



**Community**  
**Landscape**  
**Archaeology**

# **GEOPHYSICAL SURVEY OF A FIELD WEST OF PLUM PARK, PAULERSPURY, NORTHAMPTONSHIRE**

**OS SP 47194 24615**  
**CLASP Geophysical Report No. 17/1**

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COMMUNITY LANDSCAPE & ARCHAEOLOGY SURVEY PROJECT



<b>REPORT FORM PROJECT DETAILS</b>	<b>OASIS No: CLASP1- 235799</b>
Project name	Plum Park, Paulerspury , Northants. Magnetome ter Survey
Short description (250 words maximum)	Survey covering 1.5ha of a field adjacent to Watling St., 1km North of the village of Paulerspury .  Possible Roman rural settlement and landscape.
Project type (eg DBA, evaluation etc)	Research
Site status (none, NT, SAM etc)	None
Previous work (SMR numbers etc)	ENN 106783, 106784
Current Land use	Arable
Future work (yes, no, unknown)	Yes
Monument type/ period	Settlement

	Roman Industrial Medieval
Significant finds (artefact type and period)	Ditches, enclosures and possible building wall foundations , Roman  Roman pot and coins (1st-4th C)
<b>PROJECT LOCATION</b>	
County	Northamptonshire
Site address (including postcode)	NN12 6LG
Study area (sq.m or ha)	1.44 ha
OS Easting & Northing (use grid sq. letter code)	Centred on SP 47194 24615
Height OD	C. OD 107m
Drift Geology	Glacial deposits
Solid Geology	Upper Lias Clay/ Great Oolite
<b>PROJECT CREATORS</b>	
Organisation	CLASP
Project brief originator	CLASP
Project Design originator	CLASP

Director/Supervisor	Stephen Young
Project Manager	Fred Kay
Sponsor or funding body	CLASP

**PROJECT DATE**

Start date/End date 3/9/2013 9/10/2013

<b>ARCHIVES</b>	<b>Location (Accession no.)</b>	<b>Content (eg pottery, animal bone etc)</b>
Physical	CLASP Archive:	None
Paper	CLASP Archive:	Site file
Digital	CLASP Archive:	Mapinfo plan files, Word report (PDF)

**BIBLIOGRAPHY**

Title	Plum Park, Paulerspury, Northants. Magnetometer Survey
Serial title & volume	CLASP report 16/3
Author(s)	Young S., Kay F.

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## **ABSTRACT**

*CLASP commissioned and conducted a geophysical (fluxgate gradiometer) survey on the site of a probable Roman Rural settlement on a field (centred SP 47194 24615) to the north of the village of Paulerspury, Northamptonshire. The field was under arable cultivation and only part of the site was surveyed, covering an area of 1.44ha of the 5ha. The purpose of the gradiometer survey was to establish and characterize the extent and nature of any remaining archaeology. Several geophysical anomalies were observed including a series of linear and rectilinear features which may have formed part of a Roman building.*

# **1 Introduction**

- 1.1 In September 2013 CLASP (Community Landscape & Archaeology Project) undertook a geophysical survey of part of an arable field adjacent to Watling Street, north of the village of Paulersbury in the district of South Northamptonshire.
- 1.2 The intention of the geophysical survey was to confirm and enhance our archaeological understanding of the character and extent of any surviving remains and to establish the relationship between the settlement and any neighbouring sites in the surrounding Roman landscape.
- 1.3 The geophysical survey covered 1.44ha of the 5ha field, centred on an area where Roman coins and pottery had previously been found and recorded through recent metal detecting survey.
- 1.4 The magnetometer survey was employed because potentially it offered the most effective and appropriate methodological approach for obtaining reasonable quality data from the existing circumstances and conditions.
- 1.5 The survey methodology described in this report was based upon guidelines set out in the English Heritage document *Geophysical Survey in Archaeological Field Evaluation* (David et al 2008).
- 1.6 Various magnetic anomalies were revealed. Several ditches / enclosures and some linear parallel features which may indicate the remains of a building were observed.

# **2 Site location and description**

- 2.1 Situated on the edge of a ridge to the north of the village of Paulersbury Mere (fig.1), centred at SP 47194 24615. The

geophysical survey area is bounded to the north by Watling Street, the main Roman arterial roadway between Towcester (Lactodurum) and Milton Keynes (Magiovinum) and was surrounded on the east, south and west sides by arable fields at the time of survey. The field is substantially flat, 107m above OD. The general aspect of the surveyed field is one of land sloping down towards the north. The field was arable at the time of survey.

- 2.2 The drift geology of the site consists of glacial boulder clay (*British Geological Survey sheet 185*, published in 1980).

### **3 Archaeological and historical background**

- 3.1 The site has not been previously explored or recorded and has only been recently identified through a metal detecting survey carried out by Messrs Dave Derby and Alan Standish in 2011.
- 3.2 Several coins and fragments of pottery were found and recovered from over a wider but relatively defined area which suggests the existence of a Roman rural settlement. The coins were mainly of the 3<sup>rd</sup> to 4<sup>th</sup> centuries AD whilst the numerous pottery sherds indicated a longer period of occupation stretching throughout the entire Roman period between the 1<sup>st</sup> and 4<sup>th</sup> centuries AD. A small bronze eagle head and part of a fibula were also retrieved. The type and nature of the evidence collected from the site would imply the existence of the domestic focus of a modest farming estate or possibly a small Romano-British villa; these are quite numerous in the general area around the Roman posting station of Lactodurum (Towcester).



## **4 Field methodology**

- 4.1 The aim of the geophysical survey using a magnetometer was to establish accurately the presence, extent and character of any geophysical anomalies within the survey area.
- 4.2 The use of a gradiometer is a non-intrusive scientific inspecting technique used to determine the presence or absence of some types of subsurface archaeological features (e.g. ditches, trackways, field systems, enclosures and building foundations). By scanning the soil surface geophysics can identify areas of varying magnetic susceptibility, the data from which can be interpreted in a variety of graphical formats and identifying images that share morphological affinities with diagnostic archaeological remains (Clark 1990). In this case magnetic survey was employed because it offered the best chance of locating the wider extent and structural detail of the surviving archaeology.
- 4.3 The area of the gradiometer survey was conducted using a Bartington gradiometer type 601, dual flux gate, with the 601 data logger set to make four readings per metre (sample interval of 0.25m). The zigzag traversed method of survey was used with 1m wide traverses on a N/S line across a series of 30 x 30m grids. The sensitivity of the machine was set to record and detect variation in the order of 0.1 nanoTesla
- 4.4 The data was processed using Snuffler version 1.3 and filtered to reduce geomagnetic striping and operator error due to ground irregularities etc. The gradiometer data is displayed as a greyscale map in fig. 3 and an interpretation of the possible archaeological anomalies is shown in fig. 4.

## **5 Field data analysis and interpretation of results**

- 5.1 Several anomalies were observable in the data obtained from the geophysical survey. These are c of three different types of feature; although their exact function and extent are difficult to postulate with any great certainty because of the restricted area of the field work.
- 5.2 The most conspicuous archaeological features were a series of boundary ditches forming small enclosures situated towards the south of the survey area which seem to display a general alignment from the NW towards the SE. These appear to be typical of field systems identified at other Roman sites in the wider local landscape.
- 5.3 Secondly, to the north and partly overlying these anomalies a disparate series of three double ditches or narrow trackways aligned from E to W appear to be associated with the final anomaly.
- 5.4 Associated with the parallel lines or trackways is the outline of a possible stone building. The structure is orientated from N to S but possibly faced SE with a main axis near 50m long and a width approaching 20m. This anomaly could represent the main range of a Roman farm house or a structural element of a larger wing corridor villa complex that lies beyond the geophysical survey area.

## **6 Conclusions**

- 6.1 The area surveyed is too small to confirm the extent and character of the site in its entirety. However the fieldwork did confirm the existence of yet another Roman rural settlement

in the environment of the Roman posting station and small town of Lactodurum (Towcester).

- 6.2 The geophysical survey supported by the metal detecting and fieldwalking assemblages of coins and pottery also indicates conclusively the existence and longevity of occupation and settlement throughout the Roman period.
- 6.3 The location of the site in close proximity to Watling Street is of interest as the majority of Roman settlements are placed further back from the road than is the case here. Whether this was more common than previously thought or is connected to a more prosaic function or rationale for location of the site is open to question and awaits further fieldwork.

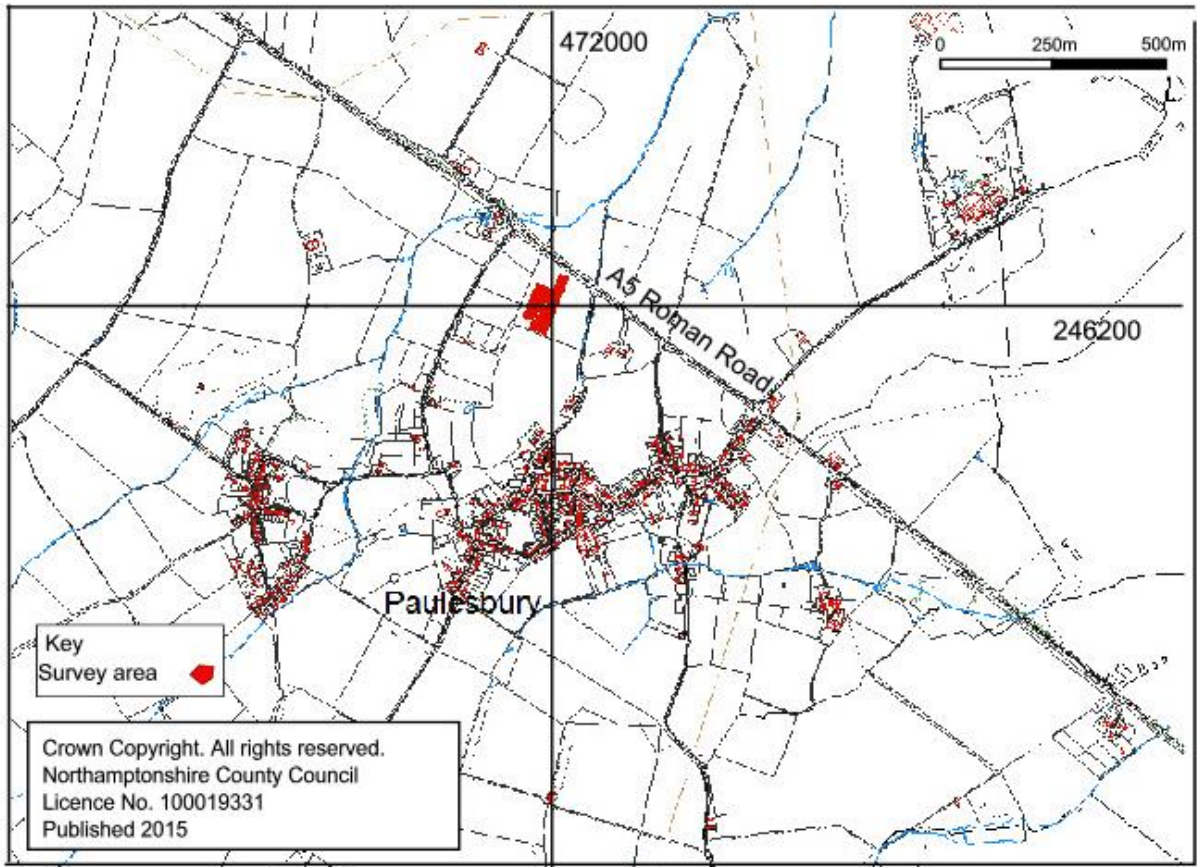
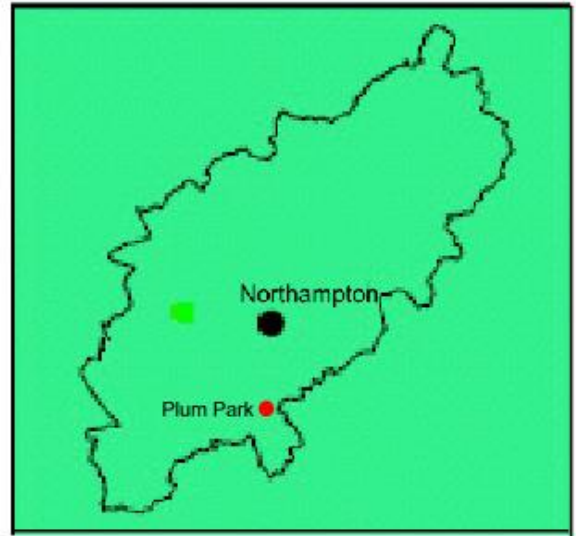


Fig 1 Location

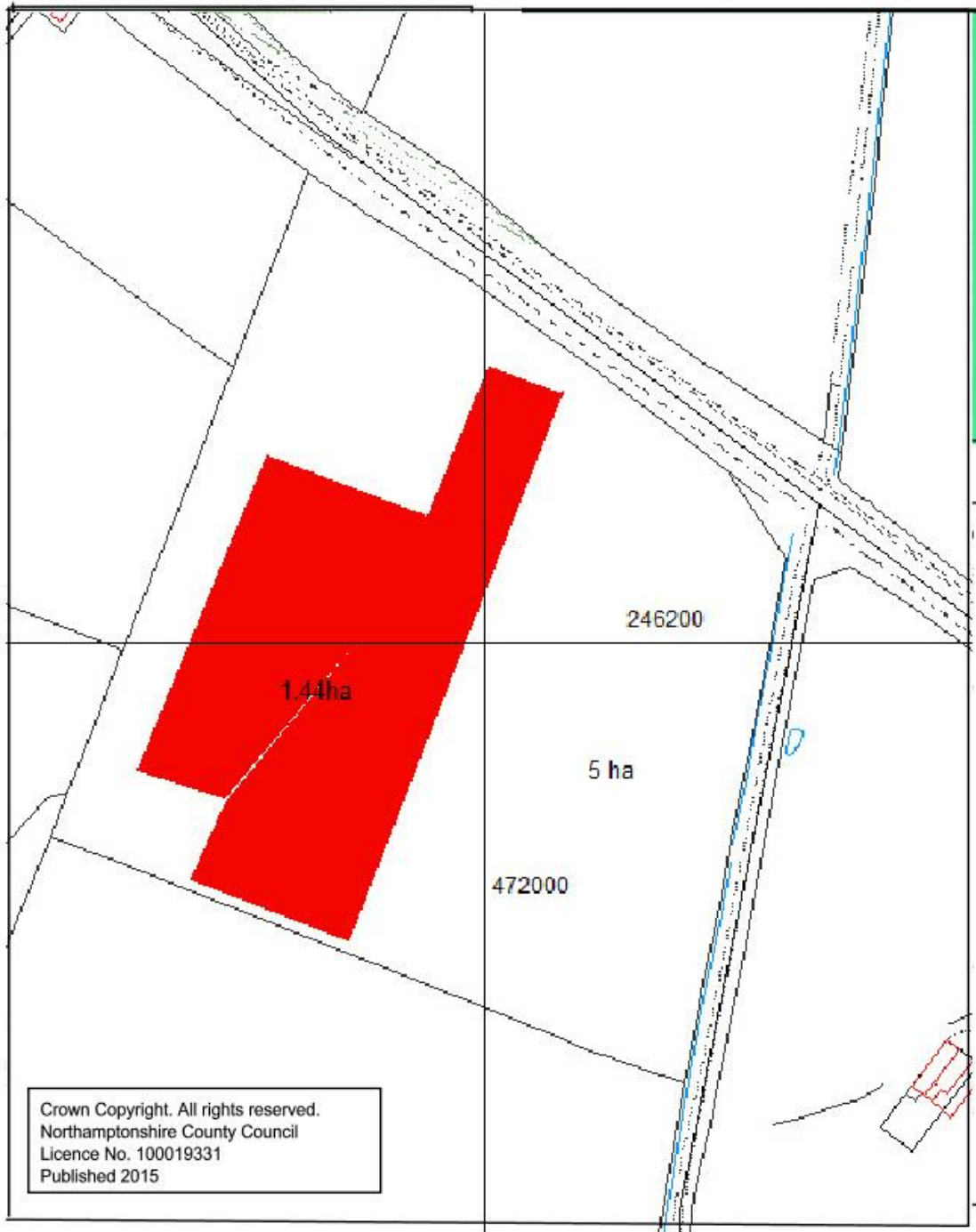


Fig. 2 Site area

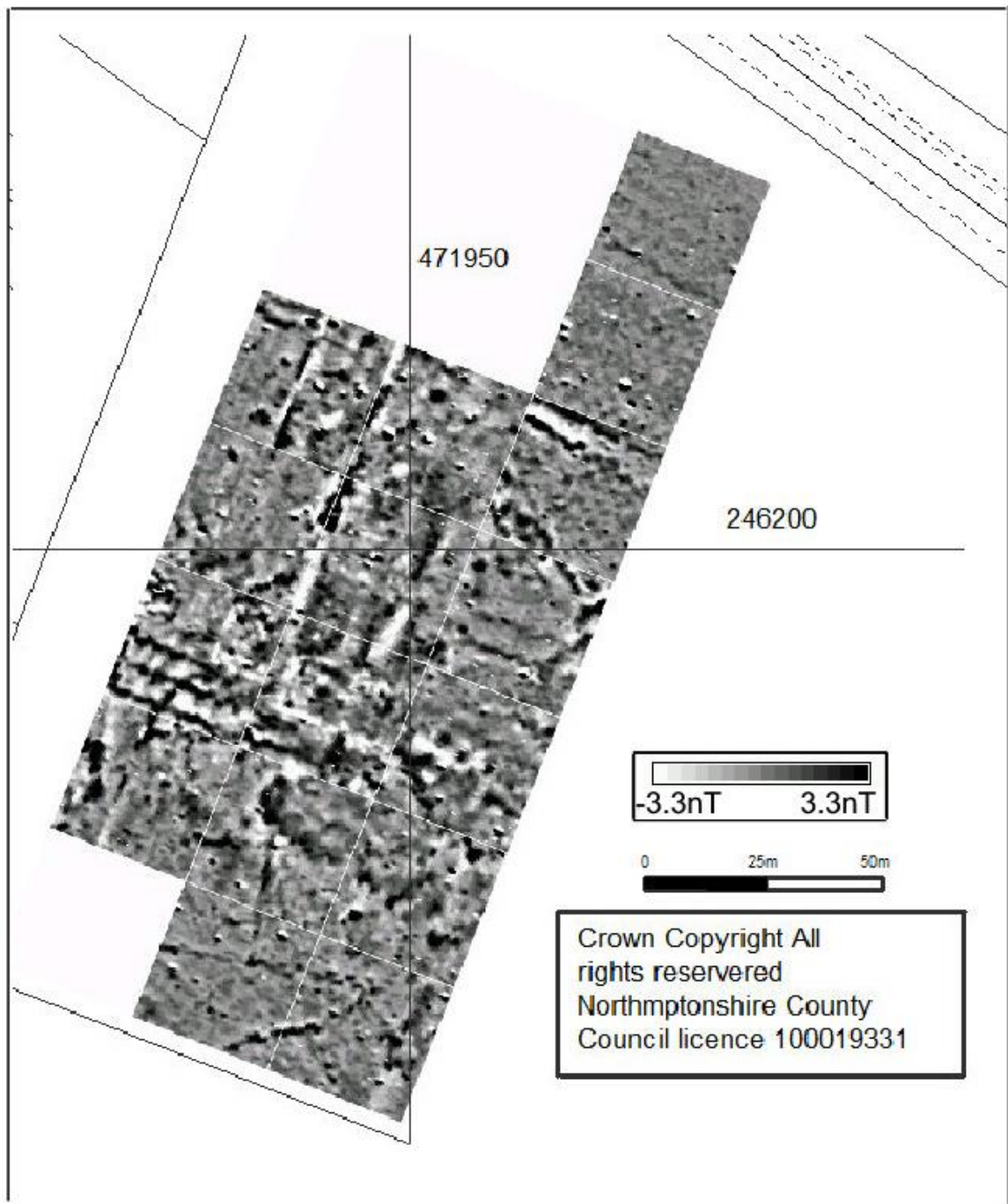


Fig 3 Greyscale plot of enhanced data



Fig. 4 Interpreted plan of gradiometer survey results

## **Acknowledgements**

CLASP would like to thank Margaret MacIntosh, Norman Garnett, Tony Keston, Colin Evans and Robert Close of CLASP for helping with the fieldwork: Dave Derby and Alan Standish, metal detector operators, for bringing the site to our attention, and Messrs Donald Taylor and Roy Taylor for access to the site: Charlotte Walker, HER officer Northamptonshire County Council, for assistance with the research: Joy Kay and Don Martin for assistance with the proof reading although any errors are strictly the authors'.

## **Bibliography**

English Heritage 1995. *Geophysical Survey in Archaeological Field Evaluation*, Research and Professional Services Guideline

Gaffney, C, Gater, J, and Ovendon, S. 2002 *The Use of Geophysical Techniques in Archaeological Evaluations*, Institute of Field Archaeologists Technical Paper

B.G.S. (*British Geological Survey sheet 185*, published 1980)



# Appendix

## HER/SMR records

- 447/1/0 Roman coin
- 7372 Industrial site, medieval
- 5245 Saxon activity
- 8323 Industrial site, medieval
- 4760/0/10 Hollow way, medieval

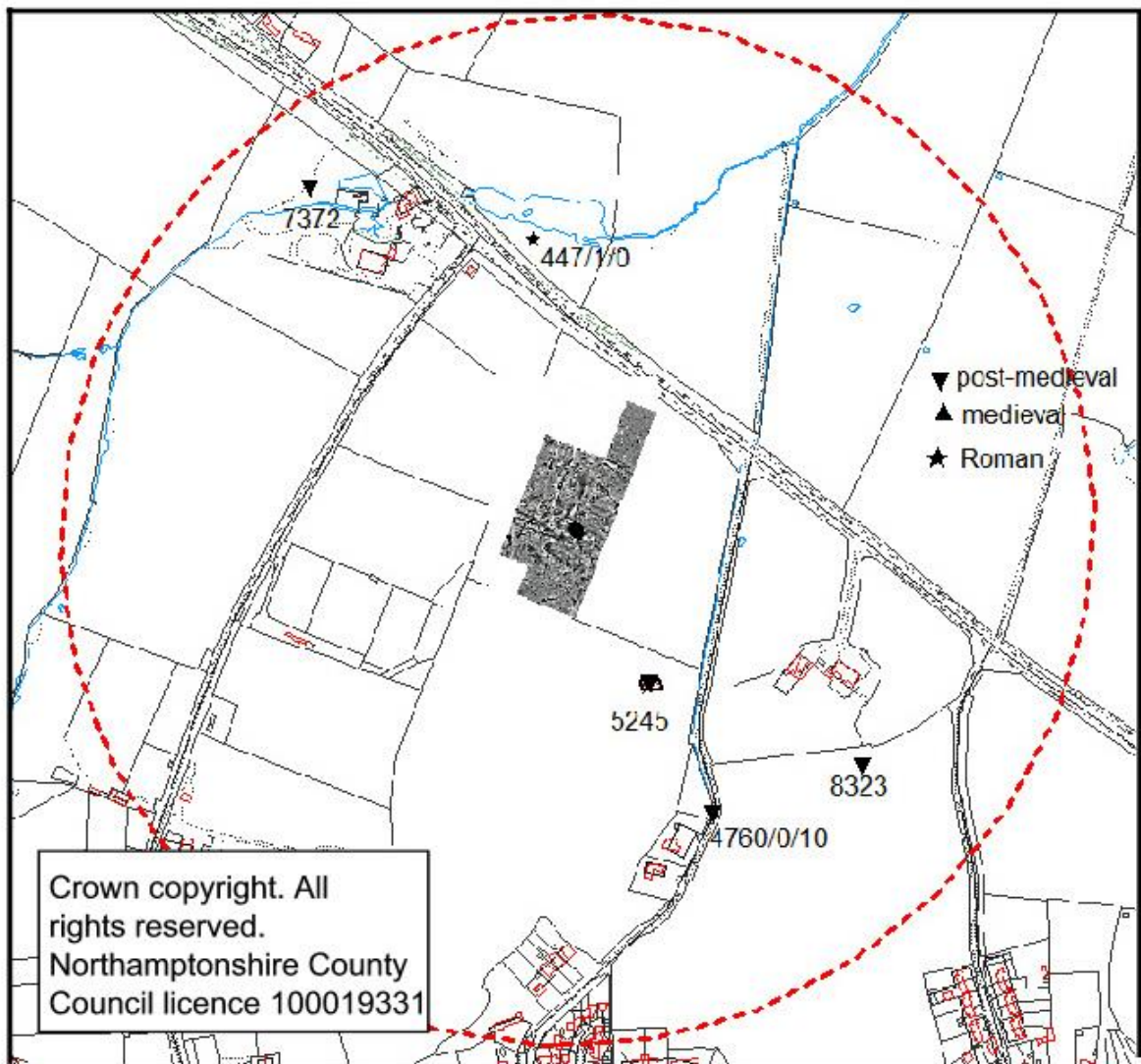


Fig 5 HER/SMR within 0.5 km