Community
Landscape
Archaeology

GEOPHYSICAL SURVEY OF THE NORTH-EAST CORNER OF THE WALLED ROMAN POSTING STATION OF BANNAVENTA (WHILTON LODGE) NORTON, NORTHAMPTONSHIRE

OS SP 461234 264692

CLASP Geophysical Report No. 16/4

STEPHEN YOUNG AND FRED KAY

February 2017

COMMUNITY LANDSCAPE & ARCHAEOLOGY SURVEY PROJECT

LOTTERY FUNDED

REPORT FORM PROJECT DETAILS	**OASIS No: clasp1-244911**
Project name	Geophysical survey of the North East corner of the Walled Roman Posting Station of Bannaventa (Whilton Lodge) Norton Northamptonshire
Short description	A magnetometer survey of the NE corner of the Roman Posting Station at Bannaventa on Watling St., Whilton Lodge, Northants. Revealed the NE corner of the defensive double ditch, a possible road way and interior linear features and probable building platforms
Project type (eg DBA, evaluation etc)	Research
Site status (none, NT, SAM etc)	None
Previous work (SMR numbers etc)	Rescue & trial excavation trenches
Current Land use	Camp site
Future work (yes, no, unknown)	Yes. Trial trenches (CLASP 2013)
Monument type/ period	Roman settlement
Significant finds (artefact type and period)	Ditches, Roman
PROJECT LOCATION	
County	Northamptonshire
Site address (including postcode)	Whilton Lodge Watling St. Norton NN11 3EH
Study area (sq.m or ha)	
OS Easting & Northing (use grid sq. letter code)	Centred on SP 461234 264692
Height OD	C. OD 123m
Solid Geology	Upper Lias
Drift Geology	Glacial clay, gravel

PROJECT CREATORS		
Organisation	CLASP	
Project brief originator	CLASP	
Project Design originator	CLASP	
Director/Supervisor	Stephen Young	
Project Manager	Fred Kay	
Sponsor or funding body	Roman Research Trust	
PROJECT DATE		
Start date/End date 01-12-2011	30-01-2012	
ARCHIVES	**Location (Accession no.)**	**Content (eg pottery, animal bone etc)**
Physical	CLASP Archive:	
Paper	CLASP Archive:	Site file
Digital	CLASP Archive:PDF report 16/4	Mapinfo plan files, Word report (PDF)
BIBLIOGRAPHY		
Title	Whilton Lodge East geophysics survey	
Serial title & volume	CLASP report 16/4	
Author(s)	Young, S and Kay, F	
Page numbers		
url www.claspweb.gov.uk		

CONTENTS

ABSTRACT

CLASP commissioned and conducted a geophysical (fluxgate gradiometer) survey on part of the site of the Roman Posting Station of Bannaventa, Whilton Lodge, Northamptonshire. The archaeology of the area, currently a camping site, immediately to the west of Whilton Lodge, suffered serious damage archaeologically through soil stripping and clearance in 1970. A small scale rescue excavation at the time identified the defenses of the Posting Station and partially investigated some of the interior structures. Subsequently the large scale ground works is thought to have totally destroyed any surviving archaeological stratigraphy for the north-east sector of the walled site of Bannaventa.

Therefore the fieldwork (centred on OS SP 641234) *was conceived with a dual purpose rationale, as a training exercise for CLASP volunteers to further their understanding of geophysical survey and to confirm through further exploration the extent of destruction or survival of residual remains. The purpose of the gradiometer survey would then be to establish and characterize the extent and nature of any remaining archaeology. In the event, geophysical anomalies indicating features of the Roman period were located particularly in the eastern half of the survey area.*

The geophysical survey area covered approximately 1.5 hectares was surveyed with a series of linear and rectilinear magnetic anomalies was detected. These findings taken together indicate that the area still contains, although heavily eroded elements of its Roman landscape. These anomalies are sufficiently consistent to assist interpretation of the overall layout of this quarter of the posting station, reflecting the relative importance and prominence of the site on Watling Street and in the neighbouring wider Roman landscape.

Introduction

1.1 A geophysical survey was conducted by the Community Landscape and Archaeology Survey Project (CLASP), a community based archaeological charity, between December 2011 and January 2013. The investigative work was undertaken in the field immediately to the west of Whilton Lodge and adjacent to Watling Street, which currently is a registered camping site. Unfortunately the area had suffered serious archaeological damage through soil stripping and clearance in 1970 and the general consensus has been that no archaeological stratigraphy remained *in situ*.

1.2 Although not scheduled the site is known to have contained the north-east quarter of the Roman posting station of Bannaventa. Other significant elements of the overall site to the west and south are Scheduled Ancient Monument list number 1003879 Site of Bannaventa. The intentions of the geophysical survey were to provide a training opportunity for CLASP volunteers to further their understanding of and proficiency in geophysical survey and to confirm the extent of the archaeological destruction or survival of any residual remains. It was hoped that the survey findings would then with other fieldwork assist Historic England in future conservation policy of the posting station of Bannaventa.

1.3 The survey covered a total area of 1.5 ha of the 2.1 ha field. At the time of survey (December 2011 to January 2012) the field was not under cultivation but was being utilized as a registered camp site. The biggest challenge encountered was appreciating the level and nature of the destruction wrought by the top soil removal and scraping on the interpretable findings collected from the field data.

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. These included importantly, the North East corner of the triple ditch surrounding the settle-ment, and some linear, parallel features which may indicate the remains of an internal road or track way and the position of building plots.

2.0 Site Location and description

2.1 Situated on level ground the site lies on the east side of the A5 (Watling St) where the road bisects the Roman settlement of Bannaventa. The camp-site covers approx. 2.1 hectares, The field has been subjected to wide scale scraping and top soiling in 1970. Part of the top soil from scraping now forms a bund along the verge of the A5 to the west and a large mound to the north eastern edge of the camp site. It is bounded on the north by the modern entrance drive to Whilton Lodge, on the south by the, now abandoned, old drive to the Lodge, on the east by the gardens of the Lodge and on the west by a horse paddock with an electric fence. The electric fence on the south side and iron railings on the south and east restricted the survey area to 5m from the boundary.

2.2 The survey area is situated on level ground 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).

3.0 Archaeological and historical background

3.1 The vicinity of the Whilton Lodge camping site field covered the north-eastern sector of the Roman posting station of Bannnaventa. Overall the walled area of the settlement covered about 5 ha with the present survey area accounting for nearly a quarter of the Late Roman posting station. Bannnaventa itself is an integral part of a larger scheme consisting of a systematic placed series of sites situated at regular intervals along Watling Street between London and

Wroxeter. The Itinerary of Antoninus noted that Bannaventa was situated approximately twelve Roman miles between the neighbouring posting stations located at Lactodorum (Tow-cester) 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. 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 proving the existence of a significant settle-ment in the wider area. In 1970 air photographs revealed the outline of the part of the posting station to the west of the modern A5. These photographs, allied to the rescue excavations undertaken on the site between 1970-72, in the field subject to the CLASP geophysical survey, revealed the existence of a roadside station of irregular quadrilateral shape with rounded corners, bounded by ditches, with gates in the north and south of the defences to allow the passage of Watling Street through the town (RCHME, 1981, 151-2).

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 to access to the relative wealth of its agricultural hinterland. Further fieldwork has demonstrated that the site's origins lie in the pre-conquest period with major development commencing in the late 1st to early 2nd century, defensive additions in the 3rd and 4th and with occupation continuing into the early 5th century AD.[1]

3.4 Excavation has demonstrated buildings were constructed during the mid-2nd and 3rd centuries, the majority being timber, of rectangular sill beam construction, although the remains of stone buildings are also recorded. A defensive

---

[1] Young & Kay forthcoming

ditch and rampart circuit enclosed about 5 ha of the town's core during the second or early third century, which was replaced by a double ditch and wall in the later third or fourth century AD. Bannaventa was occupied up to the end of the early 5th century AD but it is not known to have survived in any recognizable form into the later Saxon period (SMR 895).[2]

4.0 Field Methodology

4.1 The aim of the geophysical survey using a magnetometer was to establish accurately the degree of destruction or presence of archaeological remains and the extent and character of any geophysical anomalies within the survey area.

4.2 The gradiometer meter 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 gradiometer survey was conducted using a Barting-ton 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 traverse method of survey was used with 1m wide traverses on a north-west/south-east line across the field, the configuration of which determined a series of mixed 30 x 30, 20 x 20m and 10 x 10 survey grids. 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 a group of small trees along

---

[2] Reference excavation reports Jeremy Taylor

the south-western edge of the field 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 greyscale map in fig. 3 and an interpretation of the possible archaeological anomalies is shown in fig. 4.

5.0 Field data analysis and interpretation of results

5.1 Several anomalies were observable from the data obtained in the survey area and although the features they represent presumably are much abraided and eroded because of the top soil removal they were still remarkably clear. Many of the surviving features had enough depth, because they were cut into the underlying natural, to enable some inter-pretation of their purpose and function to be postulated.

5.2 The most obvious and conspicuous archaeological feature was a series of boundary ditches forming the north-eastern corner of the defensive circuit which had surrounded the late Roman posting station. The anomalies suggest a circuit of two ditches with an internal bank which presumably was faced by a stone wall noted elsewhere on the defensive circuit. Immediately south of the eastern extent of these ditches a road crosses these ditches, exiting by a possible postern gate through the defensive wall.

5.3 The anomalies recorded within the internal area enclosed by the defensive ditches are less clear, lacking the clarity of those features but they do indicate the position of building plots and associated structures. At present these appear to be irregular in their layout and could be interpreted as reflecting an unplanned development of the internal space. Several ditches are also observable which do not relate directly to the late Roman posting station but probably could be associated with an earlier phase of development for Bannaventa.

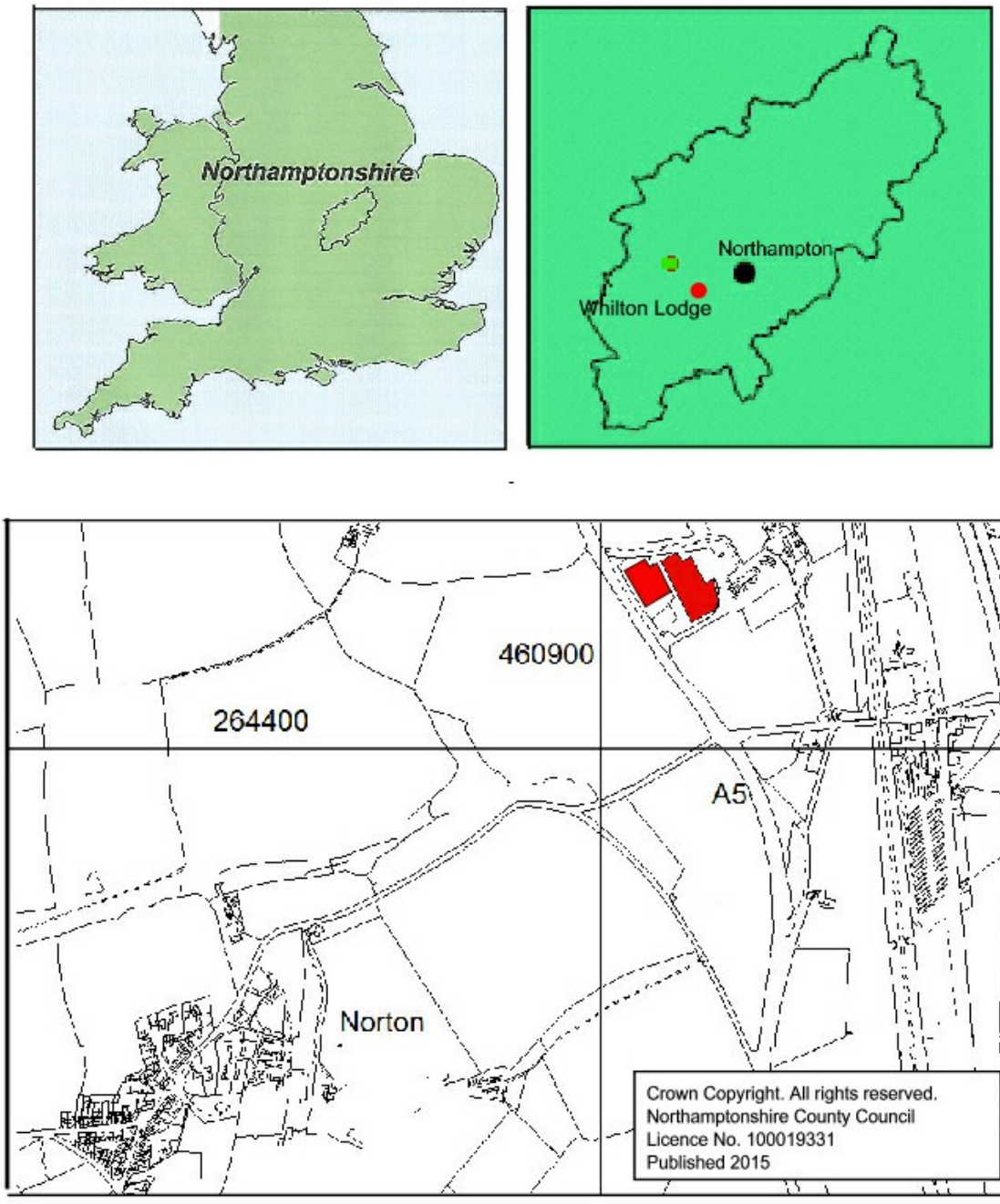

Fig 1 Site location

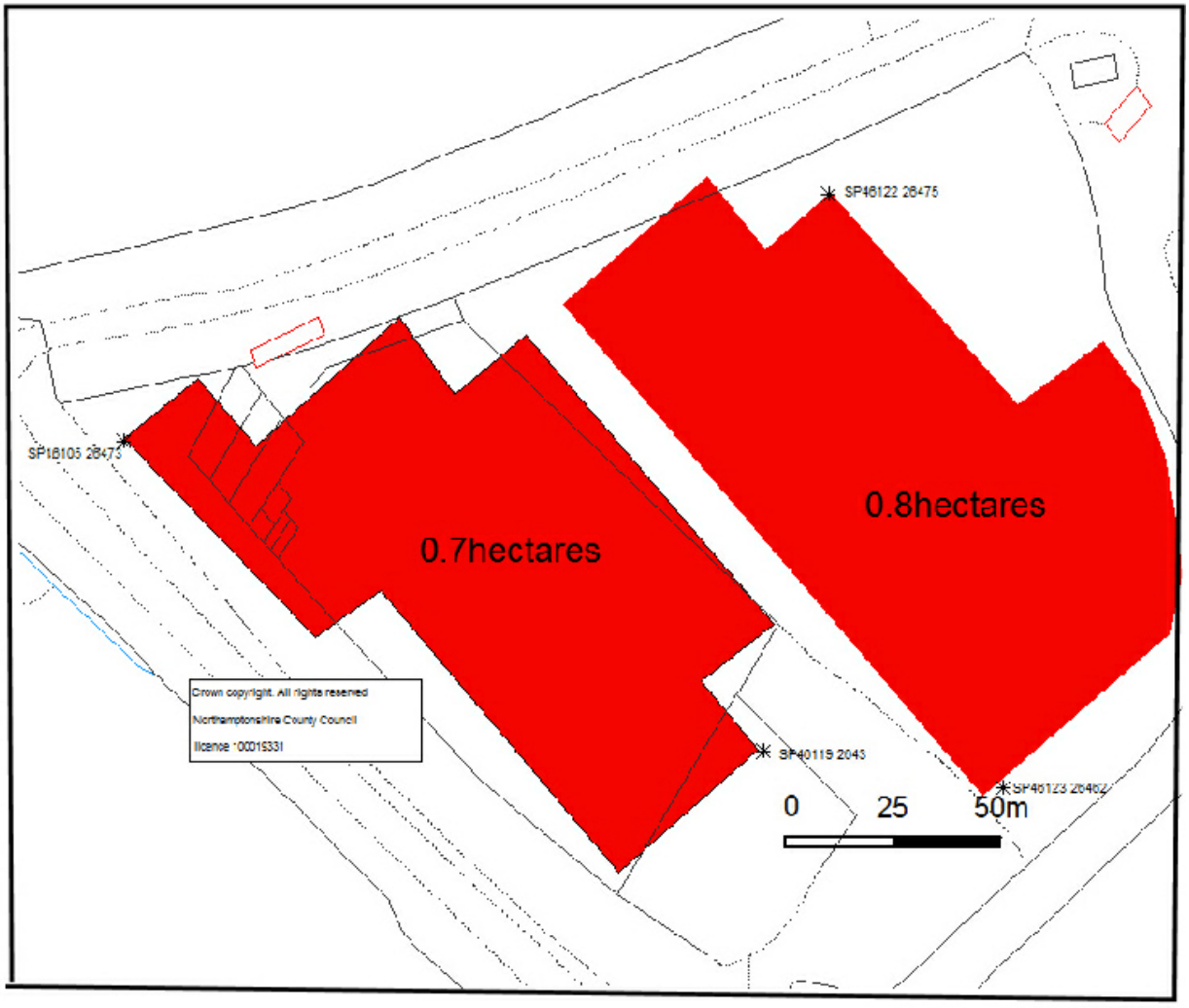

Fig 2. Survey Area

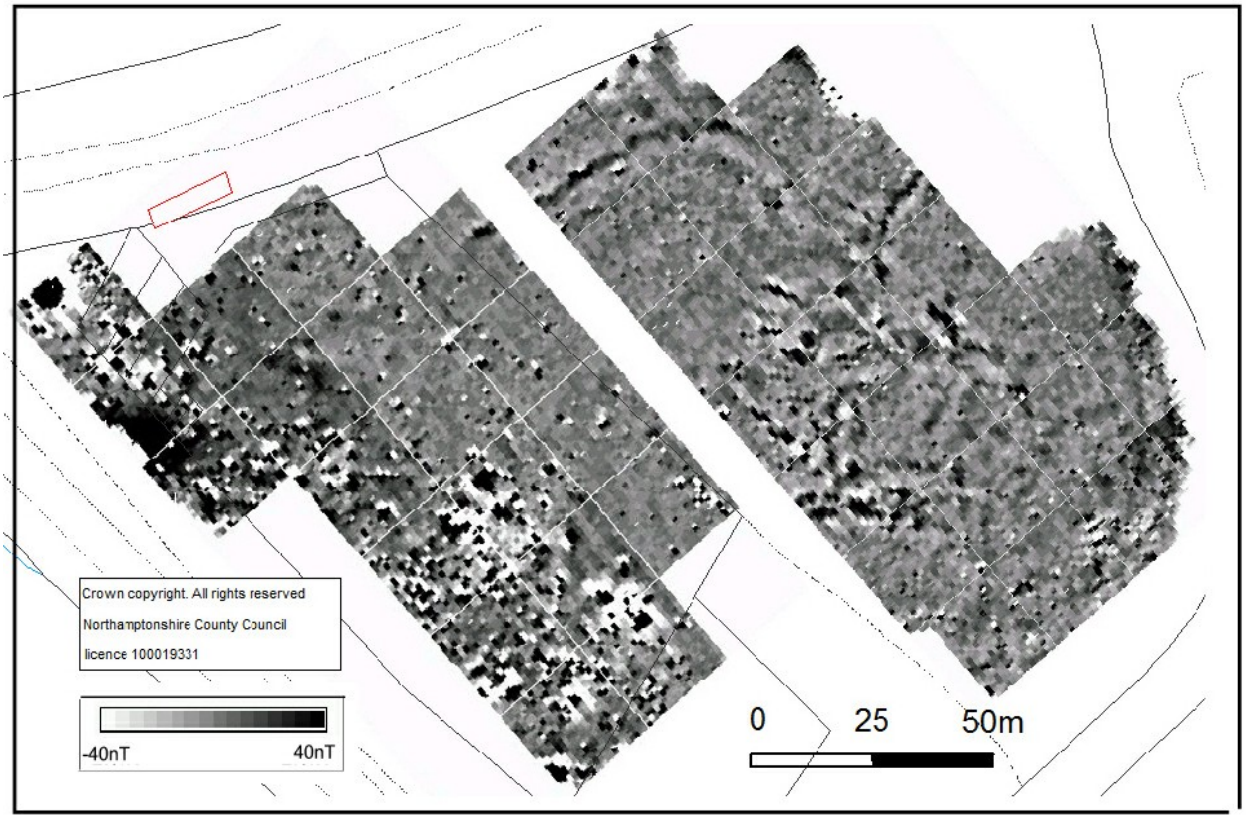

Fig 3 Greyscale magnetometry

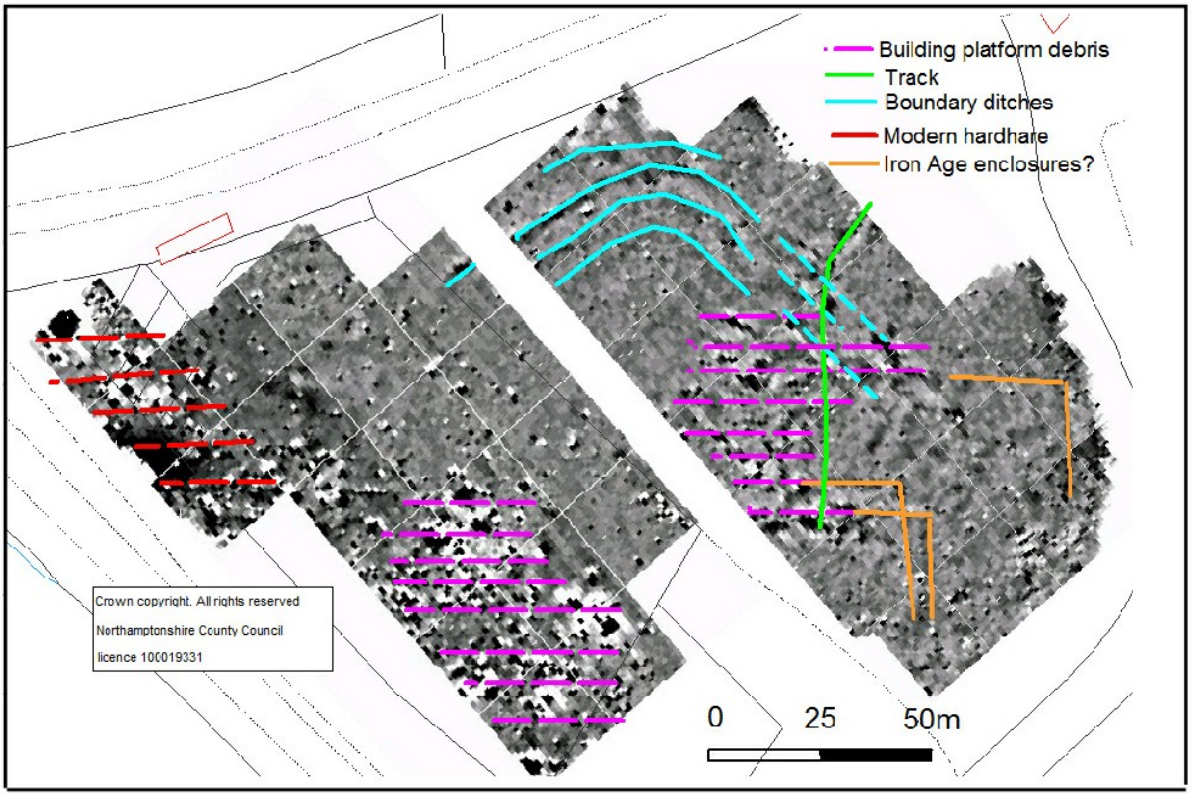

Fig 4 Magnetometry interpretation

6.0 Conclusions

6.1 Perhaps the most amazing outcome to the geophysical survey, designed essentially for training volunteers, was the realization that archaeological stratigraphy can be very durable. The field work demonstrated that archaeological features, although degraded and eroded can be worth re-examining when the extent of damage is unknown or unquantifiable. Importantly the anomalies observed enable us to understand and theorize on the general layout and probable development of the north eastern sector of the Posting Station at Bannaventa. The existence of a gateway and road exiting the defensive circuit on the eastern side of Bannaventa is also an interesting discovery as are the series of seemingly random ditches to the south of the survey area which indicate earlier stages of development at the site.

Acknowledgements

CLASP would like to thank Margaret MacIntosh, Norman Garnett, Tony Kesten, Colin Evans, Pam and Alan Watson, Jim Aveling and Robert Close of CLASP for helping with the fieldwork and Ken Bryant for access to the site. Charlotte Walker, HER Officer, Northants 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

Baker,G. (1822-30) *The History & Antiquities of the county of Northamptonshire.* London: John Bowyer Nichols

Bottfield,B. (1853) *Some Account of the Roman Villa, and the discoveries made on the Borough Hill, the ancient Bennavenna*. Archaeologia 35, 383-95

Brindle,T. *(2014) The Portable Antiquities Scheme and Roman Britain*, Brit.Mus.Res. Publ. 196, pp81-83

Butler,A. (2007) *Geophysical Survey of Bannaventa, Whilton Lodge, Northamptonshire,* Northamptonshire Archaeology

Cooper,N. (ed.), (2006) *The Archaeology of the East Midlands: An Archaeological Resource Assessment and Agenda*. Leicester: University of Leicester Archaeology Monograph 13.

Dix,B. & Taylor,S. *(1988) Excavations at Bannaventa and Whilton Lodge, Northants, 1970-1 Britannia Vol. 19* pp299-339

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

Gaffney.C, Gater.J, Linford.J, Gaffney.V and White.R (2000) *Large- scale Systematic Fluxgate Gradiometry at the Roman City of Wroxeter*, Archaeological Prospection 7(2) pp 81-100

RCHM, (1981) *An Inventory of the Historical Monuments in the County of Northampton, Vol III Archaeological Sites in North-West Northamptonshire.* London, HMSO

Roucoux,O. (1984) *The Roman Watling Street from London to High Cross,* Dunstable Museum Trust Publication

Taylor.*J, (2002) Whilton Lodge, Bannaventa: Extensive Urban Survey Report (via http:ads.ahds.ac.uk)*

B.G.S, (1980) *Geological Maps of England and Wales* Solid and Drift Edition Sheet 185. 1:50,000 Series, Keyworth. British Geological Survey

APPENDIX

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

	Type	SMR	OS co-ords	Description
MNN11430	MON	447/1	6076 6521	Watling Street Roman road (Margary Routes 1e & 1f)
MNN11583	MON	894/1	605 649	Possible Roman villa north-eest 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

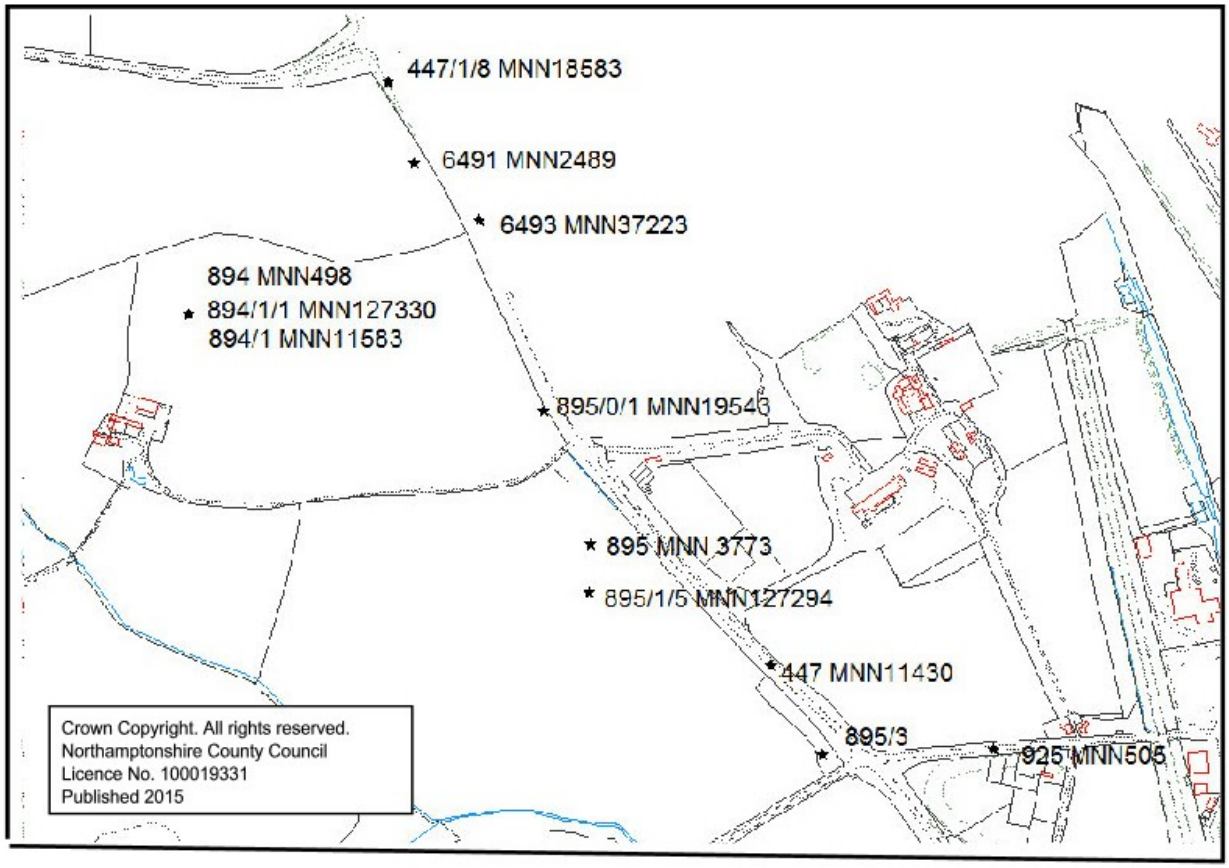

Fig 5 HER/SMR within 0.5 km.