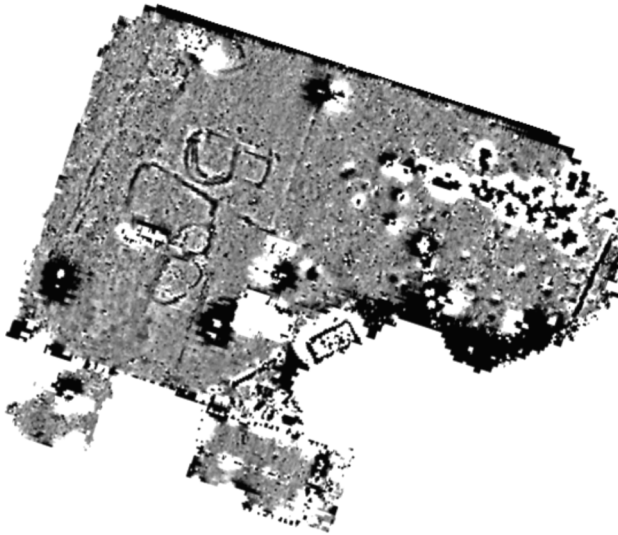




Northamptonshire Archaeology

Archaeological Geophysical Survey at Etonbury School, Arlesey, Bedfordshire



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Report 12/65

April 2012



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QUALITY CONTROL

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Checked by	Steve Morris	<i>SM</i>	11/4/2012
Verified by	Mark Holmes	<i>MH</i>	10/4/2012
Approved by	Anthony Maul	<i>AM</i>	11/4/2012

OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological Geophysical Survey at Etonbury School, Arlesey, Bedfordshire	
Short description	Northamptonshire Archaeology was commissioned by the BEST Archaeological Society to carry out a detailed magnetometer survey of the playing field at Etonbury School, Arlesey, Bedfordshire. The survey mapped a small complex of ditched enclosures of probable Iron Age or Romano-British date. A backfilled gravel pit of early 20th century date was also identified	
Project type	Geophysical survey	
Site status	None	
Previous work	None	
Current Land use	Playing field	
Future work	Training excavation	
Monument type/ period	Iron Age or Romano-British enclosures	
Significant finds		
PROJECT LOCATION		
County	Bedfordshire	
Site address	Etonbury School, Stotfold Road, Arlesey	
Study area	3.6ha	
OS Easting & Northing	TL 203 372	
Height OD	c 45 m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	Mr L. Thomas, BEST Archaeological Society	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	John Walford	
Project Manager	Adrian Butler	
Sponsor or funding body	BEST Archaeological Society	
PROJECT DATE		
Start date	24 February 2012	
End date	11 April 2012	
ARCHIVES	Location	Content
Physical	N/A	
Paper	NA	Site survey records
Digital	NA	Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological Geophysical Survey at Etonbury School, Arlesey, Bedfordshire	
Serial title & volume	Northamptonshire Archaeology Reports 12/65	
Author(s)	John Walford	
Page numbers	6	
Date	11 April 2012	

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Cover Greyscale image of survey results

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ARCHAEOLOGICAL GEOPHYSICAL SURVEY AT ETONBURY SCHOOL, ARLESEY, BEDFORDSHIRE

APRIL 2012

ABSTRACT

Northamptonshire Archaeology was commissioned by the BEST Archaeological Society to carry out a detailed magnetometer survey of the playing field at Etonbury School, Arlesey, Bedfordshire. The survey mapped a small complex of ditched enclosures of probable Iron Age or Romano-British date. A backfilled gravel pit of early 20th century date was also identified.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by the BEST Archaeological Society to conduct a magnetometer survey of the playing field at Etonbury School, Arlesey, Bedfordshire (NGR TL 203 372; Fig 1). The survey was conducted on 24 February 2012, in advance of a proposed training excavation. It was intended that the survey results would indicate the archaeological potential of the field and identify features which could be targeted by trenching.

2 TOPOGRAPHY AND GEOLOGY

The survey area consists of a single playing field, approximately 3.6ha in extent. It stands at an elevation of c 45m AOD and is fairly level, with only a slight slope southwards towards the Pix Brook. At the time of the survey there were a number of minor obstructions across the area, including goal posts, cricket nets, play equipment and picnic benches.

The geology of the area consists of Gault Clay overlain by fluvio-glacial sands and gravels of Pleistocene date (BGS 2012).

3 ARCHAEOLOGICAL BACKGROUND

Archaeological information

Although there are no known archaeological finds from within the grounds of Etonbury School, several archaeological sites have been recorded in the surrounding area. A comprehensive summary of these is contained in an assessment report prepared by Albion Archaeology prior to a proposed development at Chase Farm, Arlesey (Smith 2008).

To the south of Etonbury School, at national grid reference TL 203 367, fieldwalking led to the discovery of worked flints and Saxon pottery on the line of the A507 Stotfold Bypass. Geophysical survey and trial trenching in the same area confirmed the presence of Saxon features, including possible sunken-floored buildings (Smith 2008: 10-11). A Roman road may pass through much the same area, according to a record held by the Bedfordshire Historic Environment Record (HER No. 296).

Somewhat further from the school, a Bronze Age to Roman site occurs adjacent to the A507 at Etonbury Farm (Saunders 2003). Also, a substantial Early Iron Age site is known to the south-east of Arlesey at Fairfield Park (Webley et al 2007).

Historic mapping

The Ordnance Survey map coverage for the area shows that the survey area was in predominantly agricultural use from the early 19th century until the construction of the school in the late 1960s. However, the 1901 edition of the map shows a long and narrow gravel pit close to the Stotfold Road, in what is now the north-eastern corner of the playing field. This pit appears to have been backfilled prior to 1923, when the next edition of the map was produced.

4 METHODOLOGY

The survey was conducted with Bartington Grad 601-2, twin sensor array, vertical component fluxgate gradiometers (Bartington and Chapman 2003). These are standard instruments for archaeological survey and can resolve magnetic variations as slight as 0.1 nanoTesla (nT).

A baseline was established along the northern edge of the field and a grid of 30m squares was set out from this by means of a tape measure and optical square. The grid was tied into the Ordnance Survey National Grid by measurement with a Leica Systems 1200 dGPS. The gradiometers were carried at a brisk but steady pace through each grid square, collecting data along 1m spaced traverse lines. Measurements were automatically triggered every 0.25m along the traverses, giving a total of 3600 measurements per square.

Following completion of the survey, one wooden peg was left at the western end of the baseline and another one at the eastern end, 180m away (Fig 2). These will provide fixed points from which the grid may, if necessary, be re-established.

All fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; IfA 2011).

The survey data were processed using Geoplot 3.00v software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function, and destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of a grey-tone plot, at a scale of +/- 4nT black/white. The plot has been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay has been produced and is shown in Figure 3.

5 SURVEY RESULTS

Summary

The survey results (Figs 2-3) show that there is an archaeological site, consisting of at least four ditched enclosures, located in the western half of the school playing field. The overall appearance of this site suggests it to be of Iron Age or Romano-British date. Much of the remainder of the field is magnetically disturbed due to various modern features, including an early twentieth century gravel pit.

The archaeology

The southern of the four enclosures (Fig 3, No.1) is roughly D-shaped, measures approximately 15m east-west by 25m north-south, and appears to have an entrance gap midway along its eastern edge. To its immediate north is a second enclosure (No. 2) which measures about 30m north-south by 40m east-west. This seems to be of rectangular form, although the exact line of its southern boundary is obscured by magnetic interference from a goal post

In the south-eastern corner of the second enclosure there are two parallel ditches which separate a small area, about 10m in diameter, from the rest of the interior. There is no direct evidence for the purpose of this sub-division, but a reasonable suggestion would be that it defines the site of a round house or some other significant structure.

To the north of the second enclosure there is a set of overlapping magnetic anomalies covering an area about 25m long by 20m wide (Nos 3 and 4). These anomalies cannot be interpreted with complete confidence, but seem most likely to represent a sub-circular enclosure, about 20m in diameter, intersecting with another enclosure of more elongated rectangular form. The fact that one enclosure overlies the other suggests that they belong to different phases within the life of the settlement.

It is possible that a fifth enclosure lies at the northern edge of the field, almost adjacent to the Stotfold Road (No.5). The data clearly shows two short sections of ditch forming a right angled corner, but any continuation of this feature will have been masked by the magnetic halos from the nearby goalposts and fence,

As well as the enclosures, the data indicates several lengths of ditch which could be of archaeological significance. One of these branches eastwards from the large rectangular enclosure, another runs parallel with the western field boundary, and two more run south from the vicinity of the southernmost enclosure. Some more scattered and disjointed anomalies are also present, including two small positive anomalies in the eastern half of the field which might represent pits.

The other linear features

One negative linear anomaly runs through the northern half of the field, slightly to the east of the enclosures. It is of uncertain significance, but its regularity, and the fact that it

lies perpendicular to the modern road, suggests that it most probably represents a recent feature such as a former field boundary or a service trench.

Some very weak positive linear anomalies occur at various places across the field. These could represent ditches, but are perhaps more likely to represent ice-wedge casts or other minor geological features.

The gravel pit

In the north-eastern corner of the field is a large and elongated area of intense magnetic disturbance which coincides with the location of a gravel pit shown on the 1901 Ordnance Survey map. The strength of the magnetic anomalies suggests that the pit does not have a 'clean' backfill, but contains a mix of rubbish, perhaps including iron scrap, hearth ash, brick rubble or other magnetically enhanced materials.

The modern features

To the south of the gravel pit is a complex of other intense magnetic anomalies. These include a large positive halo arising from the school building, a couple of dipolar anomalies from goal posts, and a linear anomaly of alternating polarity which represents an iron pipe. Further to the west there is a strong linear anomaly along the line of a modern path.

A large and highly magnetic rectangular anomaly occurs immediately adjacent to the school sports hall. It almost certainly represents a modern feature – either the footings of a demolished structure or the remnants of a laid surface. Slightly to its west, there is a large gap in the data, where the survey was obstructed by cricket nets. To the south of the nets there is a strong linear anomaly caused by a long-jump track and pit.

South of the long-jump track there is a linear anomaly of alternating polarity which represents an iron pipe. A little further south of this there is a large rectangular area defined by a chain of closely spaced ferrous dipoles. The limits of this coincide with the line of a recently removed fence, and the dipoles probably represent the surviving bases of the individual fence posts.

In the far south-west of the survey area is one large ferrous anomaly, with a surrounding halo, which was caused by the shot-put circle.

6 CONCLUSION

The survey has revealed a group of ditched enclosures which are probably of Iron Age or Romano-British date. The core of the site is located within the western half of the school playing field and is approximately 0.3ha in extent. Some outlying features also exist, and it may be that further elements of the site have not been detected due to the masking effect of magnetic halos from various modern structures.

The survey has also identified a former gravel pit in the north-eastern corner of the playing field. This feature can be closely dated, as it is recorded on an Ordnance Survey map of 1901 but not on the subsequent 1923 edition.

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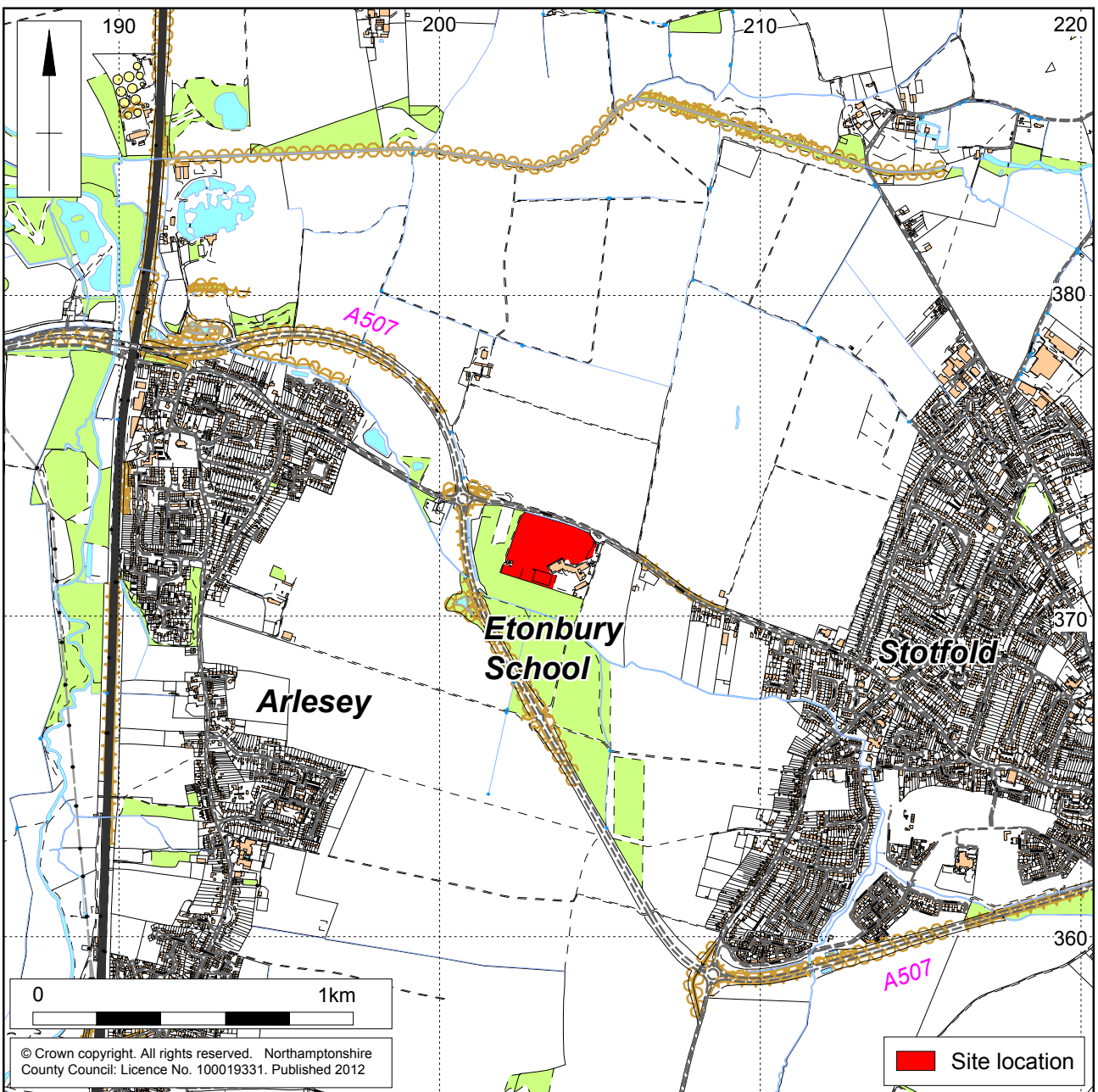
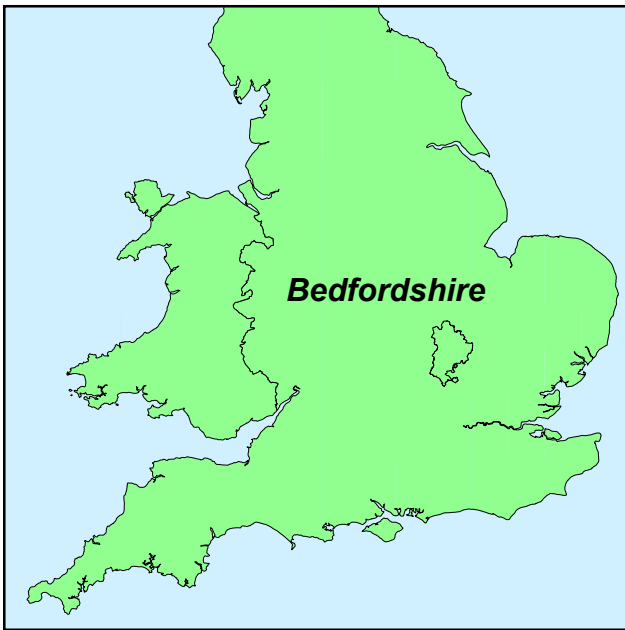
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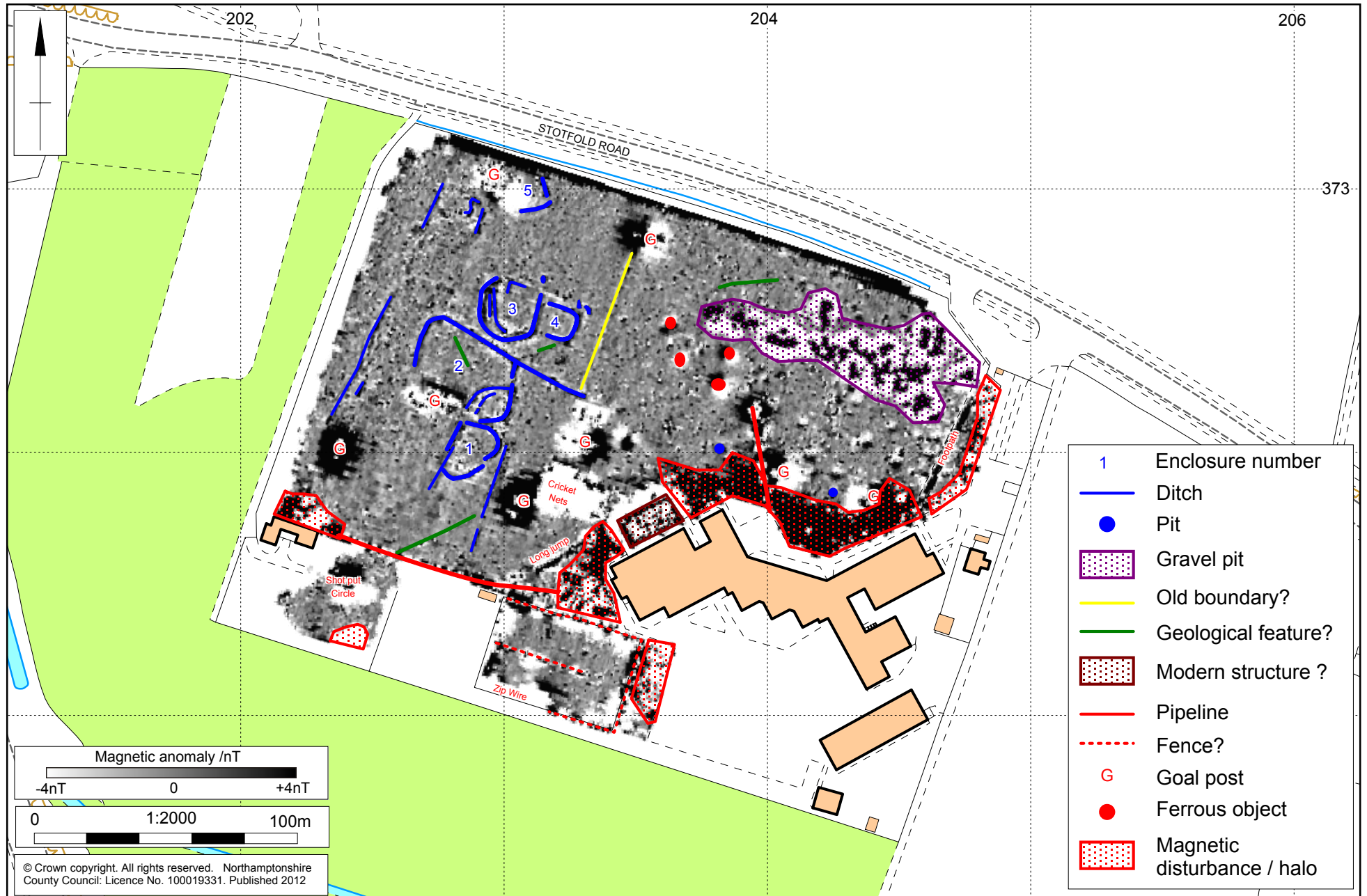
Scale 1:20,000

Site location Fig 1



1:2000 (A4)

Magnetometer survey results Fig 2



Magnetometer survey interpretation Fig 3



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