

Archaeological geophysical survey of land east of Harrow Lane, Hastings East Sussex January 2018

Report No: 18/05

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OASIS REPORT

PROJECT DETAILS		Oasis No. molanort1-306528	
Project name	Archaeological geophysical survey of land east of Harrow Lane, Hastings, East Sussex		
Short description	MOLA (Museum of London Archaeology) were commissioned to undertake a magnetometer survey of c4ha of land to the east of Harrow Lane, Hastings, East Sussex. The survey detected a probable ring ditch or roundhouse gully and some other possible ditches in the northern portion of the site and a potential trackway to the south. Field drains and modern disturbance were also detected.		
Project type	Geophysical survey		
Site status	None		
Previous work	None known		
Current land use	Recreation ground		
Future work	Trial trench excavation		
Monument type/ period	Late prehistoric or Roman ring ditch or roundhouse gully; undated ditches.		
Significant finds	None		
PROJECT LOCATION			
County	East Sussex		
Site address	Harrow Lane, Hastings		
Study area	c 4ha		
OS Easting & Northing	TQ 7995 1285		
Height OD	c 126m – 136m aOD		
PROJECT CREATORS			
Organisation	MOLA Northampton		
Project brief originator	Greg Chuter, East Sussex Assistant County Archaeologist		
Project design originator	MOLA Northampton		
Director/Supervisor	Graham Arkley		
Project Manager	John Walford		
Sponsor or funding body	Hastings Borough Council		
PROJECT DATE			
Start date	3 January 2018		
End date	4 January 2018		
ARCHIVES			
Physical	Location	Content	
Paper	MOLA Northampton	Site survey records	
Digital		Geophysical survey & GIS data	
BIBLIOGRAPHY			
Title	Journal/monograph, published or forthcoming, or unpublished client report		
Title	Archaeological geophysical survey of land east of Harrow Lane, Hastings, East Sussex, January 2018		
Serial title & volume	MOLA Northampton Reports 18/05		
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ABSTRACT

MOLA (Museum of London Archaeology) were commissioned to undertake a magnetometer survey of c4ha of land to the east of Harrow Lane, Hastings, East Sussex. The survey detected a probable ring ditch or roundhouse gully and some other possible ditches in the northern portion of the site and a potential trackway to the south. Field drains and modern disturbance were also detected.

1 INTRODUCTION

MOLA (Museum of London Archaeology) was commissioned by The Environmental Dimension Partnership (EDP), on behalf of Hasting Borough Council, to undertake an archaeological geophysical survey of land east of Harrow Lane, Hastings, East Sussex (NGR TQ 7995 1285; Fig 1). This work was prompted by a requirement from Greg Chuter, the Assistant County Archaeologist for East Sussex, and was intended to identify and map any archaeological remains which may be affected by a proposed development scheme. The fieldwork was conducted on 3rd and 4th of January 2018 and complied with all relevant standards and guidance (EH 2008, ClfA 2014).

2 BACKGROUND

2.1 Topography and geology

The survey area comprises a recreation ground, circa 4ha in extent, located immediately east of Harrow Lane and north-north-west of Welton Rise housing estate. The site lies just south of the summit of a gentle slope, at an elevation of c 136m above Ordnance Datum (aOD) to the north and 126m aOD to the south.

The British Geological Survey indicates that the geology of the site comprises sediments attributed to the Wadhurst Clay Member of the Wealden Group. No superficial drift is recorded (BGS 2018).

2.2 Historical and archaeological background

The survey area lies just south of another site that has recently undergone archaeological evaluation. MOLA conducted a geophysical survey there in November 2016 and the results of this work are reproduced alongside the present survey results in Figure 2 of this report. The 2016 survey mapped a number of magnetically weak linear anomalies that may be of archaeological origin and one strongly magnetic linear that is highly likely to represent a field boundary (Walford 2016). This feature, aligned east to west, does not appear on any known historic maps, so probably pre-dates the 19th century.

In January 2017 a trial trench evaluation targeted many of the anomalies detected by the geophysics. A number were discounted as geological, but some, including the strongly magnetic linear anomaly, were described as archaeological features that likely relate to historic field boundaries and water management. Unfortunately no artefacts were

recovered from the excavated features, so it was not possible to assign dates to them (McAtominey 2017).

This area of Hastings, named Baldslow, originates from a village that was enveloped by Hastings in the early 20th century. The study area is located just outside the historic core of the village. As a result the area is designated as an archaeological notification area (East Sussex HER No. ANA836).

The survey area is located c 150m south of the remains of a 19th-century windmill (HER No. MES999). The windmill is depicted alongside a former smithy and brickworks on the first edition of the Ordnance Survey 6" map (1874-9).

The 1899 Ordnance Survey County Series map depicts the survey area sandwiched between two brickworks with associated quarries. One was located immediately west of survey area, on the opposite side of Harrow Lane, and the other, named Beauport Brick Works, was located immediately south-east of the area, in the location now occupied by the housing along Welton Rise. Later Ordnance Survey maps show that both sets of quarries and brickworks were disused by the 1950s.

3 METHODOLOGY

The survey was undertaken with the MOLA magnetometer cart. This is a two-wheeled, lightweight structure designed to be pushed by hand. It incorporates a bank of six vertically-mounted Bartington Grad601 magnetic sensor tubes, spaced at half-meter intervals along a bar aligned crossways to the direction of travel, and also incorporates a Leica Geosystems Viva GPS antenna mounted on the central axis, 0.5m astern of the sensors. The magnetic sensors each output data at a rate of eight readings per second and the GPS antenna outputs NMEA format data (GGA messages) at a rate of one position every second. These data streams are fed into a laptop computer where they are compiled into a single raw data file by MultiGrad601 logging software specifically designed for that purpose.

The cart was pushed along straight and parallel traverses across the survey area, with data logging being manually toggled on and off at the start and end of each traverse to avoid the collection of spurious data whilst turning. Traverse ends were marked with ranging poles to aid even coverage, and the evenness of coverage was further checked by monitoring the positional trace plotted in real time by the MultiGrad601 logging software. The average speed of coverage was c 2m/s and the effective data resolution thus approximated to 0.25m x 0.50m.

The raw survey data was initially processed with MLGrad601 software, which calculated an actual UTM co-ordinate for each data point by interpolating the GPS readings and applying offset corrections based on the array geometry and calculated heading direction. This produced an output file in XYZ format which could be imported into TerraSurveyor software for data visualisation and further processing.

The raw XYZ data exhibited striping caused by slight mis-matches in the calibration of the individual magnetic sensors. This was removed in TerraSurveyor by applying the median destripe function to runs of data from each sensor.

The processed data is presented in this report as a greyscale raster plot (range +5nT to -5nT / black to white), rotated and scaled for display against the Ordnance Survey base mapping (Fig 2). An interpretive overlay is presented in Figure 3 and a plot of the unprocessed survey data in Figure 4.

4 SURVEY RESULTS

A positive circular anomaly, measuring c10m across, is present towards the northern limit of the survey area. This is likely to represent a small ring ditch or the gully of a roundhouse of late prehistoric to Roman date. There appears to be an entrance gap on its north-western side. More weakly magnetic linear anomalies are also present in this area, probably representing ditches of archaeological origin. Two of these could be projected to join with ditches previously detected in the adjacent field (Fig 3).

A few other positive linear anomalies are present at various places in the data. Whilst these could represent further ditches, they are generally too weak, short or irregular for this to be a fully convincing interpretation. Alternative causes could include field drains and natural channelling in the surface of the geological substrate.

In the southern portion of the survey area there is a pair of positive linear anomalies running in parallel, broadly aligned north-north-east, with a band of slightly negative magnetic readings in between them. All three anomalies become indistinct at each end so their extents cannot be fully determined. Their cause is unclear but the most likely interpretation would be that they represent a track or footpath. This need not be a particularly ancient feature, especially given the straightness of the anomalies and the fact that their southern end aligns approximately towards a modern path into the recreation ground.

A series of magnetically positive linear anomalies running in parallel across much of the site represent modern field drains.

The site is covered by many pairs of moderately large ferrous anomalies. The majority of these exhibit a small strongly magnetic positive core surrounded by a much larger negative halo but four of these pairs display an inversed polarity and two pairs display both a positive and negative spike. These anomalies originate from metal sockets used to hold up goal posts, reflecting the land's current use as a sports field.

Small ferrous anomalies, typically in the form of strong magnetic dipoles, are present across the site. The majority of these are likely to originate from scrap metal buried within the soil. These anomalies are especially concentrated in a band along the western edge of the survey area, perhaps indicating residual debris from the construction of Harrow Lane or else dumped materials from the nearby quarry and brickworks.

5 CONCLUSION

The survey has identified a circular feature which would be best interpreted as a small ring ditch or a roundhouse gully of probable late prehistoric or Roman date. Other possible ditches have been detected in the same vicinity, two of them seeming to be continuations of undated ditches previously detected in the field to the north (Fig 3). Further to the south a potential path or trackway has been detected, but this is quite straight and aligns with a modern footpath to the south, so may be of relatively recent date.

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19th January 2017

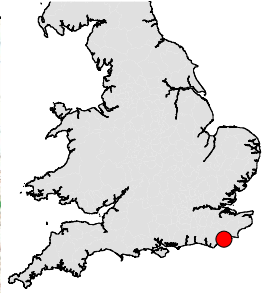
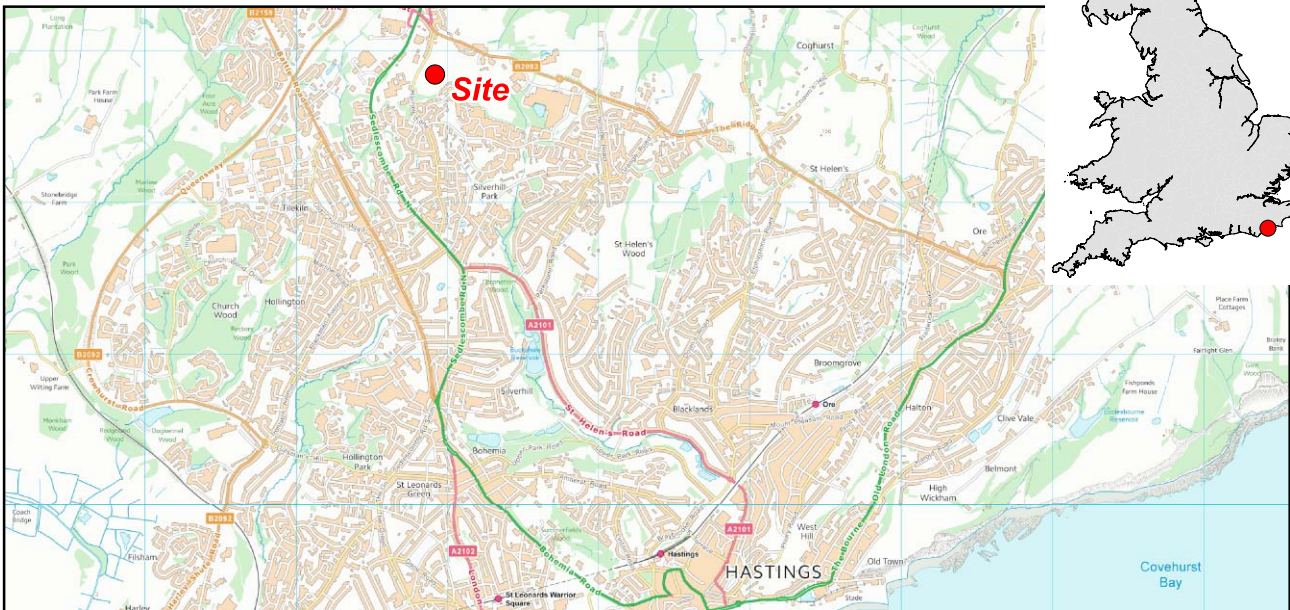
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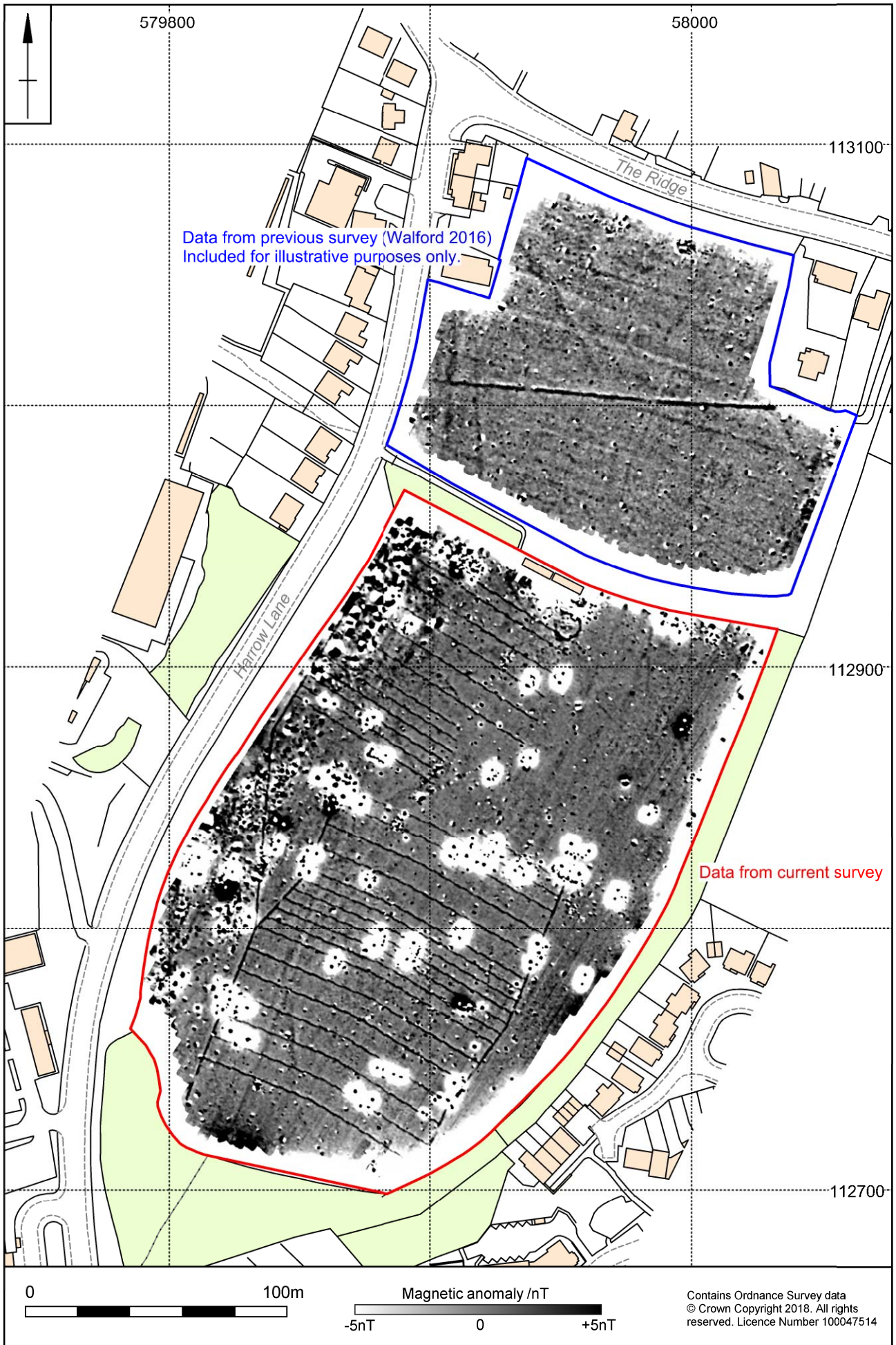


Site location

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Scale 1:3000

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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