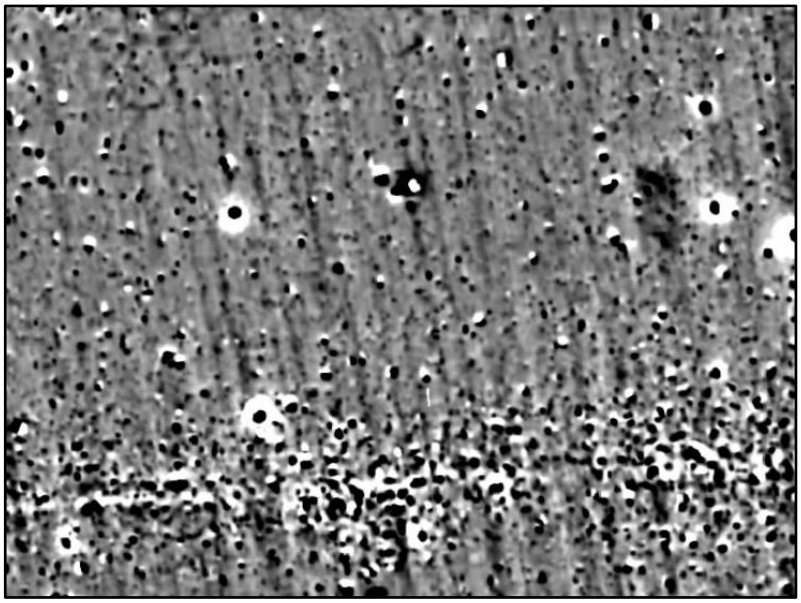

Archaeological geophysical survey of the ‘Charity Land’ site, west of Banbury Road Southam Warwickshire

November 2018

Report No: 18/162

Author: John Walford

Illustrator: Graham Arkley

Project Manager: Adam Yates
NGR: SP 415 605

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Quality control and sign off**:**

Issue No.	Date approved:	Checked by	Verified by	Approved by	Reason for Issue:
1	13/12/2018	Claire Finn	Chris Chinnock	Adam Yates	Client approval
2	26/08/2020	Chris Chinnock	-	Adam Yates	Review for client

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STAFF

Project Manager:	Adam Yates BA MCIfA
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	Nathan Sleaford MA
Text:	John Walford
Illustrations:	Graham Arkley

PROJECT DETAILS ***OASIS* ID:** molanort1 – 335099			
Project Name	Archaeological geophysical survey of the 'Charity Land' site, west of Banbury Road, Southam, Warwickshire		
Short description	MOLA was commissioned to undertake a geophysical survey of the 'Charity Land' development site, west of Banbury Road, Southam, Warwickshire. The northern portion of this site had been surveyed in 2011, revealing a probable Iron Age or Roman ditch and round house at the eastern edge of the area. The present survey covered *c*2.5ha of previously unsurveyed land to the south. It identified another one or two possible roundhouses, as well as a possible small clay pit and a remains associated with early 20th-century allotments. This report presents the results of both surveys together, covering the entirety of the site.		
Project reference	None		
Project start date	26-11-2018	**Project end date**	26-11-2018
Previous work	Yes	**Future work**	Yes
Type of project	Field evaluation / Geophysical survey		
Instrumentation	Bartington Grad601	Fluxgate	Multiple sensor
Resolution	0.1nT		
Traverse separation	0.5m	**Reading interval**	0.25m
Notes	Cart survey. Reading intervals and traverse separation above are notional figures based on probe separation and average survey speed.		
Survey extent	*c*2.5ha		
Geology (solid)	Middle Lias	**Geology (drift)**	None
Site status	None		
Current land use	Arable		
Monuments	**Monument type**	**Monument date**	
	Roundhouse	Iron Age or Roman	
	Quarry	Post-medieval	
	Allotments	Modern	
Significant finds	None		

PROJECT LOCATION			
County	Warwickshire	**District**	Stratford upon Avon
Parishes	Southam	**Site name**	Charity Land, west of Banbury Road
Site co-ordinates	SP 415 605	**Height aOD (min to max)**	81m to 82m

PROJECT CREATORS			
Organsiation	MOLA Northampton		
Project designer	MOLA Northampton		
Brief originator	Stratford upon Avon District Council		
Project manager	Adam Yates	**Project supervisor(s)**	Graham Arkley
Project sponsor	Bloor Homes		

PROJECT ARCHIVES			
Archive recipient	MOLA Northampton	**Archive ID**	None
Archive contents	Physical - None Digital - Geophysical data, GIS files and text Paper – Final report and miscellaneous field paperwork		

BIBLIOGRAPHY	
Author(s)	Walford, J.
Title	Archaeological geophysical survey of the 'Charity Land' site, west of Banbury Road, Southam, Warwickshire, November 2018
Report number	MOLA Northampton report no. 18/162
Date	13th December 2018 – reviewed 26th August 2020

Contents

1	**INTRODUCTION**	**1**
2	**BACKGROUND**	**1**
	2.1 Topography and geology	
	2.2 Historical and archaeological background	
3	**METHODOLOGY**	**3**
	3.1 2018 survey	
	3.2 2011 survey	
	3.3 Data presentation	
4	**SURVEY RESULTS**	**4**
	4.1 2018 survey	
	4.2 2011 survey	
5	**CONCLUSION**	**5**
	BIBLIOGRAPHY	**5**

Figures

Cover	Magnetometer survey results (extract)	
Fig 1	Site location	1:15,000
Fig 2	Magnetometer survey results	1:2000
Fig 3	Magnetometer survey interpretation	1:2000
Fig 4	Unprocessed magnetometer data	1:2000

Archaeological geophysical survey of the 'Charity Land' site, west of Banbury Road, Southam Warwickshire November 2018

ABSTRACT

MOLA was commissioned to undertake a geophysical survey of the 'Charity Land' development site, west of Banbury Road, Southam, Warwickshire. The northern portion of this site had been surveyed in 2011, revealing a probable Iron Age or Roman ditch and roundhouse at the eastern edge of the area. The present survey covered c2.5ha of previously unsurveyed land to the south. It identified another one or two possible roundhouses, as well a possible small clay pit and remains associated with early 20th century allotments. This report presents the results of both surveys together, covering the entirety of the site.

1 INTRODUCTION

MOLA (Museum of London Archaeology) was commissioned by Bloor Homes to undertake an archaeological geophysical survey of the proposed 'Charity Land' development site, located to the west of Banbury Road, Southam (NGR SP 415 605, Fig 1). This survey was required in support of a planning application to Stratford on Avon District Council, and aimed to locate any archaeological remains which may be affected by the proposed development. Only the southern portion of the site was surveyed, the northern portion having been covered by a previous survey in 2011, as described below.

The fieldwork was conducted on 26th November 2018. It followed the methodology outlined in the Written Scheme of Investigation for the project (Meadows 2018), and also conformed to standards and guidance issued by the Chartered Institute for Archaeologists and English Heritage (CIfA 2014, EH 2008).

This report presents the 2011 survey results alongside those of the present survey, so as to cover the entirety of the proposed development site. A copy of the report will be deposited with the Warwickshire Historic Environment Record.

This report was originally compiled in December 2018 but has been reviewed in August 2020 at the request of the client (Bloor Homes). The present condition of the site has remained comparable to its condition in 2018 and the interpretation of the geophysical data presented here should be considered an accurate and up-to-date reflection of the archaeological potential of the site.

2 BACKGROUND

2.1 Topography and geology

The Charity Land site is *c*5ha in total extent and lies on the western side of Banbury Road, to the south of Southam. Its northern part is presently occupied by the practice pitches of Southam United FC, whilst its southern part, which is the focus of the present survey, is in arable use. The southern boundary of the site follows an irregular line across the field (Fig 1), meshing with the adjacent land-take for the forthcoming HS2 railway development.

The survey area is approximately level, lying at around 81m to 82m above Ordnance Datum. At the time of the fieldwork it was under a recently sown crop. Its geology comprises Lias group strata, with Blue Lias to the north-west and Charmouth Mudstone across the remainder of the area. No drift geology is recorded (BGS 2018).

2.2 Historical and archaeological background

The northern portion of the site was subject to an archaeological geophysical survey in 2011 as part of a wider programme of archaeological evaluation for an earlier development scheme (Walford 2011). This survey identified a probable Iron Age or Roman roundhouse an associated ditch in the east of the field alongside Banbury Road (Fig 2 and Section 4.2, below). Although the survey detected no other archaeological features except for ridge and furrow across the rest of the evaluation area, the subsequent trial trench excavations located a late Bronze Age or early Iron Age pit alignment and a small Anglo-Saxon cemetery. Both of these features lay to the west of the present development site (Fig 1) and have since been fully excavated (Egan 2017, Egan and Atkins in press). No excavation has yet taken place on the probable roundhouse.

The survey area lies outside the historic core of Southam and is likely to have been in agricultural use during the medieval and post-medieval periods. Aerial photographs (Google Earth) show various traces of medieval ridge and furrow cultivation in the immediately surrounding area. Historic Ordnance Survey maps show that the survey area itself was in use as allotments during the first half of the 20th century. The first edition six inch Ordnance Survey map of 1889 also shows evidence of local industry, with former clay pits and a kiln located adjacent to the former Harp Inn, *c*500m to the south of the survey area (Fig 1).

3 METHODOLOGY

3.1 2018 survey

The survey was undertaken with a Bartington magnetometer cart. This is a two-wheeled, lightweight sensor platform designed to be pushed by hand. It incorporates a bank of eight vertically-mounted Bartington Grad601 magnetic sensor tubes, spaced at half-metre intervals along a bar aligned crossways to the direction of travel. The cart also incorporates a Leica Geosystems GS14 GPS antenna mounted on the central axis, 1.02m 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 propelled 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 speed of coverage averaged *c*1.5m/s - 2m/s and the effective data resolution thus approximated to 0.5m x 0.25m.

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.

3.2 2011 survey

The survey was conducted with hand-held Bartington Grad-601 instruments, collecting data in 30m grid units at a resolution of 1m x 0.25m, as was standard professional practice at the time (Walford 2011). The data has been reprocessed for the present report, using Geoplot 3 to destripe it and to remove some 'stagger' errors caused by uneven survey speed. The interpretation has also been re-considered and changed in some minor details from that in Walford 2011.

3.3 Data presentation

The processed survey data is presented in this report a greyscale raster (range +/-4nT black to white). Another raster plot of the 2011 survey results is presented alongside the present data, at the same display range. An interpretive overlay is presented in Figure 3 and the unprocessed survey data, at a range of +/-10nT, in Figure 4.

4 SURVEY RESULTS

4.1 2018 survey

The survey data contains a few very weak anomalies of possible or probable archaeological origin, concentrated towards the northern edge of the survey area. The most plausible of these is a penannular anomaly, *c*10m in diameter, with a small west-facing gap. This may represent the ring gully of a roundhouse. A more irregular and fragmentary anomaly *c*35m to the east may relate to another roundhouse but is less convincing. To the north are some very weak linear anomalies, aligned roughly east to west, which could either represent ditches or field drains.

An approximately rectangular positive anomaly, measuring *c*10m by *c*6m lies in the north-east of the survey area and is aligned approximately square to the present field boundaries. The most likely interpretation of this would be a small post-medieval clay pit or similar feature.

A conspicuous negative linear anomaly, suggestive of a recent trackway, extends east to west across the survey area. It is surrounded, particularly in the east, by a diffuse zone of magnetic noise likely to arise from a scatter of hardcore and ferrous debris. Individual magnetic dipoles, more widely dispersed through the data, likewise relate to pieces of ferrous debris.

The series of negative linear anomalies which are aligned north to south across the data set may represent features that were contemporary with the trackway, as a number of them terminate against it or else change alignment where they crossing it. Possible interpretations would be paths, drains or former plot boundaries associated with the former allotments.

4.2 2011 survey

The main archaeological features lie in the north-east of the field. A penannular anomaly, *c*13m in diameter, with a broad north-eastern gap probably marks the site of a roundhouse whilst a linear anomaly of similar magnetic intensity represents a ditch lying tangental to it on its south-western side. To the immediate south are some amorphous

positive anomalies which may indicate further archaeological features but are too incoherent to interpret in detail.

The widespread magnetic noise in the southern half of the field indicates a scatter of ferrous debris, whilst the negative anomaly aligned north to south through the same area represents another recent trackway.

The positive linear anomalies which are aligned east to west through the south of the field were originally interpreted as medieval ridge and furrow (Walford 2011). However they lack the gentle 'reversed-S' curves which are characteristic of medieval plough furrows and are now thought more likely to represent plot boundaries or other allotment remains similar to those described in the preceding section.

Many of the large magnetic dipoles detected across the field were caused by football goalposts other modern objects, although some may relate to buried debris. A line of such dipoles crossing the middle of the field was related to a set of poles for an overhead cable.

5 CONCLUSION

The survey of the northern part of the Charity Land site, undertaken in 2011, identified a small group of archaeological features, interpreted as a roundhouse and ditch. The latest survey results, although less clear, suggest that one or two more roundhouses may lie *c*200m to the south-west. The overall impression is of an area of dispersed, unenclosed settlement remains which, given the presence of roundhouses, are most probably Iron Age or Roman in date.

Many of the other detected features are likely to relate to the former allotments which are depicted on Ordnance Survey maps dating between 1889 and 1955. The two trackways correspond to mapped features, and the widespread areas of magnetic noise, which lie within the mapped extent of the allotments, would be consistent with scatters of bonfire debris, track hardcore and other horticultural rubbish. A series of linear anomalies across the same areas respect the lines of the tracks, and thus seem likely to represent paths, plot boundaries, drains or other allotment remains. The previous interpretation of some of these features as medieval ridge and furrow (Walford 2011) is no longer considered likely.

One feature in the 2018 survey area has been interpreted, based on the size and shape of its anomaly, as a small post-medieval clay pit. Clay pits are recorded to the south of the survey area on the 1889 Ordnance Survey map, so the presence of other, unrecorded pits in the area is plausible.

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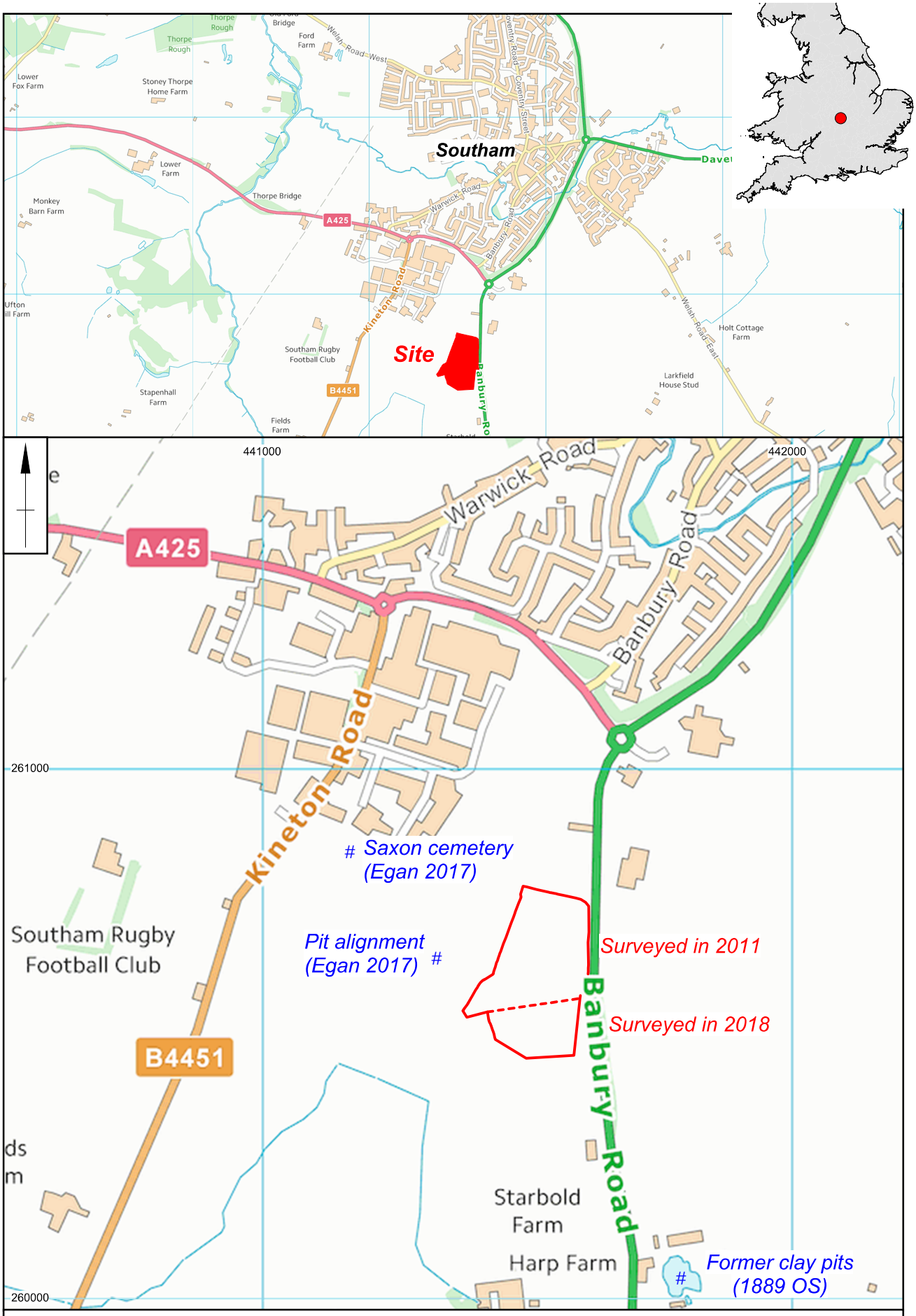
MOLA
26th August 2020



Scale 1:10,000

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