several pieces of the reconstructed scapula from the Iron Age ditch [405]. Several bone elements appear to have been shattered whilst buried (see note), as for example the distal cattle humerus from 1004 (fill of ditch [1005] Trench 10) which was in five pieces. Where fragments/pieces of the same bone elements were able to be refitted together, these were counted as single NISPs. Dog gnawing was only present in the cattle humerus from 1004; evidenced by tooth groove marks on the trochlea (distal epiphysis). There was no evidence of butchery or of burning in the submitted bone.

*Descriptions of the species represented*

*Horse* - Based on the crown height (58.1 mm) in the upper third molar from 1008 fill of ditch [1009] the horse represented is estimated to have been aged 7 to 8 years at time of death (criteria of Levine 1982).

*Cattle* – The cattle appear to have been of small stature and build. Age at death could only be established in one individual, represented by a lower third molar (context 1006) exhibiting wear stage A3 (criteria of Bond & O'Connor 1999: 346). This animal was probably aged at least 5 years and possibly up to 8 years at time of death (Ibid: 347).

*Sheep* – In appearance the sheep were clearly small sized, gracile-limbed animals, probably resembling modern Soay sheep. Using the eruption/tooth wear in their

mandibular cheekteeth (criteria of Payne 1973) the ages of three sheep were determined as follows: 6 to 12 months; 2 to 3 years; 4 to 6 years.

*Pig* – Represented solely by a calcaneum from 1006 fill of ditch [1007] Trench 10.

*Dog* – Context 1006 also yielded the only dog bones in the submitted samples, comprising parts of a skull (incomplete but including the maxillae) with associated, almost complete, right and left jawbones. These elements are from an adult dog of large size by Roman standards, as indicated by measurements taken on the upper and lower dentition and jawbones (Appendix 2); comparable to the largest dogs recorded by Maltby (2010: 216 - 217) from Roman Winchester. In comparison with modern dog breeds examined by the author, the dental measurements for the Chelveston dog match those of an English Pointer (collections of the Booth Museum of Natural History Brighton, specimen Reg. No. 101276). No direct ancestral association with this particular modern breed is implied but such comparison may indicate the Chelveston dog was of similar overall size; with perhaps a stature (shoulder height) of c.55 to 58 cm.

#### Conclusions and Discussion

Any detailed meaningful reconstruction of the local livestock economy is rendered unfeasible owing to the insufficient sample size. However, based on the limited evidence that is available there is perhaps an indication that, as in the case of the majority of Roman sites in Britain, the economy had been dominated by cattle with, at this site, sheep of virtually equal abundance. Both horse and dog would have been usefully employed in assisting herd and flock movements between enclosures and grazing pastures.

There is very scant evidence of pig keeping and a notable absence of exploitation of wild game (deer, wild boar or hare), wildfowl, or aquatic resources (freshwater fish); though this situation may simply reflect the small sample size and lack of sieved samples.

#### 5.4 The iron nails by Tora Hylton

Three iron nails were recovered from Ditch 1206. One complete example with a T-shaped head, is 48mm long, while the other two incomplete examples are up to 50mm long. The types present would have had any number of uses with wood, for fixing light structural fittings etc.

##### Catalogue

Nail, iron. Complete. T-shaped head with square-sectioned shank tapered to a point. Clenched terminal. Length: 48mm

Nail, iron. Incomplete, terminal missing. Flat sub-circular head with square-sectioned shank. Length (incomplete): 40mm

Nail, iron. Incomplete, no discernable head. Square-sectioned shank tapered to a point. Length (incomplete): 50mm

#### 5.5 Charred plant materials by Val Fryer

##### ***Introduction and method statement***

A sample for the evaluation of the content and preservation of the plant macrofossil assemblage was taken from the fill of ditch [1012] within trench 10.

The sample was bulk floated by NA and the flot was collected in a 300 micron mesh sieve. The dried flot was scanned under a binocular microscope at magnifications up to

x 16 and the plant macrofossils and other remains noted are listed in Table 5. Nomenclature within the table follows Stace (1997). All plant remains were charred. Modern roots and arthropod remains were also recorded.

Table 5: Charred plant remains

<b>Sample</b>	<b>1</b>
<b>Fill</b>	<b>1011</b>
<b>Feature</b>	<b>1012</b>
<b>Feature type</b>	<b>Ditch</b>
<b>Trench</b>	<b>10</b>
<b>Cereals</b>	
<i>Triticum</i> sp. (grains)	x
(glume bases)	x
<i>T. spelta</i> L. (glume bases)	x
Cereal indet. (grains)	x
<b>Herbs</b>	
<i>Arrhenatherum</i> sp. (tuber)	x
<i>Bromus</i> sp.	x
Fabaceae indet.	xcf
<b>Other plant macrofossils</b>	
Charcoal <2mm	xxx
Charcoal >2mm	xx
Charcoal >5mm	x
Charred root/stem	x
<b>Other remains</b>	
Black porous 'cokey' material	xx
<b>Mollusc shells</b>	
<b>Woodland/shade loving species</b>	
<i>Oxychilus</i> sp.	x
<b>Open country species</b>	
<i>Pupilla muscorum</i>	x
<i>Vallonia</i> sp.	x
<i>V. costata</i>	x
<i>Vertigo pygmaea</i>	x
<b>Catholic species</b>	
<i>Trichia hispida</i> group	x
<b>Marsh/freshwater species</b>	
<i>Anisus leucostoma</i>	x
<i>Armiger crista</i>	x
<b>Sample volume (litres)</b>	<b>40</b>
<b>Volume of flot (litres)</b>	<b>&lt;0.1</b>
<b>% flot sorted</b>	<b>100%</b>

### Results

Although the assemblage is small (<0.1 litres in volume), cereal grains/chaff and seeds of common weeds are recorded. However, preservation of the remains is quite poor,

with many being puffed and distorted, probably as a result of combustion at very high temperatures.

Elongated 'drop' form wheat (*Triticum* sp.) grains typical of spelt (*T. spelta*) are present along with a small number of spelt glume bases. Weed seeds are scarce, but do include a brome (*Bromus* sp.) fruit, possible small legume (Fabaceae) cotyledons and an onion-couch (*Arrhenatherum* sp.) type tuber. Charcoal/charred wood fragments are also recorded along with small pieces of charred root/stem and fragments of black, porous material, with the latter probably being a residue of the combustion of the cereal grains at very high temperatures.

Although specific sieving for molluscan remains was not undertaken, a limited number of shells of both terrestrial and marsh/freshwater species are recorded. Assuming that these are contemporary with the context from which the sample was taken, they would appear to indicate that the ditch was situated within an area of open grassland and was at least seasonally damp or partly water filled.

### **Conclusions**

In summary, it would appear most likely that this assemblage is largely composed of cereal processing waste. Whether this waste was subsequently used as tinder/kindling or whether it was burnt as agricultural refuse is not known, but the presence of the onion-couch tuber may indicate that combustion occurred within an area of rough grassland or waste ground. The occurrence of this material within a ditch fill is almost certainly a result of the wind-dispersal of the burnt remains.

Although this assemblage is both small and from a secondary context, it clearly shows that charred plant remains are preserved within the archaeological horizon at Chelveston. Therefore, if further interventions are planned, it is strongly recommended that additional plant macrofossil samples of approximately 20 – 40 litres in volume are taken from all dated and well-sealed contexts recorded during excavation.

## **6 DISCUSSION**

The trial trenching identified a series of ditches and one pit spread across the development area, dated by an assemblage of diagnostic and largely unabraded pottery sherds from the middle to late Iron Age and early Roman periods. Medieval ridge and furrow was also identified across the trenched area. Extensive modern activity associated with the construction and use of the area as an airbase was present in all but three trenches (Trench 3, 7 and 13).

Activity as represented by the ditches and pit indicate that the area was part of a field system with little or no evidence for buildings, although the Roman pottery assemblage (Section 5.2) contained a range of fabric types and forms that suggest domestic activity is likely to have been sited close by. The animal bone assemblage supports the physical evidence. It contained a small range of species typical of Roman sites in Britain, with cattle and sheep as livestock and horse and dog as working animals. The occupation can therefore be characterised as rural Romano-British, with a probable Iron Age antecedent (ditch [405]).

Evidence for post-Roman activity comprised medieval ridge and furrow only. It was present in trenches 5 and 7 where it was seen to have had little destructive impact on the earlier remains, which indicates that where modern impact has also been minimal there is a high probability that further archaeological remains in close proximity will survive and be well-preserved.

**BIBLIOGRAPHY**

- Boessneck, J, 1969 *Osteological Differences between Sheep (Ovis aries Linne) and Goat (Capra hircus Linne)*, in D Brothwell, and E Higgs (eds), 1969, 331-58
- Bond, J M, and O'Connor, T P, 1999 *Bones from Medieval Deposits at 16-22 Coppergate and Other Sites in York*, The Archaeology of York, **15/5**, York: York Archaeological Trust & CBA
- Brown, A. 1994 A Romano-British shell-tempered pottery and tile manufacturing site at Harrold, Bedfordshire, *Bedfordshire Archaeol J*, **21**, 19–107
- Clarke, V, 2013 *Brief for archaeological evaluation by trial trenching for solar farm development: Chelveston Renewable Energy Park, Former Chelveston Airfield, Kimbolton Road, Chelveston*
- Dawson, M, 2004 *Archaeology in the Bedford Region*, Brit Archaeol Rep, Brit Ser, **373**/Bedfordshire Archaeology Monograph, **4**, Oxford: British Archaeological Reports
- Dawson, M, 2013 *Archaeological Desk-based Assessment: Chelveston Renewable Energy Park*, CgMs Consulting
- Dawson, M, and Leigh, D, 2013 *A programme of archaeological observation, investigation and recording during construction of new wind turbines, Chelveston, Northamptonshire February–April 2013*, Northamptonshire Archaeology report, **13/97**
- von den Driesch, A, 1976 *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum Bulletin, **1**
- Howe, M D, Mackreth, D F, and Perrin, J R, 1980 *Roman Pottery from the Nene Valley: a Guide*, Peterborough City Mus Occ Paper, **2**
- IfA 2008 *Standard and guidance for archaeological field evaluation*, Institute for Archaeologists
- IfA 2010 *Code of Conduct*, Institute for Archaeologists
- Johnston, D E, 1969 Romano-British Pottery Kilns near Northampton, *Antiq J*, **49**(i), 75–97
- Levine, M A, 1982 The use of crown height measurements and eruption-wear sequences to age horse teeth, in B Wilson, C Grigson and S Payne (eds) *Ageing and Sexing Animal Bones from Archaeological Sites*, BAR British Series, **109**, 23 – 250.
- Maltby, M, 2010 *Feeding a Roman Army. Environmental Evidence from Excavations in Winchester, 1972 – 1985*, Winchester: Winchester Museums & English Heritage
- NA 2011 *Archaeological Fieldwork Manual*, Northamptonshire Archaeology
- NA 2013 *Chelveston Renewable Energy Park, Bedfordshire, Specification for Archaeological Trial Trench Evaluation*, Northamptonshire Archaeology
- NAS 1978 Archaeology in Northamptonshire 1977, *Northamptonshire Archaeology*, **13**, 178



Parminter, Y, and Slowikowski, A M, 2004 The Ceramics Assemblage, in M Dawson 2004, 442–503

Parry, S J, 2006 *Raunds Area Survey: An Archaeological Study of the Landscape of Raunds, Northamptonshire 1985–94*, Oxford, Oxbow Books

Payne, S, 1973 Kill-off patterns in sheep and goats: the mandibles from Aşvan Kale, *Anatolian Studies*, **XXIII**, 281-303

Payne, S, 1985 Morphological distinctions between the mandibular teeth of young sheep, *Ovis*, and goats, *Capra*, *Journal of Archaeological Science*, **12**, 139-147

Perrin, J R, 2006 Romano-British pottery, in Parry 2006, 84–91

Schmid, E, 1972 *Atlas of Animal Bones*, Amsterdam: Elsevier Publishing Company

Sisson, S, and Grossman, J D, 1953 *The Anatomy of the domestic animals* (4th edition revised)

Stace, C, 1997 *New Flora of the British Isles* (2nd edition) Cambridge University Press

Tomber, R, and Dore, J, 1998 *The National Roman Fabric Reference Collection: a handbook*, London: Museum of London Archaeology Service

Upton-Smith, T, 2012 Building Recording of Nissen Huts at the former RAF Chelveston, *Northamptonshire Archaeology*, **37**, 171-182

Wilson, B, Grigson, C, and Payne, S (eds) *Ageing and Sexing Animal Bones from Archaeological Sites*, British Archaeol Reports, International Series, **109**, Oxford, 55-71

### Maps

British Geological Survey, Market Harborough Sheet 170, Solid and Drift Edition enhanced 1:50,000 reprint, 1997

### Websites

BGS 2009 <http://www.bgs.ac.uk/geoindex/home.html> British Geological Survey website

## APPENDIX 1: CONTEXT INVENTORY

Trench No	Length, width & alignment	NGR	Surface height	height of natural
1	100m x 2.0m E-W	TL 00439 68136	90.04m aOD	89.14m aOD
<i>Context</i>	<i>Context type Feature &amp; type</i>	<i>Description</i>	<i>Dimensions</i>	<i>Artefacts/Samples</i>
101	Topsoil	Mid grey-brown sandy clay	0.15m thick	
102	Made ground	Re-deposited clay mixed with brick and tile. Present in the southern part of the trench	0.40m thick	
103	Subsoil	Light grey-brown sandy clay	0.30m thick	
104	Natural	Mid yellow-brown clay		

Trench No	Length, width & alignment	NGR	Surface height	height of natural
2	400m x 2.0m E-W	TL 00405 68083	90.16m aOD	87.96aOD
<i>Context</i>	<i>Context type Feature &amp; type</i>	<i>Description</i>	<i>Dimensions</i>	<i>Artefacts/Samples</i>
201	Topsoil	Mid grey-brown sandy clay	0.20m thick	
202	Made ground (within eastern part of trench)	Re-deposited clay, brick, tile and limestone fragments	0.60m thick	
203	Buried soil	Truncated former plough soil, mid brown sandy clay	0.45m thick	
204	Natural	Mid yellow-brown clay with chalk and flint inclusions		
205	Made ground (within western part of trench)	Re-deposited clay, brick, tile and limestone fragments	1.10m thick	
206	Buried soil	Truncated former plough soil, mid brown sandy clay	0.90m thick	
207	Fill of [208]	Mid grey-brown sandy clay		Roman pottery
208	Cut of gully	Shallow U-shaped profile. Filled by (207)	0.50m wide 0.10m deep	

Trench No	Length, width & alignment	NGR	Surface height	height of natural
3	100m x 2.0m N to S	TL 00542 68097	88.76m aOD	88.53m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
301	Topsoil	Mid grey- brown sandy clay	0.20m thick	
302	Natural	Mid yellow-brown clay with chalk and flint inclusions		

Trench No	Length, width & alignment	NGR	Surface height	height of natural
4	100m x 2.0m NW-SE	TL 00666 68199	88.34m aOD	88.02m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
401	Topsoil	Mid grey-brown sandy clay	0.30-0.35m thick	
403	Natural	Mid yellow-brown clay with chalk and flint inclusions (truncated)		
404	Fill of [405]	Dark grey-black clay		Pottery and animal bone
405	Cut of ditch	V-shaped profile, filled by (404)	1.10m wide and 0.30m deep	

Trench No	Length, width & alignment	NGR	Surface height	height of natural
5	50m x 2.0m N to S	TL 00784 68150	89.52m aOD	88.66m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
501	Topsoil	Mid grey-brown sandy clay	0.20m thick	
502	Made ground	Re-deposited clay, brick, tile and limestone fragments	0.60m thick	
503	Buried soil	Mid orange-grey sandy clay	0.20m thick	
504	Natural	Mid yellow-brown clay with chalk and flint inclusions		

Trench No	Length, width & alignment	NGR	Surface height	height of natural
6	100m x 2.0m E to W	TL 00749 68177	89.34m aOD	86.84m aOD
<i>Context</i>	<i>Context type Feature &amp; type</i>	<i>Description</i>	<i>Dimensions</i>	<i>Artefacts/ Samples</i>
601	Topsoil	Dark grey-brown sandy clay	0.20m thick	
602	Made ground	Re-deposited clay, brick, tile and limestone fragments	0.90m thick	
603	Buried soil	Mid brown sandy clay	0.30m thick	
604	Natural	Mid yellow-brown clay with chalk and flint inclusions		

Trench No	Length, width & alignment	NGR	Surface height	height of natural
7	100m x 2.0m N to S	TL 00880 68193	88.41m aOD	87.86m aOD
<i>Context</i>	<i>Context type Feature &amp; type</i>	<i>Description</i>	<i>Dimensions</i>	<i>Artefacts/ Samples</i>
701	Topsoil	Mid grey-brown sandy clay	0.40m thick	
702	Subsoil	Light grey-brown sandy clay	0.20m thick	
703	Natural	Mid yellow-brown clay with chalk and flint inclusions		
704	Fill of [705]	Light brown-grey sandy clay		Roman pottery
705	Cut of ditch	U-shaped profile, filled by (704)	0.75m wide 0.28m deep	

Trench No	Length, width & alignment	NGR	Surface height	height of natural
8	100m x 2.0m E to W	TL 00748 68047	89.71m aOD	88.51m aOD
<i>Context</i>	<i>Context type Feature &amp; type</i>	<i>Description</i>	<i>Dimensions</i>	<i>Artefacts/ Samples</i>
801	Topsoil	Mid grey-brown sandy clay	0.15m thick	
802	Made ground	Re-deposited clay, brick, tile and limestone fragments	0.80m thick	
803	Buried soil	Truncated former plough soil, mid brown sandy clay	0.20m thick	
804	Natural	Light brown-grey sandy clay		

<b>Trench No</b>	<b>Length, width &amp; alignment</b>	<b>NGR</b>	<b>Surface height</b>	<b>height of natural</b>
<b>9</b>	<b>100m x 2.0m NW to SE</b>	<b>TL 00619 68038</b>	<b>88.74m aOD</b>	<b>87.32m aOD</b>
<b>Context</b>	<b>Context type Feature &amp; type</b>	<b>Description</b>	<b>Dimensions</b>	<b>Artefacts/ Samples</b>
901	Topsoil	Dark grey-brown sandy clay	0.15m thick	
902	Made ground	Re-deposited clay, brick, tile and limestone fragments	0.80m thick	
903	Buried soil	Truncated former plough soil, mid brown sandy clay		
904	Natural	Light brown-grey sandy clay		

<b>Trench No</b>	<b>Length, width &amp; alignment</b>	<b>NGR</b>	<b>Surface height</b>	<b>height of natural</b>
<b>10</b>	<b>100m x 2.0m E to W</b>	<b>TL 00576 67951</b>	<b>90.38m aOD</b>	<b>89.11m aOD</b>
<b>Context</b>	<b>Context type Feature &amp; type</b>	<b>Description</b>	<b>Dimensions</b>	<b>Artefacts/ Samples</b>
1001	Topsoil	Mid grey-brown sandy clay	0.20m thick	
1002	Subsoil	Mid brown sandy clay	0.10m thick	
1003	Natural	Light brown-grey sandy clay		
1004	Fill of [1005]	Dark grey-brown clay		Roman pottery and animal bone
1005	Cut of ditch	Shallow U-shaped profile, filled by (1004)	0.60m wide 0.08m wide	
1006	Fill of [1007]	Mid brown-grey clay		Roman pottery and animal bone
1007	Cut of ditch	Shallow U-shaped profile, filled by (1006)		
1008	Fill of [1009]	Dark grey-brown sandy clay		Roman pottery and animal bone
1009	Cut of ditch	U-shaped profile, filled by (1008)	1.00m wide 0.23m deep	
1010	Fill of [1012]	Dark grey-black silty clay	1.00m wide 0.40m deep	Roman pottery and animal bone
1011	Fill of [1012]	Mid grey-brown sandy clay	2.00m wide 0.45m deep	Roman pottery and animal bone sample 1
1012	Cut of ditch	U-shaped profile, filled by (1010-11, 13)	2.20m wide 0.70m deep	

1013	Fill of [1012]	Light orange-grey clay	1.10m wide 0.10m deep	
1014	Made ground	Re-deposited clay, brick, tile and limestone fragment	0.30m thick	
1015	Fill of [1017]	Dark brown-black sandy clay	0.43m deep	Roman pottery
1016	Fill of [1017]	Mid brown-grey sandy clay	0.75m wide 0.10m deep	
1017	Cut of ditch	U-shaped profile, filled by (1015-16)	0.75m wide 0.30m deep	

<b>Trench No</b>	<b>Length, width &amp; alignment</b>	<b>NGR</b>	<b>Surface height</b>	<b>height of natural</b>
<b>11</b>	<b>100m x 2.0m N to S</b>	<b>TL 00432 67983</b>	<b>89.58m aOD</b>	<b>89.30m aOD</b>
<b>Context</b>	<b>Context type Feature &amp; type</b>	<b>Description</b>	<b>Dimensions</b>	<b>Artefacts/ Samples</b>
1101	Topsoil	Mid grey-brown sandy clay	0.20m thick	
1102	Made ground (at northern end)	Re-deposited clay, brick, tile and limestone fragment	0.20m thick	
1103	Natural	Light brown-grey sandy clay		

<b>Trench No</b>	<b>Length, width &amp; alignment</b>	<b>NGR</b>	<b>Surface height</b>	<b>height of natural</b>
<b>12</b>	<b>45m x 2.0m E to W</b>	<b>TL 00576 67951</b>	<b>90.17m aOD</b>	<b>88.89m aOD</b>
<b>Context</b>	<b>Context type Feature &amp; type</b>	<b>Description</b>	<b>Dimensions</b>	<b>Artefacts/ Samples</b>
1201	Topsoil	Mid grey-brown sandy clay	0.20m thick	
1202	Made ground	Re-deposited clay, brick, tile and limestone fragment	0.45m thick	
1203	Buried soil	Truncated former plough soil, mid brown sandy clay	0.60m thick	
1204	Natural	Light yellow brown clay		
1205	Fill of [1206]	Dark brown-black sandy clay	2.00m wide 0.47m deep	Roman pottery and animal bone
1206	Cut of ditch	U-shaped profile, filled by (1205, 1207)	2.00m wide 0.67m deep	
1207	Fill of [1206]	Light brown sandy clay		Roman pottery
1208	Fill of [1209]	Light brown clay		Roman pottery
1209	Cut of pit	Sub-circular, filled by (1208)	0.50m diam 0.12m deep	

<b>Trench No</b>	<b>Length, width &amp; alignment</b>	<b>NGR</b>	<b>Surface height</b>	<b>height of natural</b>
13	25m x 2.0m E to W	TL 00576 67951	90.17m aOD	88.80m aOD
<b>Context</b>	<b>Context type Feature &amp; type</b>	<b>Description</b>	<b>Dimensions</b>	<b>Artefacts/ Samples</b>
1301	Topsoil	Mid grey-brown sandy clay	0.20m thick	Tile, brick
1302	Made ground	Re-deposited clay, brick, tile and limestone fragment	0.70m thick	
1303	Buried soil	Truncated former plough soil, mid brown sandy clay	0.50m thick	
1304	Natural	Light yellow brown clay		
1305	Fill of [1306]	Light brown-grey sandy clay		
1306	Ditch	Same feature as [1017]		

**APPENDIX 2: ANIMAL BONE TABLES**

*Table 6: Iron Age and Roman ditches: anatomical distributions of the cattle*

Trench	4	10	10	10	10	12	
Context	404 (a)	1004	1006	1008	1015	1205	
Feature	405	1005	1007	1009	1017	1206	
Date	IA	RB	RB	RB	RB	RB	Totals
Horn core						1	1
Skull						1	1
Lower Cheekteeth			1			2	3
Cervical Scapula	1						1
Humerus			1		1		3
Radius			1				1
Metacarpus						2	2
Femur			1			1	2
Phalanx I					1		1
Phalanx II				1			1
Long bone			11	3		1	15
Shaft frag.							
<b>Totals</b>	<b>1</b>	<b>14</b>	<b>5</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>32</b>

*Table 7: Summary of cattle epiphyseal fusion data: Roman contexts combined*

	Unfused	Fused
<i>Early fusing epiphyses:</i>		
Radius proximal		1
Scapula glenoid process		1
Humerus distal		2
Phalanx I proximal		2
<i>Later fusing epiphyses:</i>		
Metacarpus distal	1	
<i>Late fusing epiphyses:</i>		
Femur proximal		1
<b>Totals</b>	<b>1</b>	<b>7</b>

*Table 8: Iron Age and Roman ditches. Anatomical distributions of the sheep/goat*

Trench	4	10	10	10	10	12	
Context	404 (a)	1004	1006	1008	1015	1205	
Feature	405	1005	1007	1009	1017	1206	
Date	IA	RB	RB	RB	RB	RB	Totals
Mandible					1	1	2
Incisor			1				1
Upper cheekteeth					1		1
Lower cheekteeth				1			1
Cervical						1	1
Rib				3			3
Scapula				1			1
Metacarpus					1		1
Tibia						1	1
Long bone shaft frag.				3	9	1	13
<b>Totals</b>			<b>1</b>	<b>8</b>	<b>12</b>	<b>4</b>	<b>25</b>



*Table 9: Metrical summary for the dog maxilla and mandible from (1006) fill of Roman ditch [1007] - Trench 10*

Maxilla	[15]	[19]	P4 L	P4 B	P4 GB	M1 L	M1 B	M2 L	M2 B	
	71.6	20.2	19.7	8.4	10.7	14.1	15.3	6.8	10.2	
Mandible	[7]	[8]	[9]	[18]	[19]	[20]	M1 L	M1 B	M2 L	M2 B
	86.7	79.3	77.4	55.5	23.5	21.0	23.4	9.4	10.2	6.9

*All measurements are in mm and follow the system of von den Driesch (1976)*

Key to measurements:

Maxilla

[15] length of cheektooth row along the alveoli

[19] length of upper carnassial tooth (P4) alveolus

P4 L & P4 B length & breadth of upper fourth premolar (carnassial tooth)

M1 L & M1 B length & breadth of upper first molar

M2 L & M2 B length & breadth of upper second molar

Mandible:

[7] length of mandible

[8] length of cheektooth row P1 - M3

[9] length of cheektooth row P2 - M3

[18] height of vertical ramus

[19] height of mandible behind M1

[20] height of mandible between P2 and P3

M1 L & M1 B length & breadth of lower first molar (carnassial tooth)

M2 L & M2 B length & breadth of lower second molar

*Table 10: Metrical summary for selected horse and cattle bones*

Upper Third Molar	Species	ht.crown	M3 L	M3 B	Context	Period
	Horse	58.1	27.0	21.2	1008	Roman
Lower Third Molar	Species		M3 L	M3 B	Context	Period
Wear stage A3 (a)	Cattle		36.2	13.5	1006	Roman
(a) wear stage (criteria of Bond & O'Connor 1999: 346)						
Scapula	Species	GLP	SLC		Context	Period
	Cattle	55.0	44.6		404	Iron Age

*All measurements are in mm and follow the system of von den Driesch (1976) except for crown height in the horse tooth (method of Levine 1982)*



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