



**C**ommunity  
**L**andscape  
**A**rchaeology  
**S**urvey  
**P**roject

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## Geophysical survey of hinterland fields adjacent to Watling Street to the North West of the Posting Station of Bannaventa, Norton, Northamptonshire

**OS SP460560 264930**

**CLASP Geophysical Report No. 2/19**

**OASIS clasp1-341648**

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# Contents

<b>Abstract</b>	ii
<b>1.0 Introduction</b>	1
<b>2.0 Site Location and description</b>	2
<b>3.0 Archaeological and historical background</b>	3
<b>4.0 Field Methodology</b>	5
<b>5.0 Field data analysis and interpretation of results</b>	5
<b>6.0 Conclusions</b>	9
<b>Appendix A</b> OASIS form	10
<b>Appendix B</b> <b>Figures</b>	
Fig.1 Site Location	2
Fig.2 Survey areas	3
Fig 3 Area A geophysics	12
Fig.4 Area A interpretation	13
Fig 5 Area B geophysics	14
Fig.6 Area B interpretation	15
Fig 7 Area C geophysics`	16
Fig 8 Area C interpretation	17
Fig.9 Area D geophysics	18
Fig 10 Area D interpretation	18
Fig 11 Area D geophysics (detail)	19
Fig. 12 HER records within 0.5km	21
<b>Appendix C</b>	
HER records	20
<b>Acknowledgements</b>	21
<b>Bibliography</b>	22

## **ABSTRACT**

*CLASP conducted a large scale geophysical (fluxgate gradiometer) survey of four arable fields, covering a total area of 29ha, to the North-West of the Roman Posting Station of Bannaventa, Whilton Lodge in Norton Parish, Northamptonshire. The survey covered the area between the scheduled area encompassing the Roman Posting Station and the B4036 Long Buckby to Daventry road. The fields are bounded on the eastern side by the A5 (Roman Watling St.) and to the west by the headwater tributaries of the River Nene. The field work was undertaken in several separate surveys by volunteers of the CLASP Geophysical Team.*

*The fieldwork (centred OS SP640560 264930) was commissioned to observe and record the extent of any residual archaeological landscape remains connected with the Posting Station. CLASP's rationale was to help establish and characterize the nature of any remaining archaeology associated with the site, identify any extra mural development and examine the immediate hinterland for Roman activity in the general area to the north west of the late 3<sup>rd</sup>/4<sup>th</sup> century settlement.*

*Discrete geophysical features were observed, indicating the presence of a range of period-based activity within the survey fields. The findings unmistakably implied the existence of widespread Roman and possible underlying Late Iron Age landscape, together with regularly laid-out ribbon development along Watling Street.*

*A broad expanse of features constituting paddocks, enclosures, possible roundhouses and trackways situated further to the north-west on the more elevated contours radiated out from the north gate of the Roman Posting Station indicated the extent of the site. The hinterland features offer widespread evidence of the agricultural regime practised and outlines the link between the fields and the inhabited settlement itself, illustrating some aspects of the nature of rural and domestic daily life at the site.*

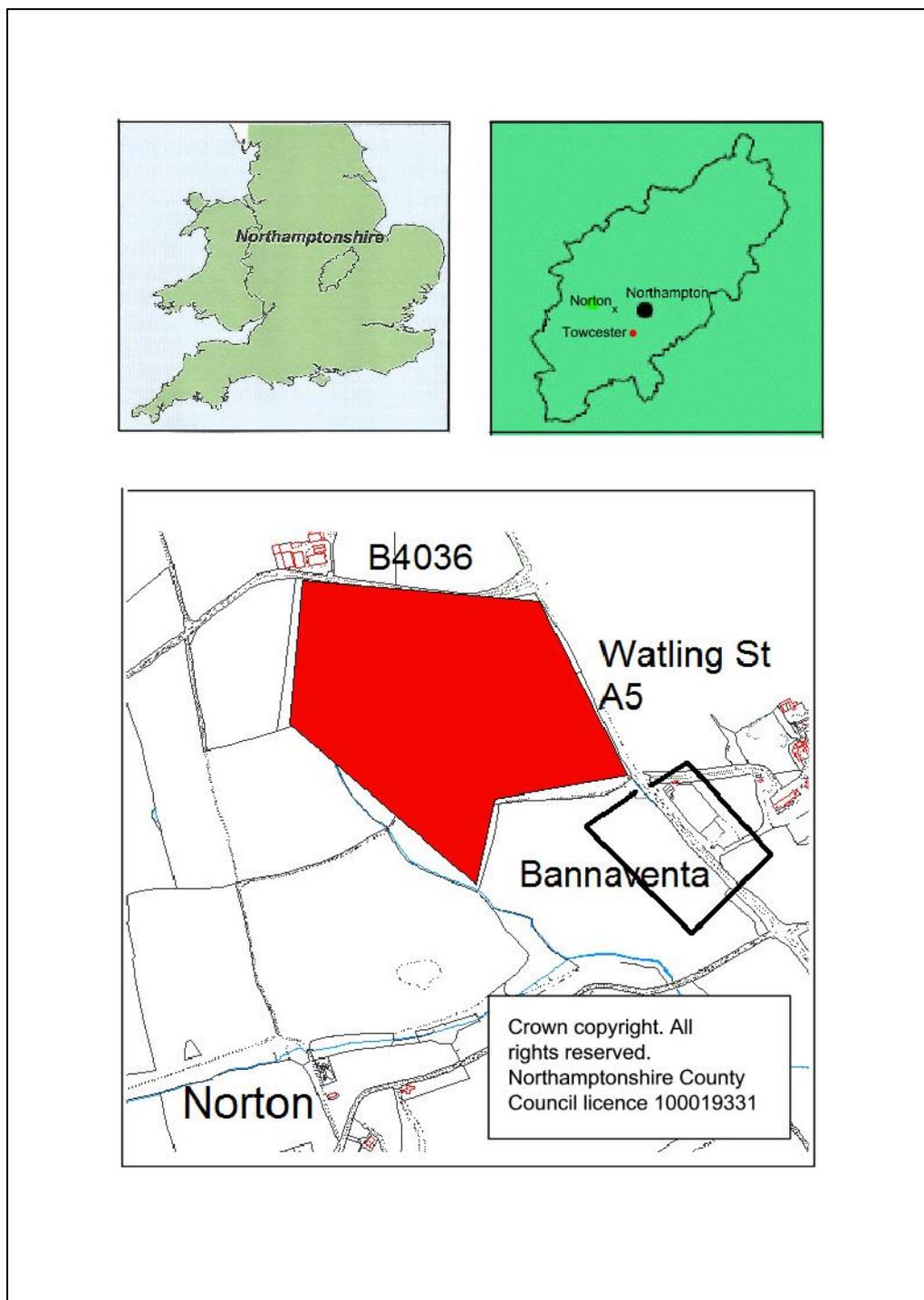
## 1.0 Introduction

- 1.1 A geophysical survey was conducted by the Community Landscape and Archaeology Survey Project (CLASP), a community based archaeological charity, between 2012 and 2017. The investigative work was undertaken on four fields North-West of the late Roman Posting Station of Bannaventa all lying to the West of Watling Street.
- 1.2. The survey purpose was to confirm the extent of any archaeological remains associated with the Late Roman Posting Station and its immediate hinterland outside o the North gate. Findings from the survey will, with other fieldwork in the wider area, assist Historic England in future conservation policy regarding the Posting Station of Bannaventa.
- 1.3 The survey covered a total area of 29 ha spread over four fields. At the time of survey the fields were all arable with crops either oilseed rape or cereal. 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<sup>1</sup>.
- 1.4 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).
- 1.5 Various magnetic anomalies were revealed, suggesting fairly intensive agricultural activity over a long period including some probable round houses. There were also indications of ribbon development and extra-mural activity composed of regularly laid out enclosures adjacent to Watling St. extending for 500 m North of the Posting Station boundary.

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<sup>1</sup> A. Clark, *Seeing beneath the Soil*, 1996

## 2.0 Site Location and Description

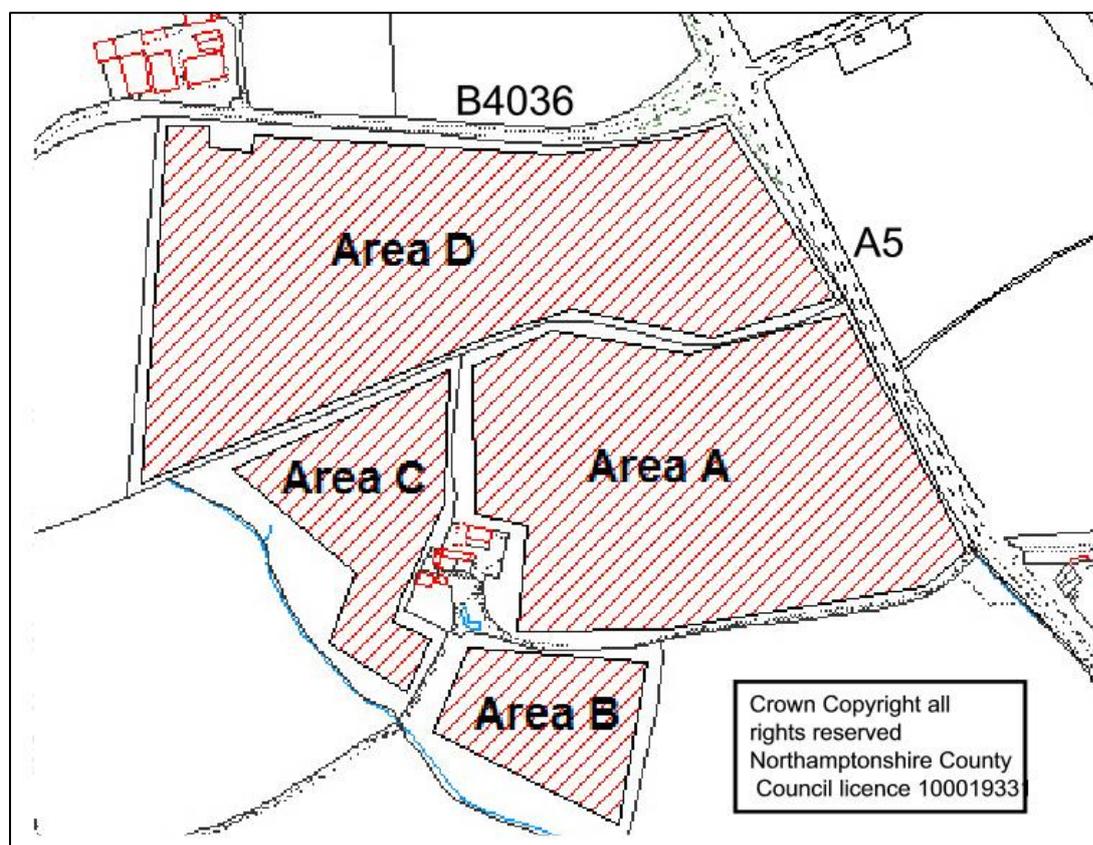


**Fig 1. Site Location**

2.1 The survey site lies in the parish of Norton, Northamptonshire and is agricultural land farmed by Thrupp Farms Ltd. During the survey period it was arable with either cereals or oilseed rape. The survey

fields lie to the West side of the A5 (Watling St) immediately North of the posting station. It covers four fields with a total area of 29 ha

- 2.2 The area is situated on the substantially level ground of a promontory at an average of 120m OD (fig.2). The drift geology of the site consists of glacial sands and gravel deposits. (*British Geological Survey sheet 185*, published in 1980).



**Fig. 2 Survey Areas**

### **3.0 Archaeological and historical background**

- 3.1 The main archaeological feature of the area is the scheduled Posting Station of Bannaventa. The walled defensive perimeter covers about 5 ha. Bannaventa itself is an integral part of a larger scheme of systematically placed settlements that comprise a series of sites situated at regular intervals along Watling Street between Londinium (London) and Viroconium Cornoviorum (Wroxeter). Ancient itineraries note that Bannaventa was situated between the neighbouring posting stations at Lactodorum (Towcester) to the South and Tripontem (Cave's Inn) to the North.

In the wider landscape Bannaventa's strategic importance is reflected in its location on the main arterial road from the South-east to the North-west of the province whilst locally it occupies a key position on the watershed of the River Nene dominating the local villa-based economy. The settlement acted as a market centre and focal point with semi 'urban' attributes for the densely inhabited surrounding area of rural settlement.

- 3.2 Various archaeological discoveries were made during the early twentieth century implying the existence of a significant settlement in the wider area. In 1970 air photographs revealed the outline of the western part of the posting station alongside the modern A5. These photographs, allied to the rescue excavations undertaken on the site in 1970-72, revealed the existence of a roadside station of irregular quadrilateral shape with rounded corners; bounded by a defensive ditch and rampart, enclosing an area of approximately 5ha. The defences were updated by a double ditch and wall in the later third or fourth century with gates in the north and south of the defensive perimeter to allow the passage of Watling Street through the town (RCHME, 1981, 151-2). Recent work nearby has revealed a larger, earlier enclosed area of 9ha indicating a much larger small town beneath the later Posting Station.<sup>2</sup>
- 3.3 It is likely that the Posting Station became a local market centre, owing its prosperity to its location on Watling Street, one of the region's arterial roads, and its access to the relative wealth of the agricultural hinterland. Previous fieldwork has demonstrated that the site's origins lie in the pre-conquest period with major development commencing in the late 1<sup>st</sup> to early 2<sup>nd</sup> century, defensive additions in the 3<sup>rd</sup> and 4<sup>th</sup> and occupation continuing into the early 5<sup>th</sup> century AD.<sup>3</sup>
- 3.4 Excavation has demonstrated that buildings were constructed during the mid-second and third centuries, the majority being timber of rectangular sill beam construction, although the remains of stone buildings are also noted. Bannaventa was occupied up to at least the

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<sup>2</sup> Young & Kay 2018 *Geophysical Survey of the Roman Posting Station of Bannaventa and its hinterland adjacent to Watling Street in Fields East of the A5*

<sup>3</sup> Young & Kay forthcoming

early 5<sup>th</sup> century AD but it is not known to have survived in any recognizable form into the later Saxon period (SMR 895).<sup>4</sup>

## **4.0 Field Methodology**

4.1 The aim of the geophysical survey was two-fold: to establish accurately the extent and presence of archaeological remains and the character of any geophysical anomalies within the survey area.

4.2 The gradiometer is a non-intrusive scientific surveying instrument 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 displayed in a variety of graphical formats from which archaeological features can be identified. 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 (Clark 1990).

4.3 The area survey was conducted using a Bartington gradiometer type 601, dual flux gate gradiometer, with the 601 data logger set to make four readings per metre (Sample interval of 0.25m). The zigzag traverse method of survey was used with 1m wide traverses on an approximate North South line across the fields based on 30x30m grid squares. The sensitivity of the machine was set to detect and record variation in the order of 0.1 nanoTesla. Metal contamination along some field boundaries and landscape trees with metal cattle protection slightly restricted the survey area

4.4 The data was processed using Snuffler Version 1.3 and filtered to reduce geomagnetic striping (ZMT) and operator error due to ground irregularities etc. The gradiometer data is displayed as a series of greyscale maps and an interpretation of the possible archaeological anomalies is shown in a series of interpretational figures on a field by field basis.

## **5 0 Field data analysis and interpretation of results**

To assist interpretation in a logical and more accessible way presentation of the findings from the geophysical survey anomalies

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<sup>4</sup> Taylor, Jeremy Reference excavation reports

are reviewed by individual field and in an alphabetical order starting with Area A and finishing with Area D.

### **5.1 Area A (Figs, 3 & 4)**

The survey field immediately to the north of the Roman Posting Station to the west of Watling Street reveals a complex pattern of features implying several phases of occupation and cultivation possibly from as early as the Late Iron Age right through to the Medieval period with an emphasis on the Roman era. The majority of anomalies lie in the central and eastern sections of the field where the relatively level land adheres to the higher contour relief of the underlying promontory.

The earliest observable feature is probably a short linear stretch of a pit alignment aligned roughly north to south towards the northern boundary of Field A. This is a feature that occurs frequently in Northamptonshire and probably represents an early land boundary and although difficult to date these have been attributed elsewhere to the Late Bronze/Late Iron Age periods<sup>5</sup>. The alignment is quite short and does not extend into the next field (Area D).

In the south east corner and aligned along the eastern side of Field A adjacent to Watling St. are a series of fairly regular/linear ditches indicative of a field system composed of enclosures and paddocks whose layout appears to correspond with the Late Roman Posting Station boundary suggesting they date to the Romano-British period. The anomalies mirror the same type of features identified to the east of Watling St and form the core of the ribbon development located to the north of the settlement.

Further west towards the south and centre of Field A are more irregular ditches and small rectangular features (animal pens or paddocks?). They occupy a similar alignment to the 'Roman' features but equally could suggest earlier activity going back to the pre-conquest era. There are also several circular features observable within both areas situated in enclosures implying the presence of roundhouses.

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<sup>5</sup> Alison Deegan, *Mapping Ancient Landscapes, Northamptonshire*

Diagonally dividing the field is a broad track which snakes across the field connecting the north gate of Bannaventa with another discrete area of Roman features further to the North West near Thrupp Grounds, and may well date to that period. This feature lies beneath ridge and furrow which itself is most likely of medieval date, with a spacing between ridges of 8-9m. Extensive patches of ridge and furrow can be observed running both East West and North South are also present in Field A. These features could be associated with the open field system of the outlying settlement of Thrupp<sup>6</sup>, situated 800 m to the North-West.

A disturbed area of features in the centre of Area A looks like a demolished building although there is nothing visible on the surface to determine the character and date of the disturbance.

## **5.2 Area B (Figs. 5 & 6)**

The geophysical survey of this field revealed very few archaeological features. A very faint, presumably shallow, possible boundary ditch is visible running along the top of the quite sharp slope to the South-West. There is some 'noise' along the North edge from adjacent road material but little else. Area B lies immediately to the south west of the previous field on the interface between the elevated promontory plateau and the steeper sided headwater tributary of the River Nene

The absence of features reinforcing the interpretation from the wider site that features are confined to the level high part of the plateau.

## **5.3 Area C (Figs. 7 & 8)**

The field containing Area C lies immediately to the west and north west of Areas A and B and contains a number of features that appear to fit into the wider context. Located centrally within the field is a wedge-shaped enclosure surrounding a number of circular features, probably round houses and/or stores. This appears to be a characteristic type of feature the layout of which has been detected elsewhere in the locality. In fact, it is almost identical to a group of feature recorded at Harpole approximately 100m from a Romano-

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<sup>6</sup> Partida, Hall & Foard. *An Atlas of Northamptonshire*, 2013

British villa<sup>7</sup> and also on an aerial photo at SP460647 276680 (Long Buckby) associated with a Romano-British agricultural estate<sup>8</sup>. Its purpose is difficult to discern but an agricultural context seems the most sensible interpretation. In addition, two other small enclosures are visible; possibly from the size, these could be interpreted as animal pens or paddocks. Extensive evidence of medieval ridge and furrow is present in the field as elsewhere in the general locality.

Victorian features include an iron water pipe originally supplying the farmhouse from a natural spring and debris from old garden features and work on the barns.

#### **5.4 Area D (Figs. 9, 10 & 11)**

This field is the most northerly investigated during the geophysical survey. It lies to the south of the B4036 and to the west of Watling St. A series of features was identified implying several discrete classes. At the eastern edge of the field is a series of enclosures which appear to form part of the organised, well laid out, ribbon development associated with the alignment of the Roman Road.

Towards the centre of Area D is another extensive complex of enclosures orientated along the same alignment as those further to the east. One enclosure appears to contain a roundhouse and possibly other structures. The features could be interpreted as a farmstead surrounded by an inland field system. Excavation of a surface within the enclosure revealed a Late Iron Age/Pre-Roman Conquest period of activity at the site.<sup>9</sup>

Several pens or paddocks of various sizes were also recorded spread across Area D. These features appear to be unrelated to any of others previously discussed in the field and probably indicate a change in agricultural regime in the late Roman land use pattern, perhaps associated with sheep rearing and wool trade which is known to have been important in the locality.

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<sup>7</sup> Young & Kay *Geophysical survey of Barn Close and the Mere, Harpole* 2015 (OASIS no. clasp1-225998)

<sup>8</sup> Google Earth 2005

<sup>9</sup> Young forth coming

Evidence of medieval ridge and furrow was also noted in the field and is consistent with the other examples found within the survey area.

## **6.0 Conclusions**

The geophysical survey of these four fields to the west of Watling St and to the north of the Late Roman Posting Station of Bannaventa complement our understanding of the wider settlement in its immediate and wider locality. It has helped us to establish the extent of activity associated with the site and highlighted the longevity of the occupation of the area. Crucially it confirms that the hinterland of Bannaventa spread across the higher ground of the promontory and was demarcated to some extent by the steeper sides of the eroding drainage pattern of the watershed streams of the River Nene on good agricultural land above 126m OD which would not be flooded.

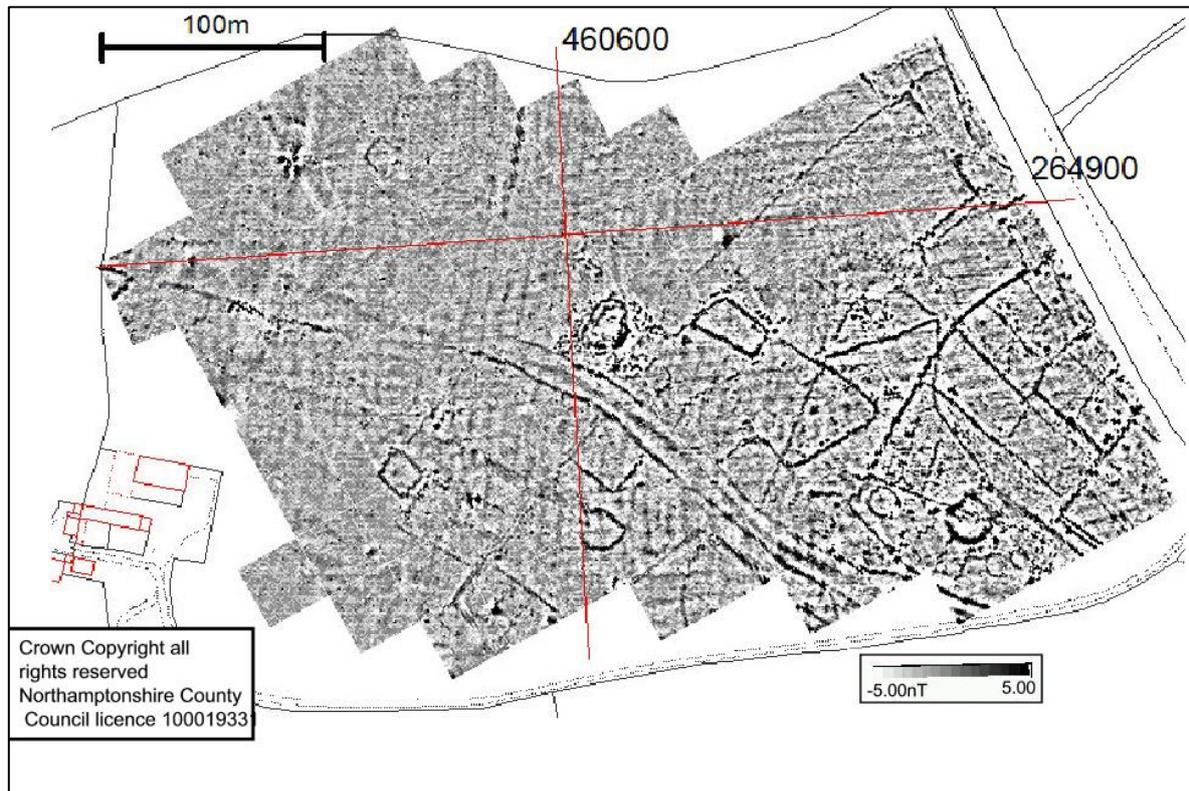
Geophysical features located along Watling St indicate the scale of the ribbon development to the north of the Posting Station and imply an organised and structured laying out of this part of the site, consistent with a central planning agency probably based on the small town. It is now beyond doubt that the surveyed area is almost entirely outside the residential/commercial focus of the settlement and its importance lies in the agricultural and communicational aspects of the features located.

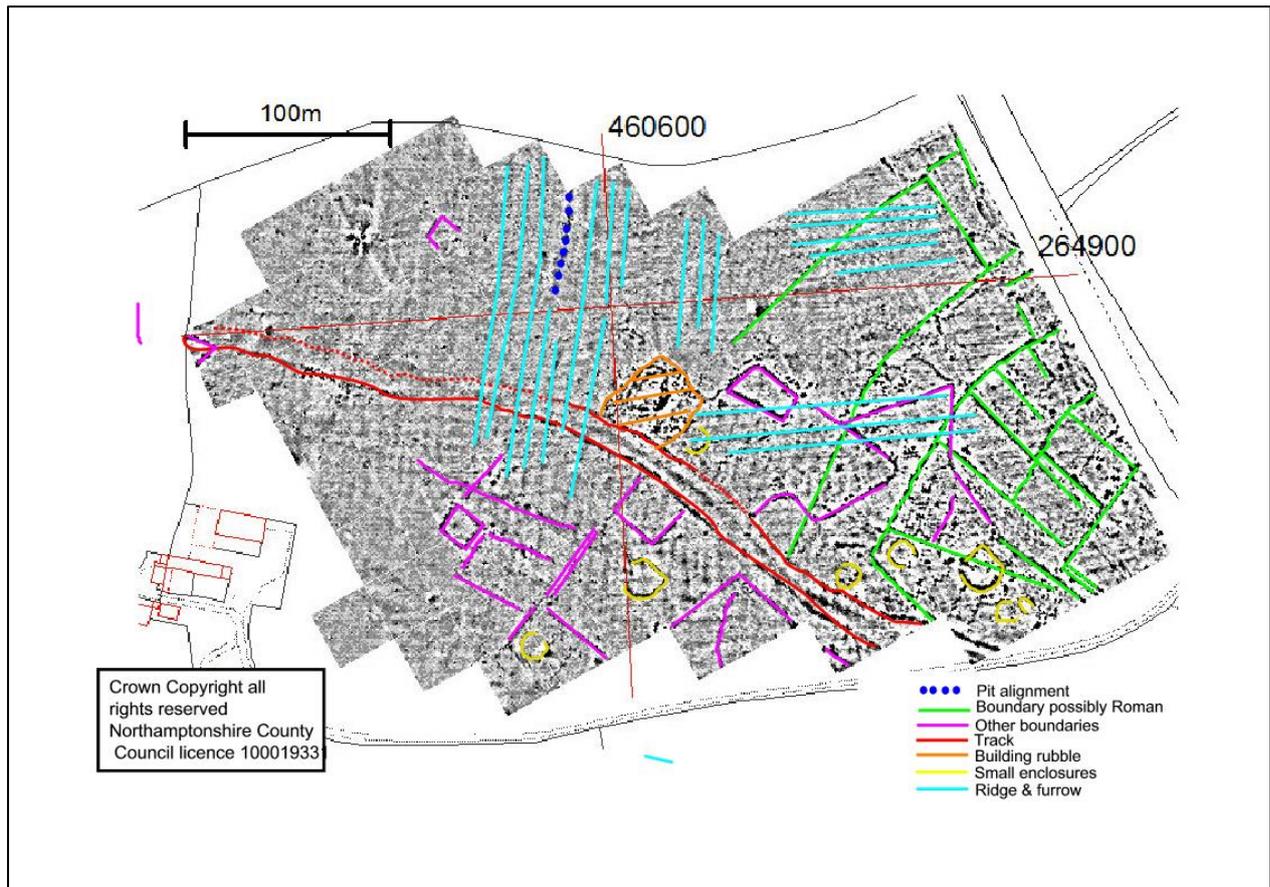
All the geophysical features identified, based on the field systems and enclosures, suggest several different phases of landscape development including the application of specific agricultural regimes to meet the diverse and changing agricultural needs of Bannaventa as a community through time.

**Appendix A OASIS form**

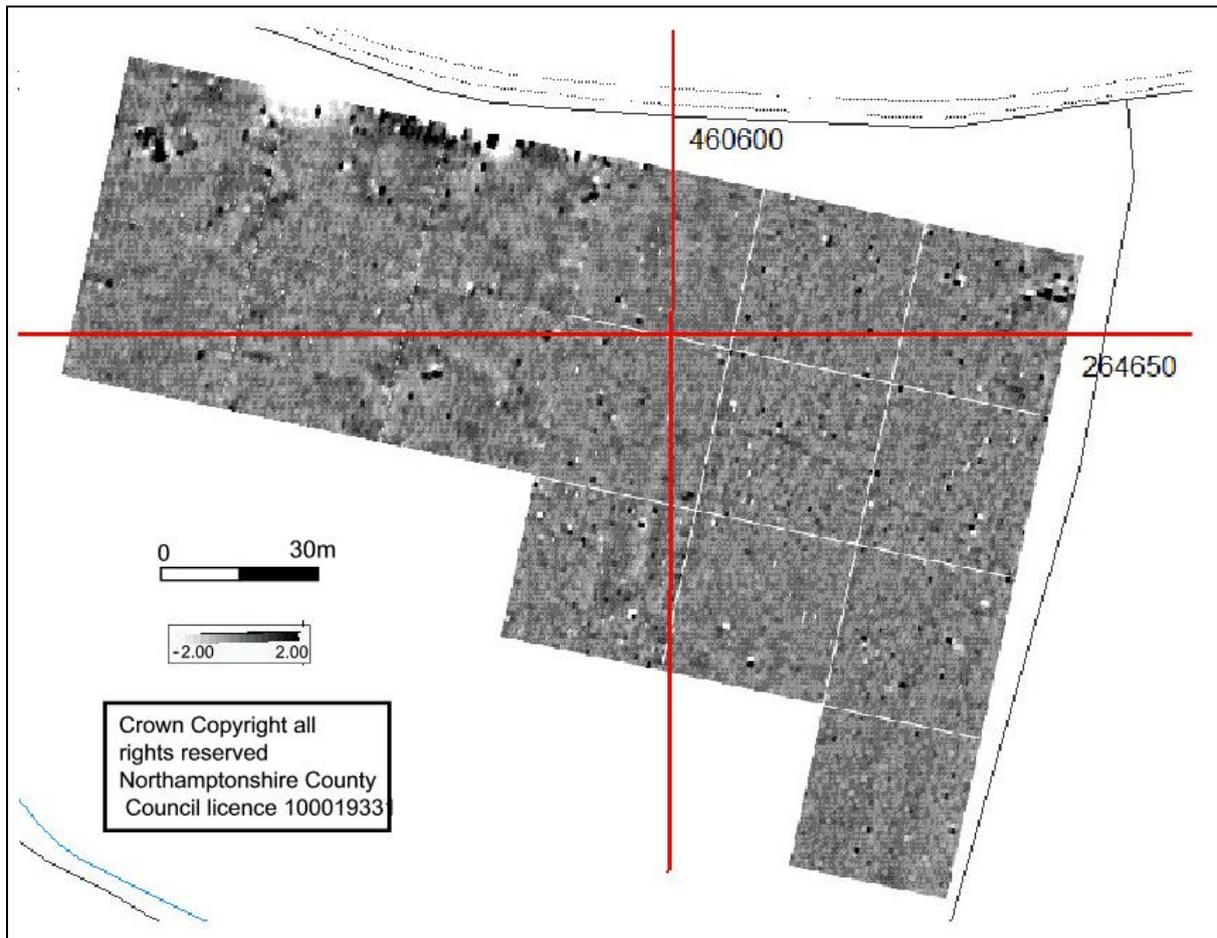
<b>REPORT FORM PROJECT DETAILS</b>	<b>OASIS No: clasp1-341648</b>
Project name	Magnetometer survey. Bannaventa-North. Norton Parish, Northants
Short description (250 words maximum)	Geophysical survey of 4 fields NW of Bannaventa in Northamptonshire. The survey revealed numerous ditches, enclosures, possible round houses and regularly laid out enclosures adjacent to Watling St. extending for 500m North of the Posting Station boundary.  2 phases of ridge and furrow.
Project type (eg DBA, evaluation etc)	Research
Site status (none, NT, SAM etc)	None
Previous work (SMR numbers etc)	None
Current Land use	Pasture
Future work (yes, no, unknown)	Unknown
Monument type/ period	Early Roman
Significant finds (artefact type and period)	Ditches, enclosures, possible round houses
<b>PROJECT LOCATION</b>	
County	Northamptonshire
Site address (including postcode)	Norton Lodge, Norton, Northamptonshire NN11 2LY
Study area (sq.m or ha)	29 ha
OS Easting & Northing	Centred on SP 460560 264930

(use grid sq. letter code)		
Height OD	C. OD 123m	
<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	None	
<b>PROJECT DATE</b>		
Start date/End date	Dec 2012 - Jan 2016	
<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 plans, Word report
<b>BIBLIOGRAPHY</b>		
Title		
Serial title & volume		
Author(s)	Stephen Young & Fred Kay	
Page numbers		

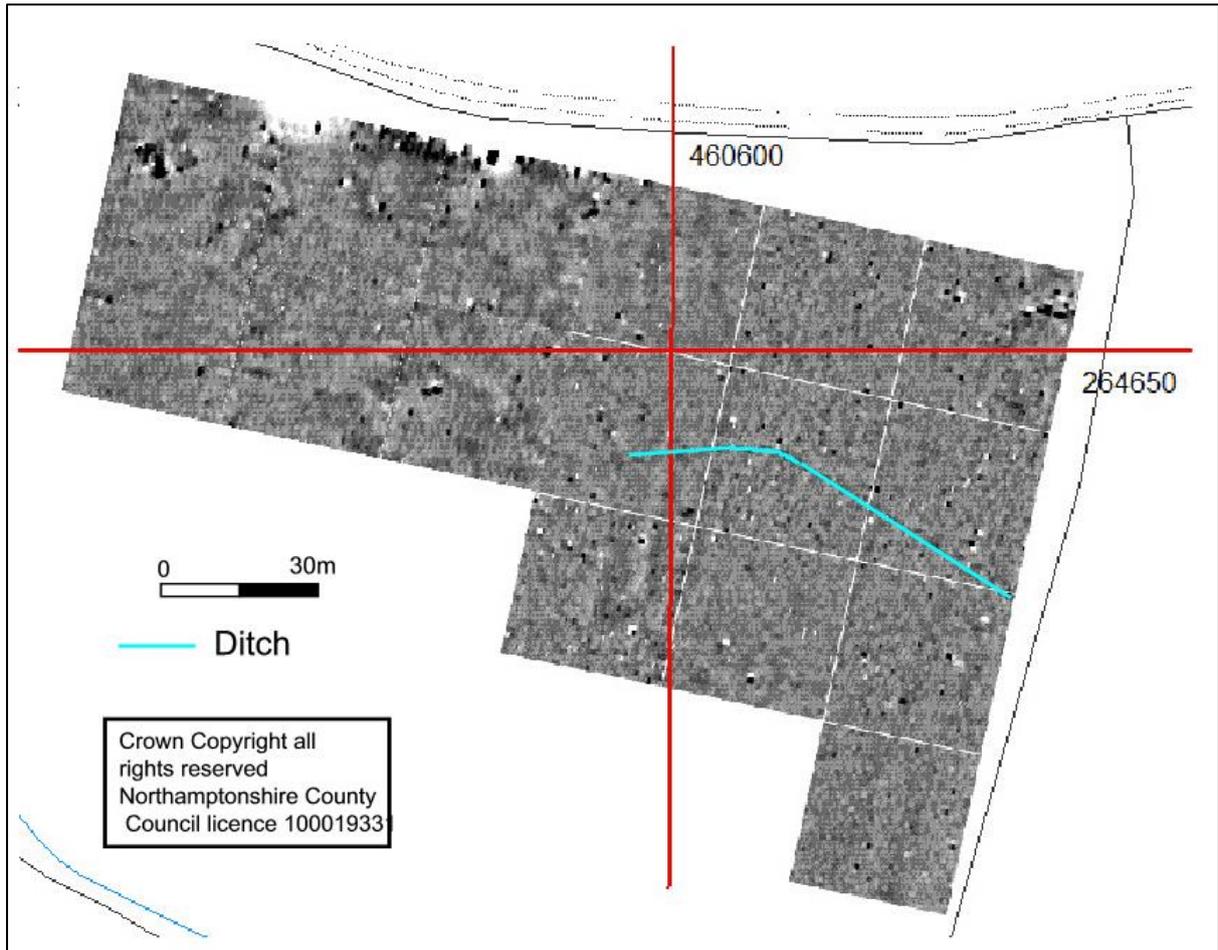
**Appendix B****Figures****Fig 3 Area A Geophysics**



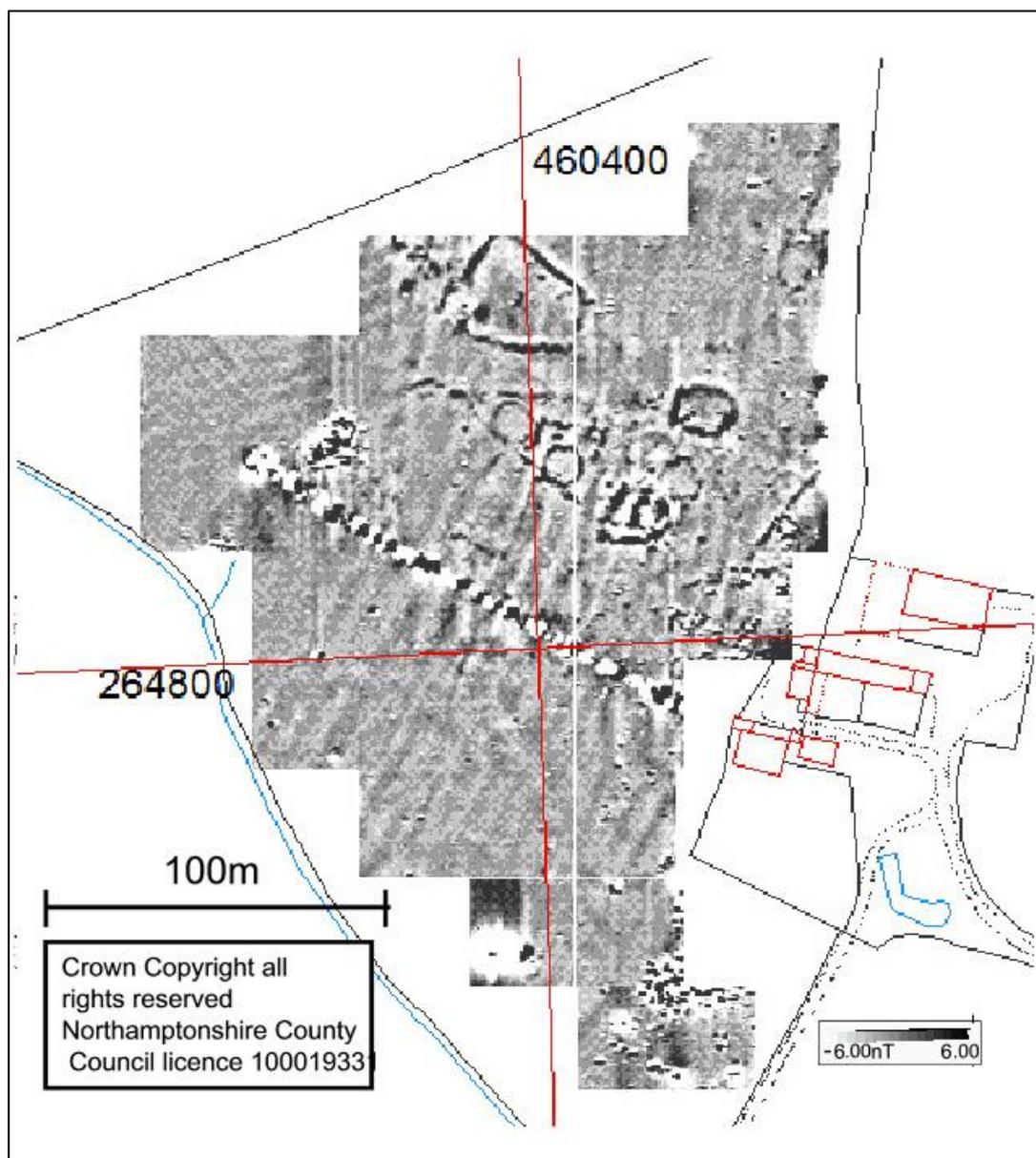
**Fig. 4 Area A interpretation**



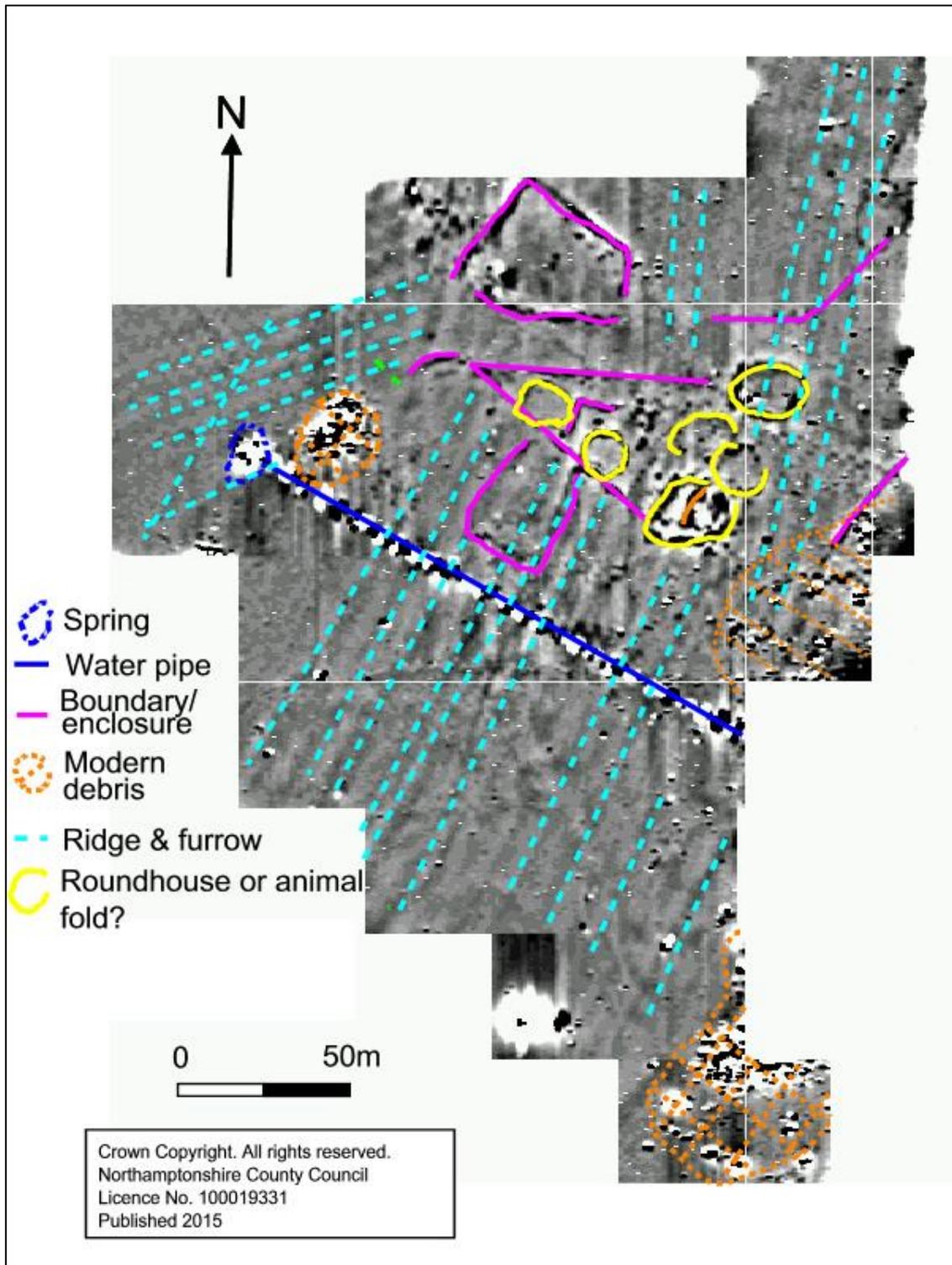
**Fig. 5 Area B geophysics**



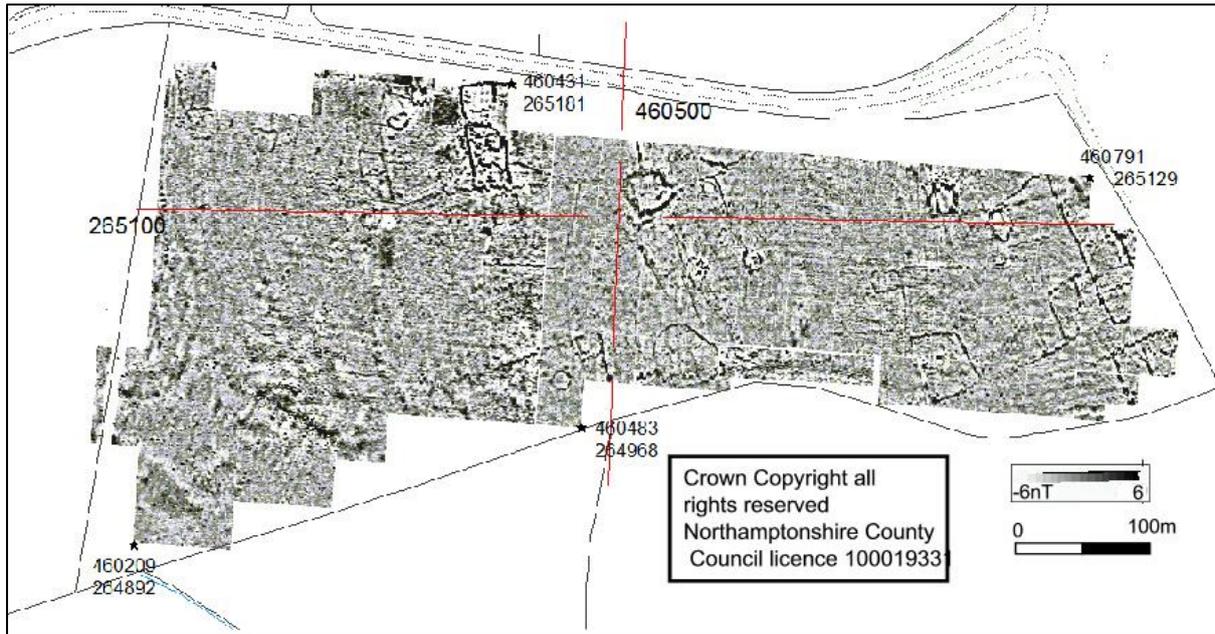
**Fig. 6 Area B interpretation**



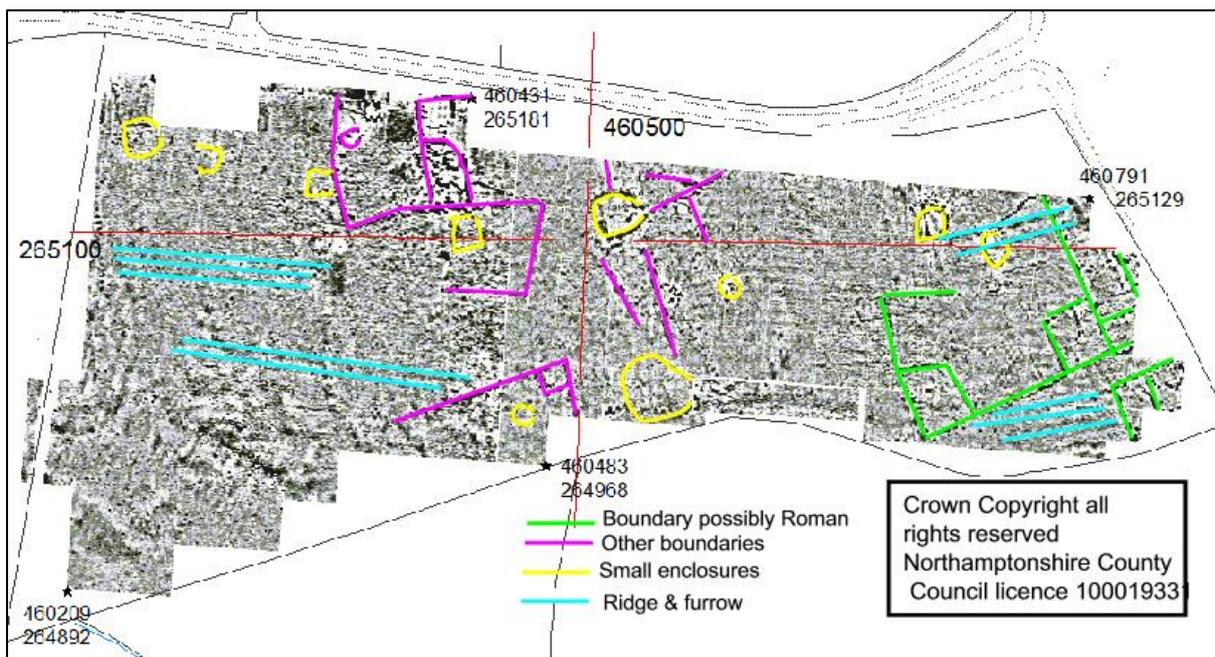
**Fig. 7 Area C geophysics**



**Fig. 8 Area C interpretation**



**Fig.9 Area D geophysics**



**Fig. 10. Area D Interpretation**



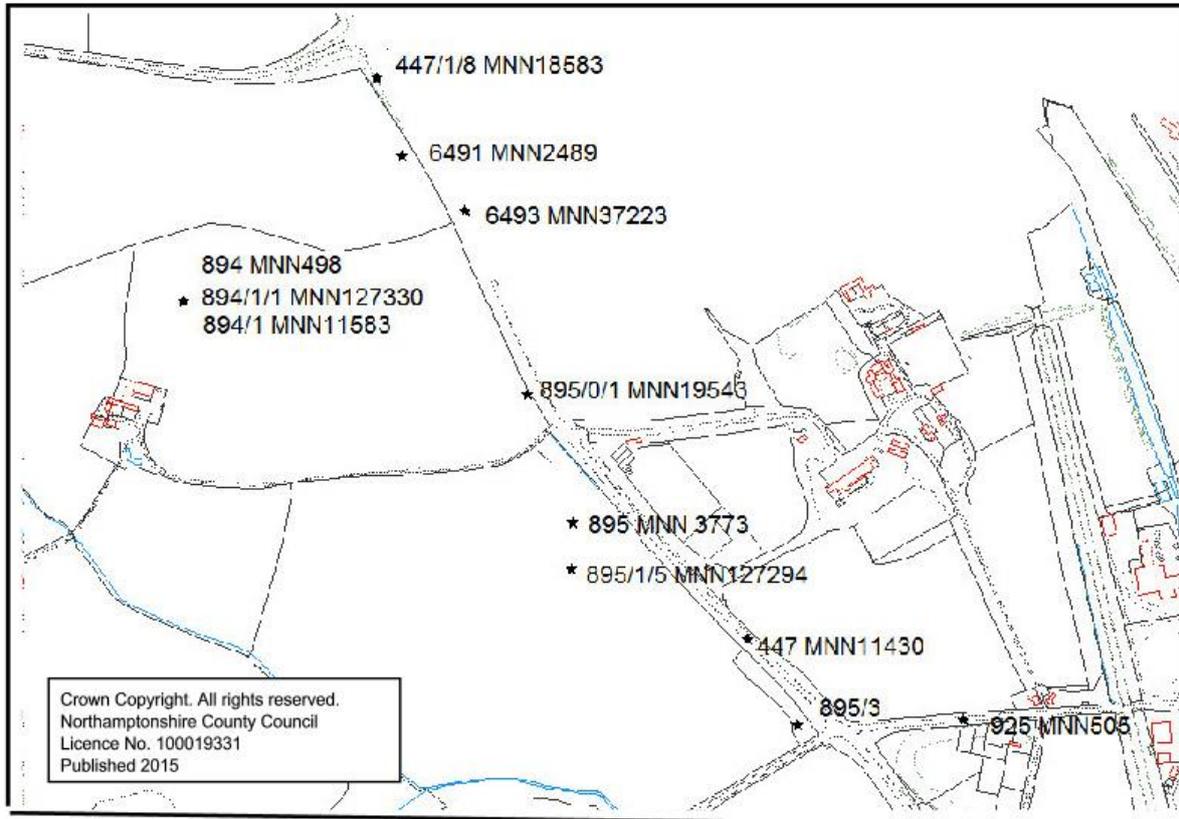
**Fig11. Area D geophysics (detail)**

## APPENDIX C

### HER/SMR records

The County HER records show large numbers of Roman small finds i.e. pot sherds and coins in the fields surrounding Bannaventa, too numerous to list here. Below are other Roman features recorded in the area

	<b>Type</b>	<b>SMR</b>	<b>OS co-ords</b>	<b>Description</b>
MNN11430	MON	447/1	6076 6521	Watling Street Roman road (Margary Routes 1e & 1f)
MNN11583	MON	894/1	605 649	Possible Roman villa north- west of Bannaventa
MNN127294	MON	895/1/5	6100 6458	Section of Bannaventa town defences (Morphed aerial archaeology interpretation)
MNN127330	MON	894/1/1	6058 6493	Part of a possible Roman villa
MNN18583	MON	447/1/8	6076 6535	Inhumation from base of Roman ditch
MNN2489	MON	6491	6087 6509	Possible Roman settlement
MNN3773	MON	895	6101 6456	Bannaventa Roman settlement
MNN505	MON	925	6151 6442	Duston-Bannaventa Roman road
MNN498	MON	894	605 649	Possible Roman settlement
MNN19543	MON	895/0/1	6096 6480	Roman rubbish pits
MNN37223	MON	6491/0/1	609650	Roman cobbled surface, nails, brick
		895/3	612 264	Possible Romano/British cemetery south of settlement



**Fig. 12. HER records within 0.5km**

### **Acknowledgements**

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The landowner, Joe Adams for access to the site and support.

Charlotte Walker, HER Officer, Northants County Council for assistance with the research.

Roman Research Fund for financial assistance.

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(OASIS No. clasp1-336159) CLASP, Northamptonshire

