

**Archaeological geophysical survey at  
Chapel Drive, Aston Clinton  
Buckinghamshire  
April 2016**

Report No. 16/90

Author: Adam Meadows

Illustrator: Adam Meadows



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**OASIS REPORT**

<b>PROJECT DETAILS</b>		<b>Oasis No. molanort1-253496</b>	
Project name	Archaeological geophysical survey at Chapel Drive, Aston Clinton, Buckinghamshire		
Short description	MOLA Northampton was commissioned to carry out a detailed magnetometer survey on land off Chapel Drive, Aston Clinton, Aylesbury, Buckinghamshire. The survey identified a nineteenth century field boundary and a modern pipeline.		
Project type	Geophysical survey		
Site status	None		
Previous work	Desk-based assessment (Harrison 2014)		
Current Land use	Arable		
Future work	Trial trench evaluation		
Monument type/ period	None		
Significant finds	None		
<b>PROJECT LOCATION</b>			
County	Buckinghamshire		
Site address	Chapel Drive, Aston Clinton		
Study area	c 5.3ha		
OS Easting & Northing	SP 8805 1255		
Height OD	c 95-98m aOD		
<b>PROJECT CREATORS</b>			
Organisation	MOLA Northampton		
Project brief originator	Buckinghamshire County Council		
Project design originator	MOLA Northampton		
Director/Supervisor	Adam Meadows		
Project Manager	John Walford		
Sponsor or funding body	Bellway Homes		
<b>PROJECT DATE</b>			
Start date	19 April 2016		
End date	20 April 2016		
<b>ARCHIVES</b>		Location	Content
Physical	N/A		
Paper	MOLA Northampton		Site survey records
Digital			Geophysical survey & GIS data
<b>BIBLIOGRAPHY</b>			
	Journal/monograph, published or forthcoming, or unpublished client report		
Title	Archaeological geophysical survey at Chapel Drive, Aston Clinton, Buckinghamshire, April 2016		
Serial title & volume	MOLA Northampton Reports 16/90		
Author(s)	Adam Meadows		
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# Archaeological geophysical survey at Chapel Drive Aston Clinton, Buckinghamshire April 2016

## ABSTRACT

*MOLA Northampton was commissioned to carry out a detailed magnetometer survey on land off Chapel Drive, Aston Clinton, Aylesbury, Buckinghamshire. The survey identified a nineteenth-century field boundary and a modern pipeline.*

## 1 INTRODUCTION

MOLA Northampton was commissioned by Bellway Homes to conduct a geophysical survey on c 5.3ha of arable land near Chapel Drive, Aston Clinton, Buckinghamshire (NGR SP 8805 1255; Fig 1). The purpose of the survey was to investigate the presence, layout and extent of any archaeological features which may be affected by the proposed development. The fieldwork was undertaken on 19th and 20th April 2016.

## 2 BACKGROUND

### 2.1 Location and geology

The survey area comprises a block of three arable fields on the northern edge of Aston Clinton. It is bounded by residential properties along Green End Street to the south-west, by a housing development to the south-east, and by pasture and arable fields on the remaining sides.

The survey area lies on gently sloping ground, rising from 95m aOD in the north to 98m aOD in the south. The solid geology of the area is mapped as mudstone, siltstone and sandstone from the Gault Formation. There are no recorded drift deposits (BGS 2016).

### 2.2 Historical and archaeological background

A Heritage Assessment has been carried out on the survey and surrounding area (Harrison 2014). This contains a full historical and archaeological background of the survey area; the findings are summarised below.

Two prehistoric find-spots are recorded within c 500m of the survey area. These comprise a Palaeolithic hand axe found at Buckland Range (MBC2537) and an Iron Age coin found in Buckland (MBC31958).

Roman activities within the surrounding area is recorded through the excavations of three possible Roman field boundary ditches c 500m west of the survey area (Cotswold Archaeology) and a number of spot finds of Roman coins and pottery sherds. These all lie within 700m of the survey area and are located to the west, south and east of the site (MBC1488; MBC439; MBC1168; MBC444; MBC499; MBC1460). Other archaeological sites of Iron Age to Roman date (not noted in the Heritage Assessment) have been discovered through recent geophysical survey (Clements and Smith 2010; Walford 2015), trial

trench evaluation and open-area excavation (Clarke 2013; Simmonds 2015) on the Arla Dairy site and adjacent land between the Grand Union Canal and the A41.

A medieval moated site is located c 200m to the east of the survey area (MBC440). This scheduled monument comprises a rectangular, water-filled ditch encompassing an area of land measuring c 76m from north-east to south-west and c 34 m north-west to south-east. No surviving evidence is visible on the surface for the structures that would have been present on this island.

### **3 METHODOLOGY**

The magnetometer 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 single network of 30m grid squares was established across all three of the fields. The grid was set out with a tape measure and optical square and was tied in to the Ordnance Survey National Grid by means of a Leica Viva 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. All fieldwork methods complied with the guidelines issued by Historic England and by the Chartered Institute for Archaeologists (HE 2015; ClfA 2014).

The survey data was processed using Geoplot 3.00v software. The striping was removed using the 'Zero Mean Traverse' function and destaggering of the data was performed where necessary to correct slight misalignments of the data caused by an uneven survey pace. The processed data is presented in this report in the form of greyscale plots at a range of +4nT (black) to -4nT (white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2) and are shown with an interpretative overlay in Figure 3. Separate plots of the unprocessed data are presented in Figure 4.

### **4 SURVEY RESULTS**

The survey has identified a very weak linear trend running southwards into the southern field of the survey area, towards an extant pond. This corresponds to the line of a post-medieval field boundary which is recorded on a 1814 map of the parish (Harrison 2014, fig 6). To its south, north of an extant pond, there is a dense concentration of small dipolar and monopolar magnetic anomalies ('magnetic noise'). These occupy an area where the 1814 map shows two further ponds, and it is likely that the noise arises from a concentration of scrap metal, brick hardcore and similar magnetic debris used to backfill this features. A similar zone of magnetic noise to the south-west, immediately to the rear of Green End Street, corresponds to an area where the same map shows part of a range of buildings and presumably relates to a further deposit of rubble and other magnetic debris.

No other features of historical or archaeological interest have been detected. The data does contain a few very short and poorly defined linear anomalies which could conceivably represent short lengths of undated ditch, but these are too slight to support any confident interpretation.

An intense linear anomaly of alternating magnetic polarity, orientated north-west to south-east through the eastern and northern fields, represents a modern pipeline constructed of a ferrous material. There are also some widely dispersed dipolar anomalies that represent ferrous objects within the ploughsoil and some strong positive and negative magnetic halos present along the eastern and southern edges of the survey area, arising from adjacent buildings and fences.

## **5 CONCLUSION**

Whilst the survey has detected a nineteenth century field boundary, a modern pipeline and scatters of magnetic debris within the soils it provides no clear evidence for any earlier features of archaeological interest. However, it should be noted that previous magnetometer surveys in the immediate vicinity of Aston Clinton, over similar Gault Clay bedrock, have proved varyingly reliable and there have been some instances where known archaeology has been represented by very weak magnetic anomalies or by none at all (Clements and Smith 2010; Walford 2015). It is thus possible that future work may reveal historic or archaeological remains in addition to those noted here.



## BIBLIOGRAPHY

BGS 2016 *Geoindex*, <http://www.bgs.ac.uk/geoindex/home.html>, British Geological Survey, consulted April 2016

Bartington, G, and Chapman, C, 2003 A high-stability fluxgate magnetic gradiometer for shallow geophysical survey applications, *Archaeological Prospection*, **11**, 19-34

ClfA 2014 *Standard and Guidance for Archaeological Geophysical Survey*, Chartered Institute for Archaeologists

Clarke, J, 2013 *Archaeological strip, map and record of the new water and sewer pipeline from Broughton Road North to College Road North, Aston Clinton, Buckinghamshire, October to November 2012 and March 2013*, Northamptonshire Archaeology report, **13/256**

Clements, P, and Smith, H, 2010 *Archaeological geophysical survey on land east of College Road, Aston Clinton, Buckinghamshire, November 2010*, Northamptonshire Archaeology report, **10/224**

Harrison, C, 2014 *Land off Chapel Drive and rear of Green End Street, Aston Clinton, Buckinghamshire*, Archaeological Desk Based Assessment, CgMs **SM/CH/18488/01**

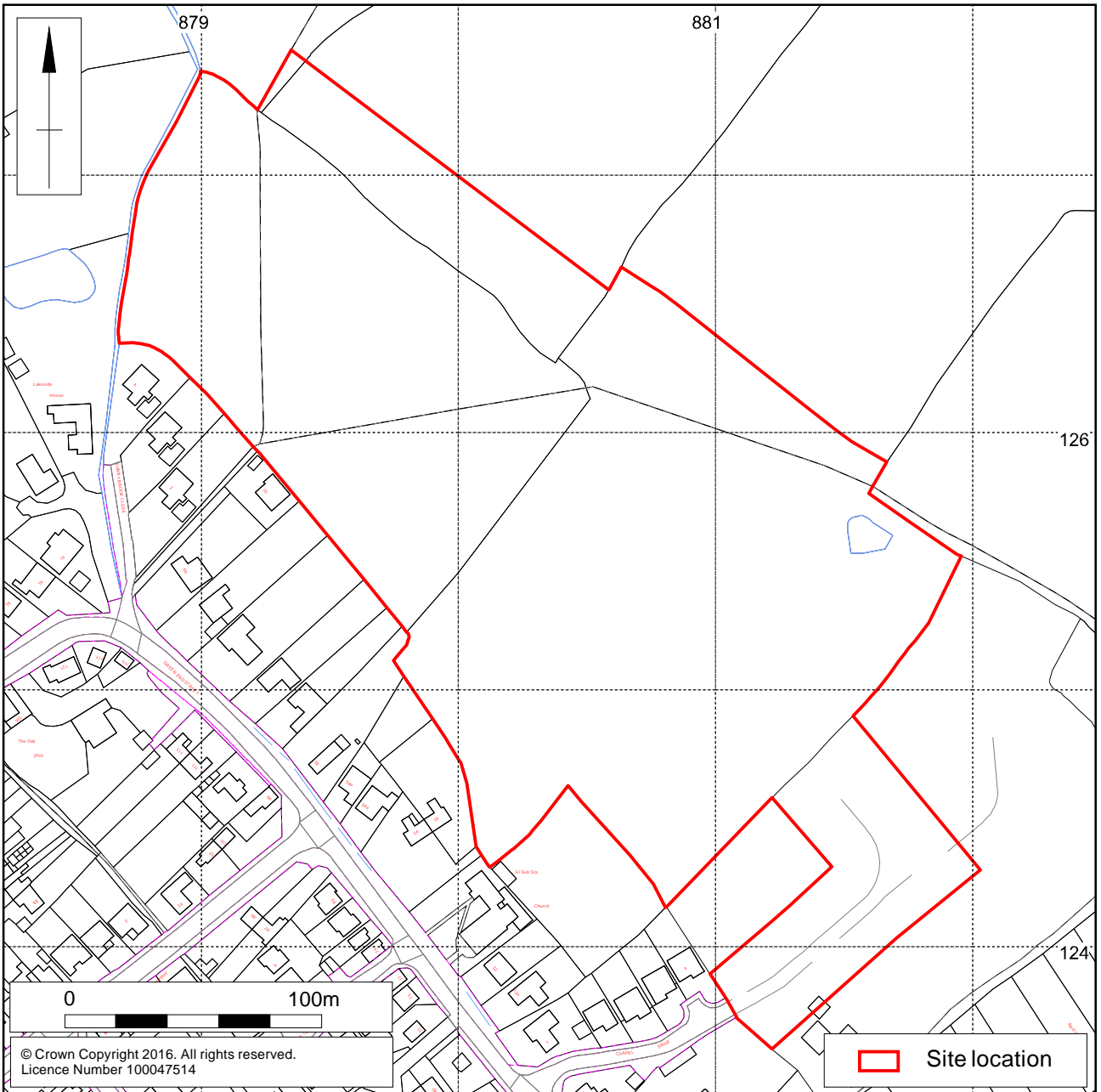
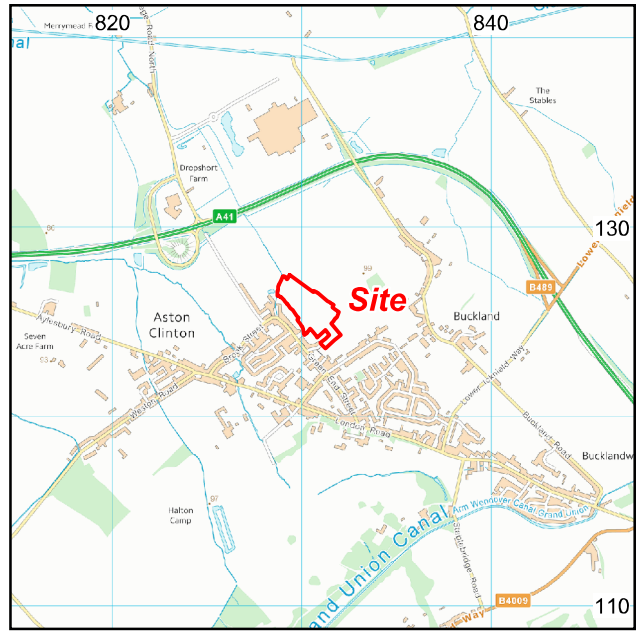
HE 2015 *Geophysical Survey in Archaeological Field Evaluation*, Historic England

Meadows, A, 2015 *Archaeological geophysical survey at Weston Road, Aston Clinton, Buckinghamshire December 2015*, MOLA Northampton reports **15/231**

Simmonds, C, 2015 *A late Iron Age and early Roman settlement on land at College Road, Aston Clinton, Buckinghamshire, November 2011 to February 2012*, MOLA Northampton report, **15/146**

Walford, J, 2015 *Archaeological geophysical survey of the proposed 'Aylesbury Woodlands' development site between Broughton and Aston Clinton, Buckinghamshire September to October 2015*, MOLA Northampton report, **15/189**

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1 June 2016



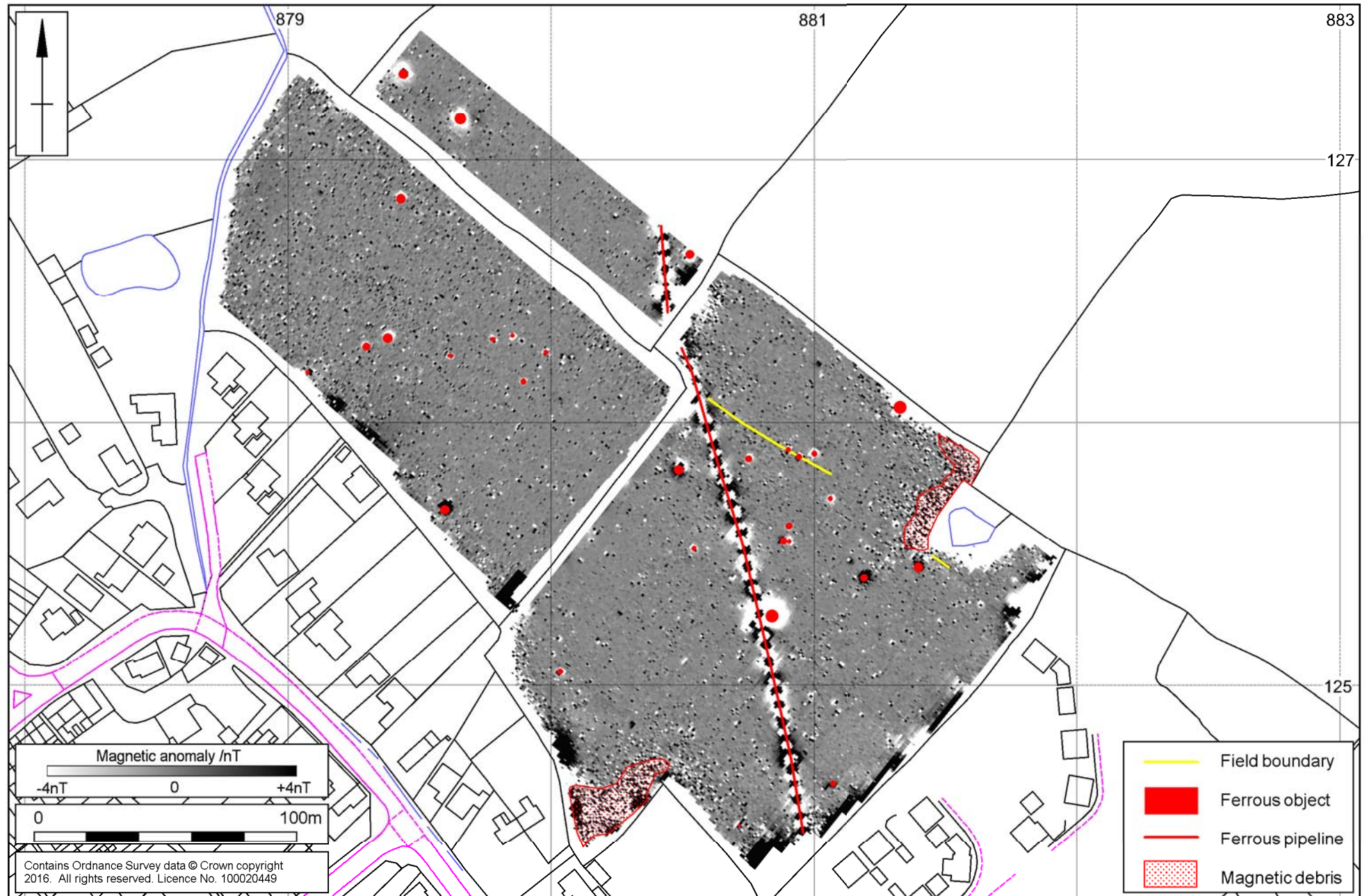
Scale 1:2,500

Site location Fig 1



Scale 1:2000

Magnetometer survey results Fig 2



Scale 1:2000

Magnetometer survey interpretation Fig 3



Scale 1:2000

Unprocessed magnetometer data Fig 4



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