



Cambridge Archaeology Field Group

***Field walking and metal detecting at
8 Elms Farm, Arrington***

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Investigations at Eight Elms Farm, Arrington

Following the completion of the CAGF 2013 Heritage Lottery funded project at Wimpole, there remained some areas within the estate that had not been field walked. One main area was the series of fields at Eight Elms Farm near Arrington that border the A1198 (Ermine Street), as shown below.

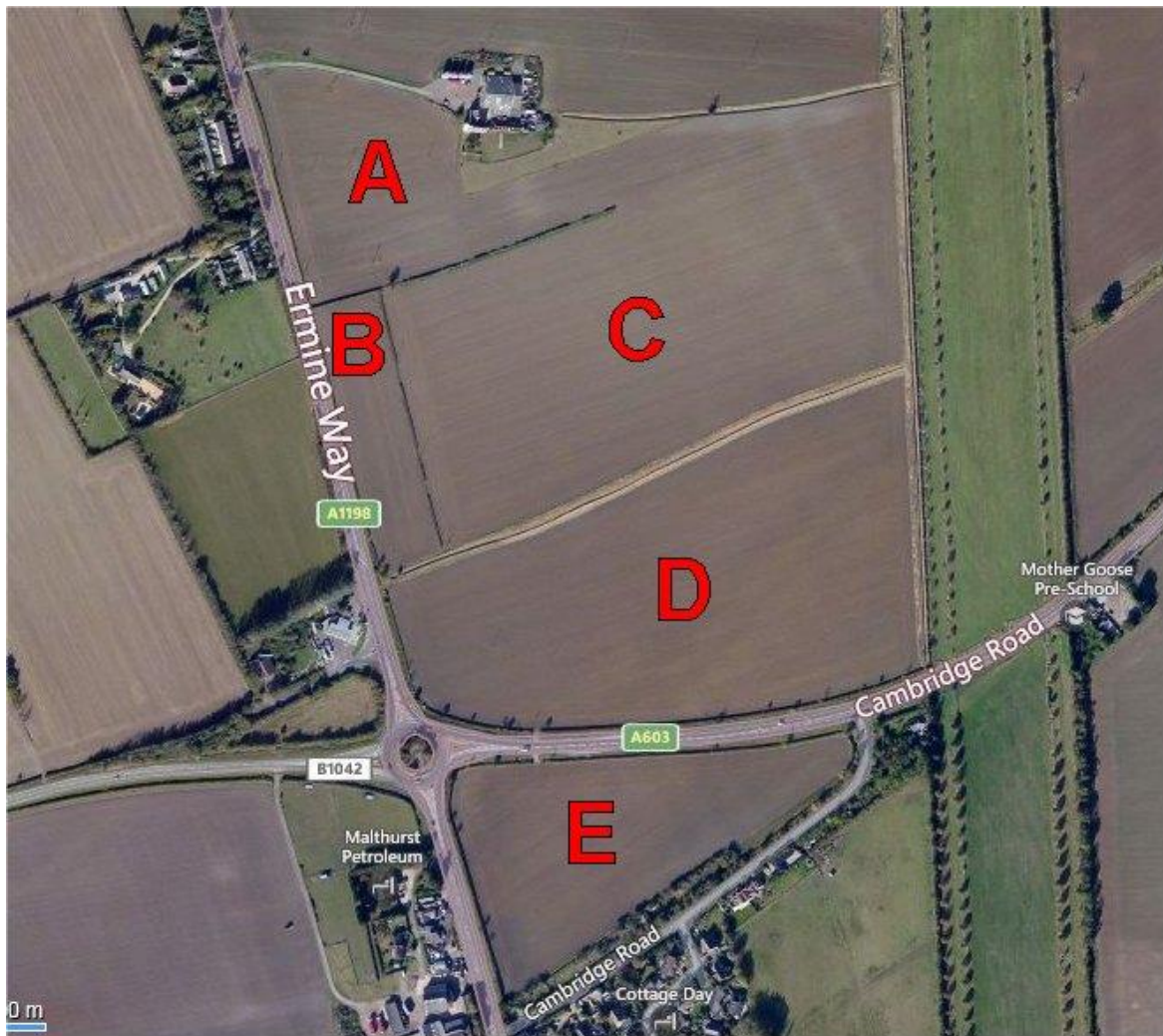


Figure 1. The area covered by the survey showing the field codes for the individual fields walked during this programme.

The investigation was intended to complete the field walking programme but also to see whether we could add to the existing knowledge of a possible Roman strip settlement believed to border Ermine Street in this location.

What previous knowledge is there in the area concerned ?

The area south of Arrington Bridge, where Ermine Street crosses the River Cam (or Rhee) is a scheduled monument Number 1006874. The scheduling covers both sides of the road, as shown in pink on this extract from the scheduling document.



Figure 2. The area south of Arrington Bridge covered by the scheduling.

The scheduling document and Cambridgeshire HER records describe work carried out here in 1972-3 by local archaeologist Roland Parker that uncovered stone, Roman pottery and bone suggestive of a large building nearby. Smith (1987, 181) records more information and catalogues the site as a roadside settlement extending along Ermine Street. Taylor (1997, 112) describes the site, the finds and its putative designation as a Roman posting station (mansio) or a mutatio where travellers could

obtain remounts or exchange draught animals. There are also three CHER references (03334, 03157 and 03335) referring to Roman finds at Wimpole Lodge and Arrington Bridge.

Finally, when roadworks were being carried out with the re-alignment of the junctions between the A603 Cambridge Road, B1042 and Ermine Street (the A14 as it was designated then), excavations (Horton et al, 1994, 31-74) at the roundabout site, shown in Figure 3, recovered much pottery and other finds, showing the Roman settlement extended this far north of the River Cam (CHER Number 08384). Numerous field and boundary ditches were recorded either parallel to, or at right angles to, Ermine Street and are shown in Figure 4 which shows the features from multiple periods.

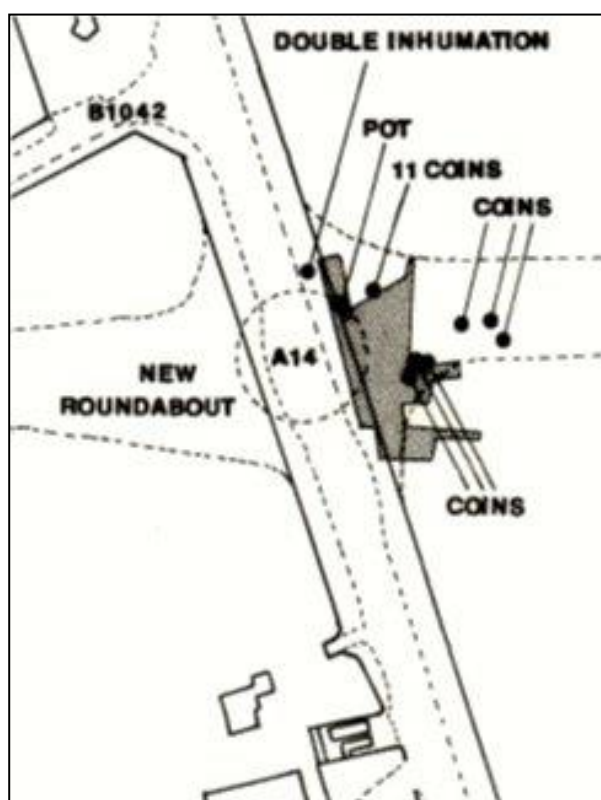


Figure 3. Site of the 1989 excavations PCAS LXXXIII, p33.

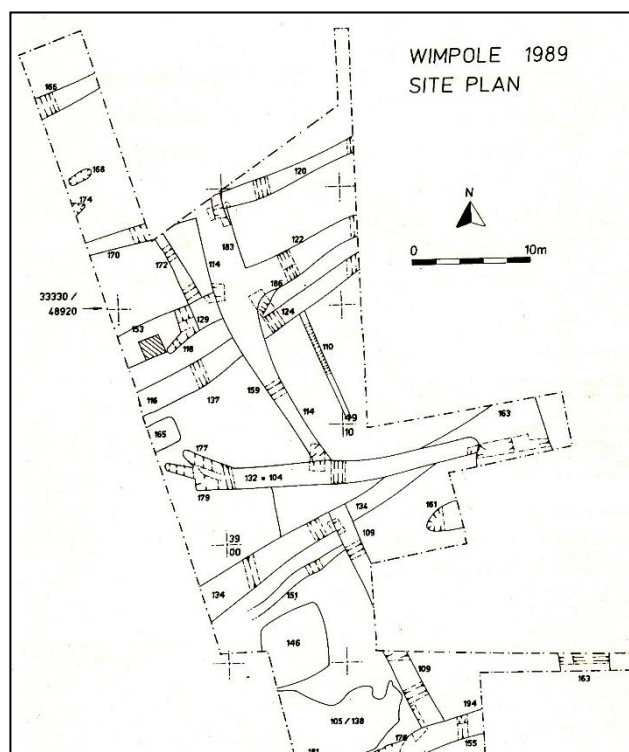


Figure 4. Composite plan for the features found of all periods from PCAS LXXXIII, p35.

CAFG field walking programme

The field walking programme started in the Autumn of 2014 in alphabetical order of the field codes shown in Figure 1. Fields were in their preferred state of being ploughed and harrowed prior to planting. Initially fields D and E were only rough ploughed but were harrowed before they were walked. The usual format of walking

transects 10m apart in the direction of the cultivation lines was used. Finds were picked up and bagged every 10m, with the bags attached to canes marking their position. Subsequently the bags were tagged and the positions of the canes recorded using a hand-held Garmin eTrex GPS to produce a list of OS co-ordinates for mapping.

Pottery and building material from most periods were recovered but the following discussion will only relate to the Roman period finds. Fields A, B and C produced little Roman material but fields D and E produced varying amounts of Roman pottery as Figure 5 shows.

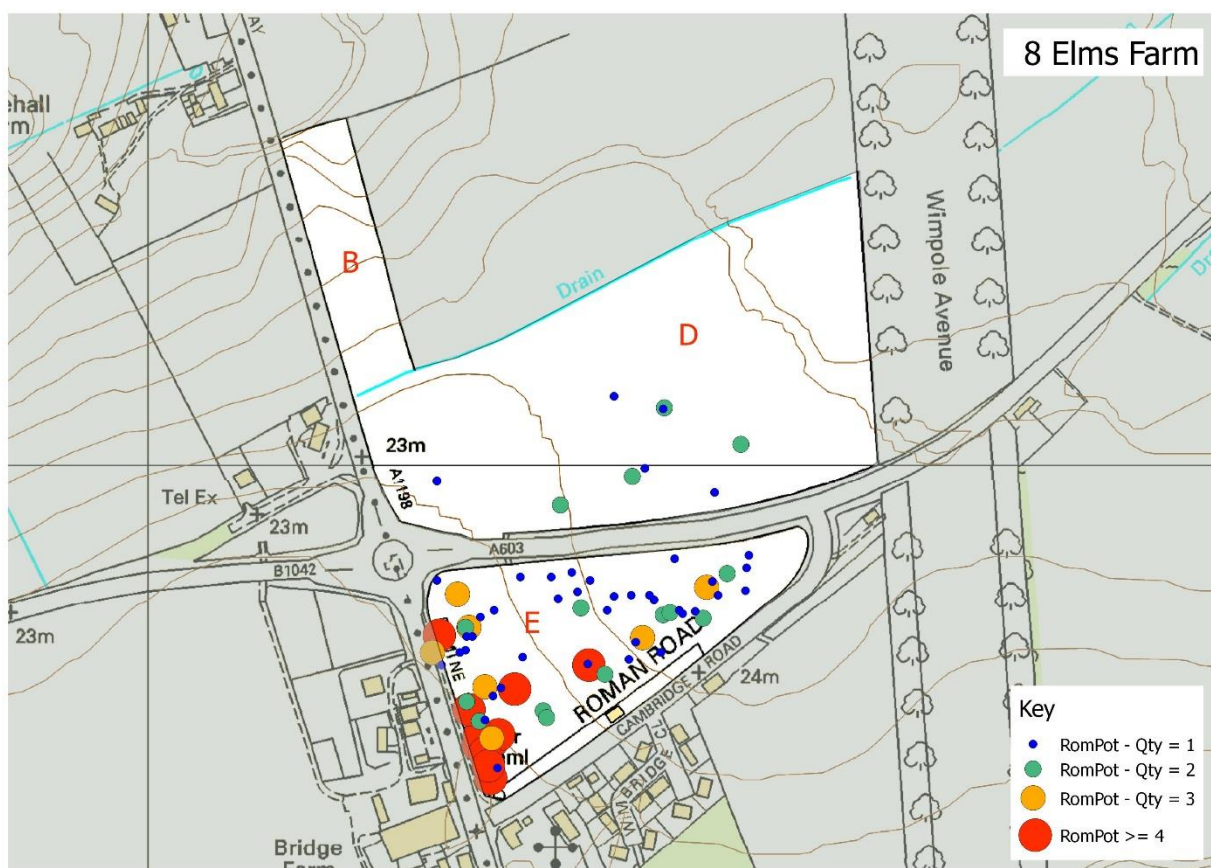


Figure 5. Plot of concentrations of Roman pottery in fields B, D and E based on their GPS co-ordinates (courtesy of Peter Cornelissen)

Field B shows no Roman pottery finds were recovered, field D shows a small scatter but field E shows the high concentration of field walked Roman pottery lying alongside the modern Ermine Street boundary. There is also a suggestion that the higher pottery concentration runs eastwards alongside the old Roman road to Cambridge. A series of fourteen 10m x 10m squares were marked out in the south-west corner of field E (over

the highest pottery concentrations) as two rows of 7 squares. Square A was the square nearest the south west corner. The long axis of the block of squares was laid out parallel to Ermine Street and as close to the field boundary as possible. These squares were positioned to be over the highest concentration of pottery found during the initial field walking. They were then walked intensively, with all the pieces of pottery (including all the Roman pottery) found within the specific square collected and bagged. The results for only the Roman pottery are shown in Table 1.

Square	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Pieces	26	12	66	39	79	24	20	25	61	16	46	7	0	0

Table 1. Comparison of numbers of pieces of Roman pottery found per square.

Squares A, C, E, G, I, K and M were the squares lying closest to the field boundary. What is clear from these results is that these squares contained the highest amounts of pottery compared to the squares further into the field. Also it demonstrates how the large amounts of pottery suddenly stopped after squares K and L, clearly marking out an area where any likely settlement was to be found. These results suggest that (a) the feature producing the pottery finds lies close alongside Ermine Street and (b) may not extend far northwards towards the modern A603.

RheeSearch geophysical survey results

As the bulk of the finds were concentrated in a relatively small area RheeSearch archaeology group were approached with a view to them carrying out geophysical measurements in fields D and E to see whether any evidence for settlement could be found. Both resistivity (using a TR/CIA twin probe system) and magnetometry (Bartington 601 system) techniques were employed but, in general, resistivity did not produce easily interpretable results whereas the magnetometry results were immediately productive.

Figure 6 shows the magnetometry results for field E where a series of boundary ditches enclosing small plots is immediately obvious running at right angles to the line of Ermine Street. (Ermine Street runs from centre right towards the bottom left in this

plot), Comparing these with the excavated ditches shown in Figure 4 indicates they are running at the same angle as those in the magnetometry result.



Figure 6. Magnetometry results for field E showing a series of boundary ditches running at right angles to Ermine Street but only extending 20 – 30m back in the field.



Figure 7. Magnetometry results showing that the series of boundary ditches seen in Field E carries on into the south west corner of field D but extends no further northwards.

Also noticeable is the fact that the boundary ditches only extend approximately 20 – 30m back into the body of the field. This is backed up by our field walking result where pottery finds in any large number only extend about 20m out into the field. About half way along the plot a very speckled area may be the result of iron working or possibly a kiln – only excavation will answer this question.

Figure 7 shows the magnetometry results for fields D and E where the series of boundary ditches can just be seen to end in the south west corner of field D. The line of the eastern back boundary in field E carries on into field D. The boundary ditches do not carry on further northwards in field D towards Arrington village and this is again backed up by our lack of field walking finds in fields A, B and D.

Pottery finds evaluation.

Although the pottery recovered by our field walking is mostly abraded small pieces, it is possible to do some analysis of the pottery types found and also to compare them with the pottery found during the excavation in 1989. The excavation finds are well described in PCAS LXXXIII pages 48 – 60. Although a full analysis has not yet been carried out, it is possible to make some conclusions. Table 2 compares the types, listed by source, of Roman pottery found in 1989 with that found during the field walking.

Fine wares	1989	% sherds	2014		Coarse wares	1989	% sherds	2014
Samian (Lezoux)	√	2.2	√		BB1	√	1.5	√
E. Gaulish	√	0.3			BB2	√	0.9	
Nene Valley	√	11.7	√		Fine Grey	√	14.2	√
Harston CC	√	0.4	√		Shell tempered	√	15	√
Oxford CC	√	1.8	√		Sandy Grey	√	35.4	√
Grey CC	√	2.4			Grog tempered	√	0.8	
Hadham Red	√	6.2	√		Flint grits	√	0.5	√
Hadham Grey	√	4.4						
					Mortaria			
Amphora					Nene Valley	√	0.4	√
Baetican	√	0.6	√		Oxfordshire	√	0.2	√
					Verulamium	√	0.2	√

Table 2. Comparison of pottery types (and amounts) from PCAS LXXXIII, p57 compared to the types from field walking.

The % of the sherds distribution is for the excavated pottery, showing the largest number of pieces are classified as coarse wares, while Nene Valley wares are predominant in the fine wares. From Table 2 it can be seen that most of the pottery types identified from the excavation are also present in the field-walked material.

Although absolute amounts have not been determined for the field-walked material, the general ratio of levels appear similar, i.e. for example coarse sandy and shell-tempered wares predominate and Nene Valley ware is present in some quantity. Appendix 1 shows photographs of the commoner types recovered during the field walking process.

Conclusions

By using a combination of field walking and geophysics, it is possible to make some observations about the roadside strip settlement believed to have existed alongside Ermine Street in the Roman period. On the eastern side of the road, pottery concentrations and magnetometry results appear to show that the strip development continues in the northerly direction but ends some 50m north of the current A603 road. In the southerly direction the settlement carries on under the present day Wimpole Lodge area. Also, the strip is probably no more than 30m deep along its length, although this assumes that the Roman Ermine Street underlies the current position of the modern Ermine Street. The fact that the boundary ditches do not carry on further east into the field perhaps suggests the field behind the back boundary could have been used for pasturing animals, perhaps be the horses implied if the site is, indeed, a *mutatio*. There is a suggestion from the pottery finds, but not so much from the magnetometry results, that the settlement may have extended eastwards along the old Roman road from its junction with Ermine Street. The vital area is private property and under grass so it may not be possible to prove this suggestion conclusively.

Metal detecting at 8 Elms Farm

Due to the vulnerability of the site, it was decided to carry out a metal detector sweep of the squares showing the highest density of pottery finds. The weather conditions at the time and the state of cultivation of the field meant that conditions were not ideal but Table 3 lists the finds recovered.

10m Grid Square	Coins	Identifiable Artefacts	Lead	Iron	Other	Detected by
A (SW corner)	1			1 x Handmade nail		SDT
B		CA "Fantail" Brooch	2 x waste			DS
C	4		3 x waste	1 x Handmade nail 1 x 4 link chain 1 x Ovoid shape link (prb from a chain)		DS
D	2	Post Med CA Mount				DS
E	1			1 x Handmade nail		SDT
F					Brightwork Frag	SDT
G	1		1 x Pot mend 1 x waste		2 x Brightwork Frag	DS
H			3 x waste			DS
I				1 x Handmade nail	Buckle/clasp (mod?)	SDT
J						SDT
K	1			1 x Handmade nail		DS
L			1 x Folded and twisted strip 1 x waste			SDT
M				1 x Knife fragment	Brightwork Frag	DS
N		Frag CA Bracelet (?)		1 x Handmade nail	Coke/charcoal	SDT
O						DS
P		Intaglio				DS
Q			1 x waste	1 x cube (!)	2 x aluminium 1 x road "cats eye"	DS
R			1 x waste		5 x aluminium	DS
S					Inhaler 4 x aluminium	DS
T			1 x waste		2 x aluminium	DS
U			1 x waste		1 x modern CA bracket	DS
V (NW corner)			1 x waste		1 x aluminium	DS

Table 3. Metal detected finds.

Table 4 lists the coin characteristics and date ranges of the Roman coins recovered..

Table 4. Roman coin descriptions

Grid Square	Finder	Date	Weight(gms)	Diameter (mm)	Die Axis	Completeness	Wear Analysis	Emp Dates	Mint	Issue dates	Metal	Denomination	Status	Mint Mark	Obv Legend	Obverse Type	Reverse Legend	Reverse Type	Notes	Reference
A	SDT	17.01.15	1.3	1.75	4 o'clock	Complete	Slightly Worn			c AD260-296	CA	Radiate				Pearl-diademed, draped and cuirassed right		Standing figure, draped facing left		
C	DCS	17.01.15	1.4	3.56	12 o'clock	Complete	Fine	AD 306-337	Constantine I	AD 337-340	CA	Nummus			DIV CONSTANTINI NVS PT AVGG	Veiled head right	Emperor (Constantine I) riding to heaven in quadriga, being received by the hand of God			
C	DCS	17.01.15	9.8	12.66	6 o'clock	Complete	Worn	AD 161-180	Marcus Aurelius as Augustus	AD 173-175	CA	Dupondius				(radiate) head right		probably Roma standing left holding Victory and vertical spear	BMC IV, pl. 83, cf. no. 12 Reece Period 8. Confirmed Sam Moorhead.	
C	DCS	17.01.15	1.2	13.31	6 o'clock	Complete	Very Worn	AD 313-364	House of Constantine			Nummus						Two Soldiers & Two Standards	Possibly contemporary PAS LIN-OCCAC6	
C	DCS	17.01.15	0.7	est. 22		Fragment	Very Worn				CA	Nummus						Type	1/3rd of a nummus. Undecipheral.	
D	DCS	18.01.15	1.2	12.74	6 o'clock	Complete	Worn	AD 317-324	R(B)S		CA	Radiate			..LVS..	Pearled-Diademmed, Draped Right	Three turrets on the camp gate			
E	SDT	17.01.15	0.7	12.09	5 o'clock	Fragment	Very Worn				CA	Nummus			DNAG..	Pearled-Diademmed, Draped Right	Crude stick figure, no definition			
G	DCS	17.01.15	3.5	20.61	6 o'clock	Complete	Very Worn	AD 269-271	Victorinus (?)		CA	Radiate		* / v		Radiate Crown, Bust Right	INV	Sol, right hand raised, walking left holding whip	Heavily worn and corroded. Possible local copy.	PAS Record: LANCUM-462CF2
K	DCS	17.01.15	2.2	16.55	6 o'clock	Complete	Fine	AD 364-78	Unclear - /[]		CA	Nummus		unknown	[...]	Pearl-diademed, draped and cuirassed right	(SECVRITAS REI PVBLICAE)	Victory advancing left holding wreath and palm	Reece Period 19. Confirmed Sam Moorhead.	

The coins are mostly quite worn copper alloy pieces dating predominantly to the 3rd C and 4th C AD. This matches the findings of the Horton et al publication where of the 58 identifiable coins 17% were 3rd C and over 70% were 4th C.

References

Smith, R F, 1987, *Roadside settlements in Lowland Roman Britain*, Oxford, British Archaeological Reports, British Series 157.

Taylor, A, 1997, *Archaeology of Cambridgeshire, Volume 1: South West Cambridgeshire*, Cambridge, Cambridgeshire County Council.

Horton, W., Lucas, G and Wait, G A. 1994, "Excavation of a Roman site near Wimpole, Cambs 1989", *Proceedings of the Cambridge Antiquarian Society, Volume LXXXIII*, p31 – 74.

Acknowledgements

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Thanks to Dominic Shelley and Suzanne Thompson for metal detecting under unpleasant muddy conditions.

Version 1.0

Appendix 1. Pottery photographs (courtesy of Stephen Reed)



Photo 1 – Oxford white coated ware mortaria with multi-coloured tituration grits.



Photo 2 – Nene Valley mortaria with black slag tituration grits.



Photo 3 – Samian ware.

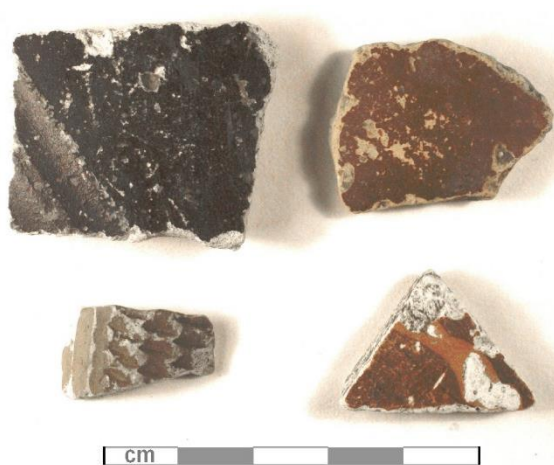


Photo 4 – Nene Valley colour-coated ware, with bottom right showing trace of barbotine decoration and bottom left with rouletted design.



Photo 5 – Shell tempered ware, with a possible box flue tile upper left.



Photo 6 – Shell tempered ware vessel, the largest fragment collected.



Photo 7 – Collection of different cooking wares, including top left – white colour-coated bowl. Centre bottom – possibly Harston ware with rouletted decoration. Left bottom – Horningsea bowl with burnished finish.



Photo 8 – Various Horningsea-type wares, bottom left showing the characteristic white/grey wash seen on many large coarseware vessels from this kiln site.

Appendix 2. Photographs of the major small finds (courtesy of Dominic Shelley)



Photo 1 – Roman fantail brooch with enamel detail



Photo 2 – Intaglio, probably in blue glass but possibly in lapis lazuli.