

## Archaeological geophysical survey at West Street, Stanwick Northamptonshire April 2014

Report No. 14/105

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Illustrator: John Walford



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### OASIS REPORT

PROJECT DETAILS	Oasis No. molanort1-1	78749			
Project name	Archaeological geophysical survey at West Street, Stanwick, Northamptonshire.				
Short description	MOLA was commissioned to carry out a detailed magnetometer survey on land north of West Street, Stanwick, Northamptonshire. The survey covered a pasture field containing medieval and later earthworks and an arable field containing a presumed prehistoric or Roman cropmark. Medieval to post-medieval settlement remains, ridge and furrow and possible trackways were detected. However, the cropmark did not produce a convincing magnetic response, and is possibly spurious.				
Project type	Geophysical survey				
Site status	None				
Previous work	Desk-based assessment (Flitcroft 2013)				
Current Land use	Pasture and arable				
Future work	Unknown				
Monument type/ period	Medieval to post-medieval settlement, ridge and furrow and tracks				
Significant finds	None				
PROJECT LOCATION					
County	County Northamptonshire				
Site address	Site address West Street, Stanwick				
Study area	c 10ha				
OS Easting & Northing	SP 974 715				
Height OD	c 37-55m AOD				
PROJECT CREATORS					
Organisation	MOLA				
Project brief originator	CgMs Consulting				
Project design originator	MOLA				
Director/Supervisor	lan Fisher				
Project Manager	Mark Holmes				
Sponsor or funding body	CgMs Consulting				
PROJECT DATE					
Start date	14 April 2014				
End date	16 April 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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report				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 West Street, Stanwick, Northamptonshire, April.2014				
Serial title & volume	MOLA Northampton Reports 14/105				
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### Archaeological geophysical survey at West Street, Stanwick, Northamptonshire April 2014

#### ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey on land north of West Street, Stanwick, Northamptonshire. The survey covered a pasture field containing medieval and later earthworks and an arable field containing a presumed prehistoric or Roman cropmark. Medieval to post-medieval settlement remains, ridge and furrow and possible trackways were detected. However, the cropmark did not produce a convincing magnetic response, and is possibly spurious.

#### 1 INTRODUCTION

MOLA was commissioned by CgMs Consulting to conduct a geophysical survey on land north of West Street, Stanwick, Northamptonshire. (NGR SP 974 715; Fig 1). A detailed magnetometer survey was undertaken on 14th to 16th April 2014, and covered a total area of approximately 10ha.

#### 2 BACKGROUND

#### 2.1 Location and geology

The survey area encompassed one pasture field and one arable field located north of West Street, between the A45 and the western edge of Stanwick (Fig 1). A small stream flows between the two fields, debouching westwards onto the floodplain of the River Nene. The land around this steam stands at *c* 37m aOD and is underlain by alluvium and first terrace gravel. To the north-east the ground slopes up, attaining a maximum elevation of c 55m aOD in the north-eastern corner of the survey area. The geology in this part of the area comprises a succession of Jurassic sedimentary strata (BGS 2014).

#### 2.2 Historical and archaeological background

The survey area lies in an archaeologically rich part of the Nene Valley, and contains medieval to post-medieval earthworks associated with the shrunken western edge of Stanwick (Flitcroft 2013). The cropmark of a presumed Iron Age or Roman enclosure has also been recorded within the area. Other significant archaeological remains have been excavated nearby, including an Iron Age settlement and Roman villa 300m west of the survey area and a Neolithic to Early Bronze Age monument complex 400m to the north (Flitcroft 2013).

Two early 19th-century maps of Stanwick (Northants Record Office 3020 and 4314) show the survey area before and after the enclosure of the parish. The earlier map, dating from 1824, shows a track running along the stream and a complex of farm buildings standing to its south. The land around the farmstead and immediately north of the stream is shown divided into a number of enclosed fields, but open strip fields are depicted on the higher ground to the north. The other map, dating from 1838, shows the open fields enclosed and the old lane replaced by a new route which follows the present line of West Street to the south of the survey area. The farmstead was still present when

the second map was drawn, but is not depicted on the first edition Ordnance Survey map published in 1885.

#### 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).

An independent network of 30m grid squares was established within each of the fields to be surveyed. These grids were set out with a tape measure and optical square and were tied in to the Ordnance Survey National Grid by means of a Leica Viva RTK 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 3600 measurements per square. All fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; IfA 2011) and with the method statement for the project (Walford 2014).

The survey data were largely processed using Geoplot 3.00v software. Most of the striping was removed using the 'Zero Mean Traverse' function but some areas had to be de-striped separately, using a spreadsheet based routine, in order to preserve linear anomalies lying parallel to the traverse direction. Destaggering of the data was performed where necessary. 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 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 greyscale plot of the unprocessed data are presented in Figure 5.

#### 4 SURVEY RESULTS

#### 4.1 The southern field

The survey of the southern field has detected a complex set of anomalies representing a palimpsest of archaeological remains and more recent features. The archaeological anomalies are mostly concentrated in the northern half of the field, along the former street frontage, where they are so densely intermingled as to be almost unintelligible. To the south there are traces of ridge and furrow and indications of more recent ground disturbance. There is also an intense linear anomaly, running north to south through the field, marking the line of a modern pipe.

Many of the archaeological anomalies are linear or curvilinear in form and magnetically positive. They are likely to represent an intercutting sequence of ditches and gullies, defining several phases of house and garden plots. Some of the small positive anomalies which lie in amongst them could represent rubbish pits, wells and similar occupation features. However, small amorphous positive anomalies can also have a natural cause, representing patches of iron panning within alluvium, and it is possible that a combination of natural and archaeological features are represented in this case.

Towards the north-eastern corner of the field there is a rectilinear set of negative anomalies which could possibly represent stone wall footings. Another possible structure has been detected close to the western edge of the field, where there is a small, almost square negative anomaly, measuring approximately 8m across. The location of this latter anomaly roughly corresponds with that of a small square building depicted on the 1824 map of Stanwick. The other farm buildings shown on the same map have not been detected, but they would lie close to the modern pipeline, where any relevant anomalies will have been masked by the intense magnetic halos.

The south-eastern corner of the southern field contains relatively few magnetic anomalies, but the areas immediately north and west of it both contain parallel linear anomalies representing ridge and furrow. This distinction between furrowed and unfurrowed ground corresponds to two different landholdings recorded on the 1824 map, and suggests that whilst one piece of land was in prolonged arable use the other may have been pasture, meadow or parkland.

Three zones of moderately intense magnetic noise have been detected in the southern field, each one probably representing a concentration of ferrous material, brick rubble, burnt soil and other magnetic debris. Two of these zones, one L-shaped and the other a narrow band with a bulbous terminal, correspond with known earthworks (Fig 4) and may indicate deposits of spoil used to level the ground. The third zone, which occurs in the south-western corner of the field, is more amorphous. Its cause is unknown, but it is possible that it represents a spread of waste material from the construction of the adjacent roundabout and the re-alignment of the A45.

A number of individual dipolar anomalies have been detected, each representing a ferrous object. One large example close to the western edge of the field relates to a cattle trough, but the remainder cannot be attributed to specific causes.

#### 4.2 The northern field

The survey of the northern field has detected anomalies relating to ridge and furrow, three possible trackways and various other features of possible archaeological interest. It has also detected a continuation of the pipeline previously described in the southern field. However, it has not detected the enclosure previously interpreted from cropmarks.

In the south-east of the northern field, there is a linear anomaly which runs from east to west, intersecting perpendicularly with the ridge and furrow before curving southwards towards the stream. It is likely to represent a boundary ditch of medieval or earlier date. To its north there is one discrete positive anomaly which may represent a large pit, and to its west there is a group of smaller anomalies which may represent a pit cluster. Slightly further west there are two weak curvilinear anomalies which may represent segments of other ditches. Further north in the field there is a rectangular positive anomaly which measures approximately 4m x 8m. It could possibly represent an animal pen or other small enclosure or, less probably, a set of foundation trenches for a timber building.

Two sets of parallel linear anomalies extend across the northern and eastern parts of the field, representing parts of two furlongs of ridge and furrow. Three further furrows have been detected along the western edge of the field. The extent of the northern and eastern furrows largely corresponds to the extent of open strip fields depicted on the 1824 map of Stanwick.

One broad linear anomaly and two less distinct linear trends intersect obliquely with the ridge and furrow. It is most likely that these represent former tracks, with the strongest

anomaly perhaps representing a hollow-way and the others representing less well defined combinations of hollows, ruts and side ditches. If these are tracks, they could be of early date, as they are not recorded on any historic mapping, and do not respect the layout of the ridge and furrow or the modern field boundaries.

Apart from the pipeline, which is represented by an intense linear anomaly in the western half of the field, the survey has detected only a little evidence for recent ground disturbance in the northern field. There is some sparse magnetic noise near the eastern hedgeline, suggesting a scatter of rubbish from the adjoining properties, and one large dipolar anomaly indicates a substantial ferrous object in the north-eastern part of the field.

#### 5 CONCLUSION

The survey has confirmed the presence of archaeological features along the southern frontage of the former lane, where remains of medieval to post-medieval settlement had been anticipated. It has also mapped some possible trackways and other archaeological features in the field to the north. However, it has been unable to detect the remains of a post-medieval farmstead known from historic maps, as the relevant part of the survey data has been badly affected by magnetic interference from a modern pipe.

The survey has also failed to detect an oval-shaped enclosure which cropmarks suggested to lie in the northern part of the survey area. It has, however, demonstrated a strong coincidence between the north-eastern corner of the cropmark and the angled junction between two abutting furlongs of ridge and furrow (Fig 4). This suggests that the enclosure is perhaps a spurious one, with the cropmark representing a chance combination of furrows and other features.

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Scale 1:15,000



Scale 1:2000

Magnetometer survey results Fig 2



Scale 1:2000

Magnetometer survey interpretation Fig 3



Scale 1:2000

Magnetometer survey results with cropmarks and earthworks Fig 4



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