

**Archaeological geophysical survey at
Hughenden Manor, High Wycombe
Buckinghamshire
September 2014**

Report No. 14/188

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Illustrator: John Walford



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OASIS REPORT

PROJECT DETAILS		Oasis No. molanort1-191823	
Project name	Archaeological geophysical survey at Hughenden Manor, High Wycombe, Buckinghamshire		
Short description	MOLA was commissioned to carry out a detailed magnetometer survey at Hughenden Manor prior to the development of a proposed visitor car park. No archaeological features were identified within the proposal area. An undated surface scatter of burnt flint was observed in a field just to the west of the proposal area, but an extension of the survey across this feature proved uninformative.		
Project type	Geophysical survey		
Site status	None		
Previous work	None known		
Current Land use	Car park and rough grassland		
Future work	Unknown		
Monument type/ period	Burnt flint scatter		
Significant finds	None		
PROJECT LOCATION			
County	Buckinghamshire		
Site address	Hughenden Manor		
Study area	c 1ha		
OS Easting & Northing	SU 859 957		
Height OD	c 160m - 165m aOD		
PROJECT CREATORS			
Organisation	MOLA Northampton		
Project brief originator	Eliza Alquassar, Buckinghamshire Archaeological Planning Officer		
Project design originator	MOLA Northampton		
Director/Supervisor	John Walford		
Project Manager	John Walford		
Sponsor or funding body	National Trust		
PROJECT DATE			
Start date	8 September 2014		
End date	8 September 2014		
ARCHIVES	Location	Content	
Physical	N/A		
Paper	MOLA Northampton	Site survey records	
Digital		Geophysical survey & GIS data	
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report		
Title	Archaeological geophysical survey at Hughenden Manor, High Wycombe, Buckinghamshire, September 2014.		
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Archaeological geophysical survey at Hughenden Manor, High Wycombe, Buckinghamshire May 2014

ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey at Hughenden Manor prior to the development of a proposed visitor car park. No archaeological features were identified within the proposal area. An undated surface scatter of burnt flint was observed in a field just to the west of the proposal area, but an extension of the survey across this feature proved uninformative.

1 INTRODUCTION

MOLA was commissioned by the National Trust to conduct a detailed magnetometer survey on land at Hughenden Manor, to the north of High Wycombe, Buckinghamshire (NGR SU 859 957; Fig 1). The purpose of the survey was to investigate the archaeological potential of an area proposed for the development of a visitor car park. The fieldwork was undertaken on 8th September 2014, and covered c 1ha of land.

2 BACKGROUND

2.1 Topography and geology

The survey area lies within the National Trust's Hughenden Manor estate, approximately 400m north of the manor house itself (Fig 1). Its southern half comprises an un-metalled overflow car-park, surfaced with a rubber re-enforcing mesh. Its northern half comprises an area of fallow land covered with grass. The southern edge is bounded by woodland, and the remaining sides by arable land.

The survey area is situated on a crest of land which projects between the Hughenden Valley to the east and a dry valley to the west. It stands between the 160m and 165m contours on a gentle, south-facing slope. Its geology is mapped as chalk overlain by a mantle of clay-with-flints (BGS 2014).

2.2 Historical and archaeological background

Hughenden Manor is a 19th-century manor house incorporating minor elements from an earlier building (National Trust HBSMR 150743). It lies within extensive grounds which are listed as number 1000318 on the Register of Historic Parks and Gardens. Within these grounds, to the south of the house, stands the parish church of St Michael and All Angels. This is of 14th-century origin, but was substantially re-built in the 19th century.

The survey area itself lies to the north of the manor house, and just outside the registered park and garden. Its eastern edge lies alongside a historic 'coffin path'; the traditional route by which bodies were brought to the parish church from the hamlet of Naphill (NT HBSMR 150755). In the woods to the west of the area, there are various earthworks including wood-banks, lynchets and a pond (NT HBSMR 150788-92).

In the arable field to the immediate north-west of the survey area there is a slight hollow within which a very dense surface scatter of burnt flint occurs (*pers obs*). The date and significance of this feature is unknown.

3 METHODOLOGY

The survey was undertaken by John Walford of MOLA and Gary Marshall of the National Trust, aided by a team of National Trust volunteers. The National Trust provided the GPS survey and map data, and MOLA were responsible for processing and interpreting the magnetometer survey data.

The magnetometer survey was conducted with Bartington Grad 601 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). All fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists and with the method statement for this project (EH 2008; IfA 2011; MOLA 2014).

A network of 20m grids was established across the entire survey area. It was set out by tape measure and tied in to the Ordnance Survey National Grid by measurement with a Trimble GPS. 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 1600 measurements per square.

The survey data was processed using Geoplot 3.00v software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and de-staggering of the data was performed as necessary. The processed data is presented in this report in the form of grey-tone plots, at a scale of +/- 4nT black/white. The plots have been scaled, rotated and resampled (geo-rectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay has been produced and is shown in Figure 3. The raw data is presented in Figure 4.

4 SURVEY RESULTS

The survey area is split into two sections by a modern fence. To its south-east, the data is almost entirely dominated by intense magnetic noise arising from the iron pins which secure the mesh surface of the existing car park. To its north-west, the data presents a more normal and intelligible appearance. Once the nature of the magnetic response from the south-eastern area became apparent, further survey of that area was abandoned as unprofitable; hence the large gaps in the coverage of that area.

The data from the north-western area exhibits a broad band of weak and amorphous magnetic patterning within which several discrete positive anomalies occur. A magnetic response such as this is characteristic of a clay-with-flints substrate. A few small anomalies in the same area have been marked as 'undiagnostic' on the interpretation plot because, whilst they are probably part of the overall geological response, there are lower possibilities that they represent random data noise or indicate the presence of minor hollows in the surface of the geology.

To the west of the band of geological anomalies, there is a weak and discontinuous negative linear anomaly aligned from north to south. This is of modern agricultural origin, and represents the edge between the fallow and cultivated parts of the field.

The surface scatter of burnt flint noted in section 2.2 lies just to the west of the main survey area, coinciding with a slight hollow in the field surface (*pers obs*). The survey was extended to cover this feature (Fig 3), but detected nothing more than a slight concentration of small dipolar anomalies indicative of small pieces of ferrous debris (eg horseshoes, harrow tines, etc). These anomalies are not remarkable, and lower concentration of similar examples occurs across most of the rest of the survey area.

In the small part of the south-eastern area that is not dominated by magnetic noise, a slight negative linear anomaly can be seen. This follows the edge of a survey grid, and almost certainly represents a data flaw rather than a real feature.

5 CONCLUSION

The survey has not detected anything of archaeological significance within the area of the proposed visitor car park, although an undated surface scatter of burnt flint was observed in the field immediately to the west. The survey results are dominated by weak magnetic anomalies from the natural clay-with-flints geology and, in the south-east, by a much more intense magnetic response from the surface of the existing overflow car park.

BIBLIOGRAPHY

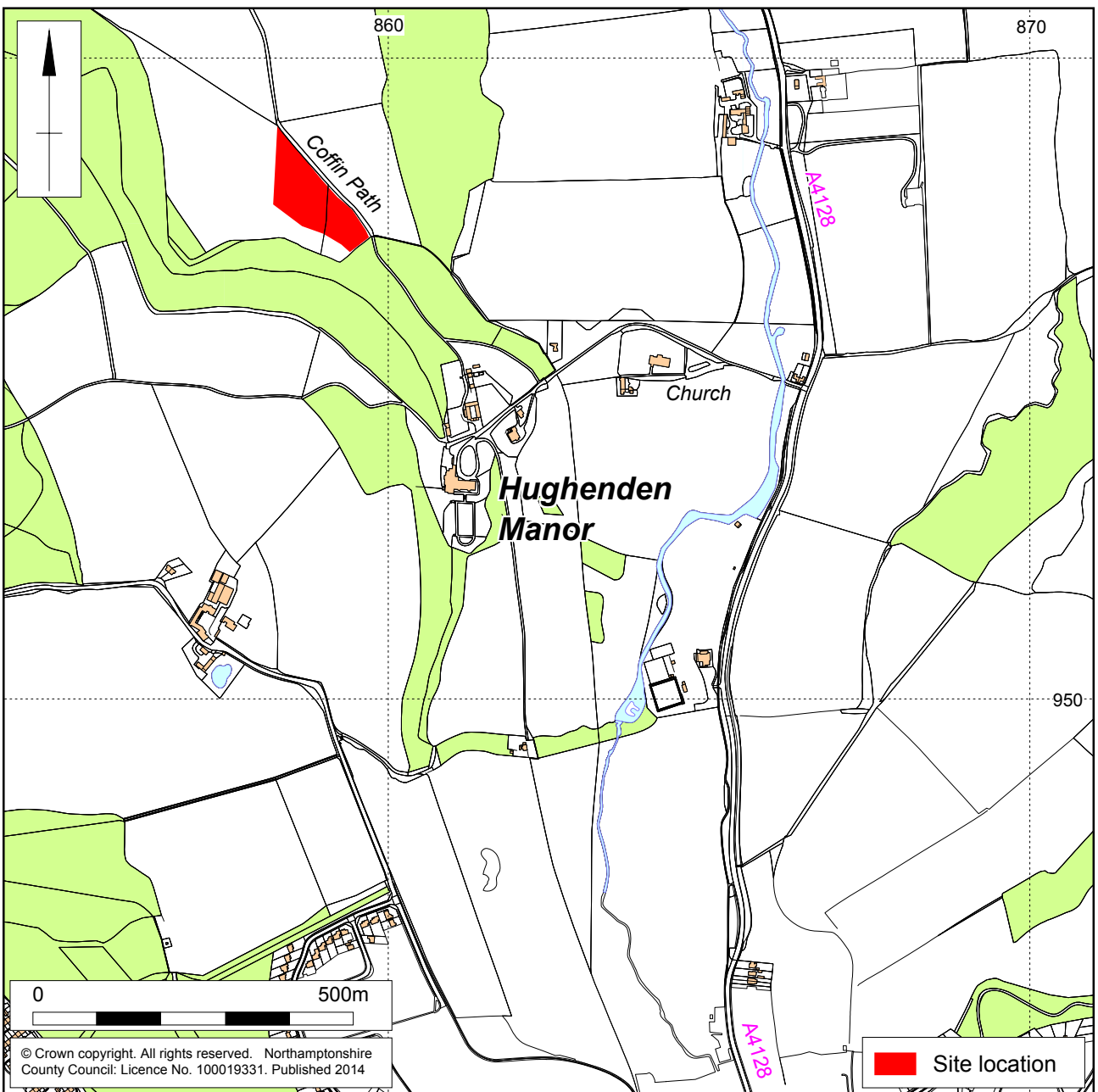
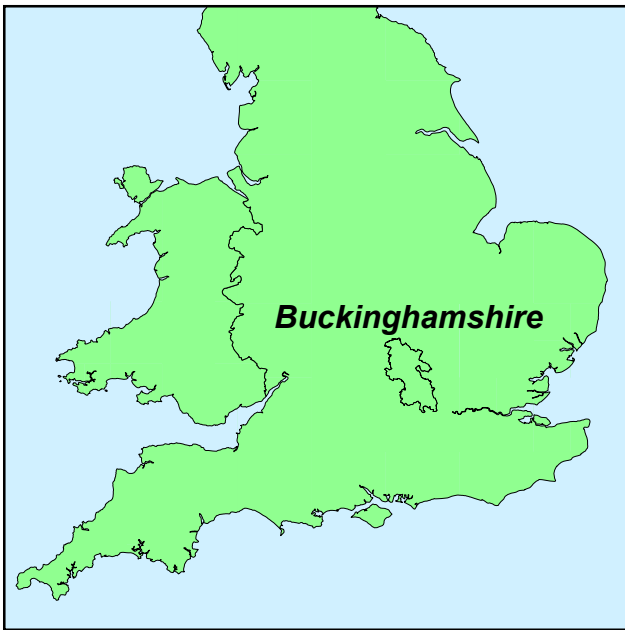
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3 October 2014



Scale 1:10,000

Site location Fig 1



1:2000

Magnetometer survey results Fig 2



1:2000

Magnetometer survey interpretation Fig 3



1:2000

Unprocessed magnetometer survey data Fig 4

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