

**Hinckley Road
Stoke Golding
Leicestershire**

Earthwork Survey

Accession no: X.A156.2014

for
EDP
on behalf of

Morris Homes Ltd

CA Project: 660402
CA Report: 15022


January 2015

Hinckley Road
Stoke Golding
Leicestershire

Earthwork Survey report

Accession no: X.A156.2014

CA Project: 660402
CA Report: 15022

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date	15 January 2015
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date	15 January 2015
issue	01

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SUMMARY

Project Name: Hinckley Road, Stoke Golding
Location: Stoke Golding, Leicestershire
NGR: SP 4056 9738
Type: Earthwork survey
Date: 22 December 2014
Planning Reference: 14/00262/OUT
Location of Archive: Leicestershire Museums Service
Accession Number: X.A156.2014

In December 2014, an archaeological earthwork survey was undertaken by Cotswold Archaeology on land at Hinckley Road, Stoke Golding, Leicestershire. The survey recorded well-preserved ridge and furrow earthworks at the site, prior to its loss to residential development.



1. INTRODUCTION

- 1.1 In December 2014, Cotswold Archaeology (CA) carried out an earthwork survey on land off Hinckley Road, Stoke Golding, Leicestershire (site centred at NGR: SP 4056 9738; Fig. 1). The survey was commissioned by EDP, acting on behalf of Morris Homes Ltd.
- 1.2 Outline planning permission for residential development of the site was granted by Hinckley and Bosworth Borough Council (HBBC; the local planning authority), conditional on an earthwork survey to record extant ridge and furrow at the site (planning ref: 14/00262/OUT). The scope of the earthwork survey was defined by Teresa Hawtin, Senior Planning Archaeologist, Leicestershire County Council (the archaeological advisor to HBBC).
- 1.3 The fieldwork was carried out in accordance with a written scheme of investigation prepared by CA (2014) and the guidelines *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice* (English Heritage 2007) and *Recording Archaeological Field Monuments: A Descriptive Specification* (RCHME 1999). The project abided by the English Heritage procedural documents *Management of Archaeological Projects 2* (English Heritage 1991) and *Management of Research Projects in the Historic Environment (MoRPHE): Project Manager's Guide* (English Heritage 2006).

The site

- 1.4 The site, which covers an area of approximately 3.15ha, is situated on the eastern edge of the village of Stoke Golding, which is located approximately 4km to the north-west of Hinckley town centre. It comprises a roughly rectangular pasture field, bordered by hedgerows, and is bounded by Hinckley Road to the east, the rear of properties fronting on to Hinckley Road to the south, residential properties on Sherwood Road to the west and a pasture field to the north. Within the site, the ground descends gradually from c. 110m above Ordnance Datum (aOD) at its northern edge to c. 107m aOD at its southern edge. In its wider topographical setting, it is situated on a south-east and east-facing slope that descends into the valley of a small stream, a tributary of the Tweed River.

- 1.5 The bedrock geology of the site comprises Triassic mudstone of the Gunthorpe Member, a sub-unit of the Sidmouth Mudstone Formation. This is overlain by superficial deposits of glacial till (diamicton) of the Oadby Member (BGS 2015).

Archaeological background

- 1.6 The site has been the subject of a desk-based heritage assessment (CgMs Consulting 2010), a geophysical survey (NA 2010), a programme of archaeological trial trenching (NA 2011) and an archaeological summary (CgMs Consulting 2014). These demonstrated that there are no significant below-ground archaeological remains at the site. However, the site does contain extant ridge and furrow earthworks, the remains of a medieval/early post-medieval agricultural field system.

Archaeological objectives

- 1.7 The objectives of the survey were to record the ridge and furrow earthworks at the site prior to their loss during development. The recording of the ridge and furrow earthworks was in line with Research Objective 7I of the *East Midlands Heritage Research Agenda* (Knight *et al.* 2012), which was to: “*Investigate the development of the [medieval] open-field system and medieval woodland management.*” Ridge and furrow earthworks remain important elements of the landscape character in Leicestershire, and detailed surveys have the potential to significantly enhance our understanding of the origins of this agricultural system and how it developed over time.

Methodology

Equipment, calibration and verification

- 1.8 Measured survey was carried out using a combination of Leica 1200 and Viva series “SmartRover” (real-time kinematic) RTK GPS and TCRP1203 robotic Total Station instruments. The Leica RTK GPS is quoted as +/- 20mm in accuracy for all 3D observations and measurements, and the Leica TCRP1203 R100 has a quoted horizontal and vertical accuracy of 3”. CA has a fleet of CST and Sokkia automatic levels which are serviced annually and recalibrated when required.

- 1.9 All instruments were calibrated or verified (as appropriate) in accordance with RICS guidelines (e.g. ISBN: 9781842193525). Where there is no published guideline, accepted industry practice has been adopted.
- 1.10 When heights were surveyed using RTK, the accuracy was monitored by observing points of known height established for this purpose at intervals during the survey day. The results of these observations were logged with their date and time and the record submitted with the Report of Survey. As a minimum, these observations were taken before the commencement of surveying and as the last observation at the end of each survey day. Following any loss of initialisation or confidence in the equipment, the surveyor staked-out a previously-observed point and took a reading on it to check reinitialisation. When necessary, the instrument was powered-down in order to force re-initialisation. If any observation was found to vary from the known height by 100mm or more, then all data observed since the previous check was abandoned and resurveyed.
- 1.11 When Kinematic GNSS data collectors were used for earthwork measurement they were set to a horizontal precision of 30mm and a vertical precision of 50mm.
- 1.12 For spirit-levelling instruments, a two-peg test was to be carried out at the beginning of each survey day and if the instrument receives a knock.

Survey control

- 1.13 Permanent and temporary survey control stations were established according to good survey practice. A series of survey control stations were identified or installed to provide sufficient coverage of survey areas. These were either intervisible, or offered views to suitable mapped control. The OS co-ordinates of the survey stations were established using the Leica 1200/Viva GPS, with an expected accuracy of +/- 20 mm.
- 1.14 All horizontal and vertical control was derived directly or indirectly from the OS Net. For guidance on good practice, the RICS Guidelines for the use of GNSS in Surveying and Mapping (ISBN 1842190938) were used as reference.
- 1.15 At least two network RTK stations were observed, close to the survey area and if required as an RO for total station observations there was sufficient distance

between them for a 'strong' bearing control. Observations were made in accordance with the TSA guidance notes, using at least two periods of three minute observations separated by at least 20 minutes. Additionally, observations were pre-planned so that each window of observations was made under different satellite configurations.

- 1.16 Each new CA survey station located within 300m of an OSBM was levelled from the OSBM and the results were recorded in the survey archive.

Survey detail

- 1.17 Detail data was captured using the GPS instruments to log coded points and string lines, using CA's comprehensive codelist. Where obvious topographical features such as earthworks were visible, these were surveyed on the basis of break-of-slope. Two traverse lines were also undertaken perpendicular to the earthworks to get a profile across the site.

- 1.19 Detailed survey was supported by hand measurement, field notes and digital photographs.

Quality assurance

- 1.20 The Surveyor was responsible for implementing full quality control and assurance procedures at each stage of the work, including documented self-checks and independent checks, to ensure that mistakes, errors and omissions were identified and corrected prior to delivery of the results. The quality assurance was recorded using CA internal procedures and systems.

Presentation of results

- 1.21 Once the survey fieldwork was complete, the data was downloaded from the instrument into Leica GeoOffice, a proprietary survey processing package, and then exported to a CAD system, from which a plan drawing was produced. This comprised a composite of surveyed data, superimposed on detail obtained from the OS basemap, and supported by manually-recorded additional information.

2. RESULTS

- 2.1 The remains of well-preserved ridge and furrow earthworks were recorded throughout the surveyed field (Fig. 2). The furrows measured approximately 6m–10m from ridge to ridge and had an average depth of approximately 0.4m from top of ridge to base of furrow (Fig. 3). The surviving length of the selions (individual strips), which were on a west-north-west/east-south-east alignment, was up to 196m (approximately one furlong).

3. DISCUSSION

- 3.1 The survey recorded the well-preserved earthworks of medieval/post-medieval ridge and furrow, which are the remains of the open field system that once surrounded the village of Stoke Golding. The earthworks continued on the same alignment into the fields to the north (outside of the development area), indicating that they form only part of an open field. The length of the selions is also just under a furlong, suggesting that the headlands have been encroached by the more recent field boundaries and modern road.
- 3.2 A medieval origin for the earthworks is suggested by the wide spacing of the selions (individual strips) and the reversed S-shaped curve evident in their alignment (Taylor 1975, 82; Rackham 1986, 167–9). The open field system may have continued in use until the period of the Acts of Enclosure, in the late 18th/19th centuries, or it may have been converted to pasture at an earlier date for sheep rearing.

4. CA PROJECT TEAM

The fieldwork was undertaken by Dan Riley. The report was written by Dan Riley, with illustrations prepared by Leo Heatley. The archive has been compiled by Dan Riley and prepared for deposition by Emily Evans. The project was managed for CA by Derek Evans.



5. REFERENCES

BGS (British Geological Survey) 2015 *Geology of Britain Viewer* http://maps.bgs.ac.uk/geology_viewer_google/googleviewer.html Accessed 15 January 2015

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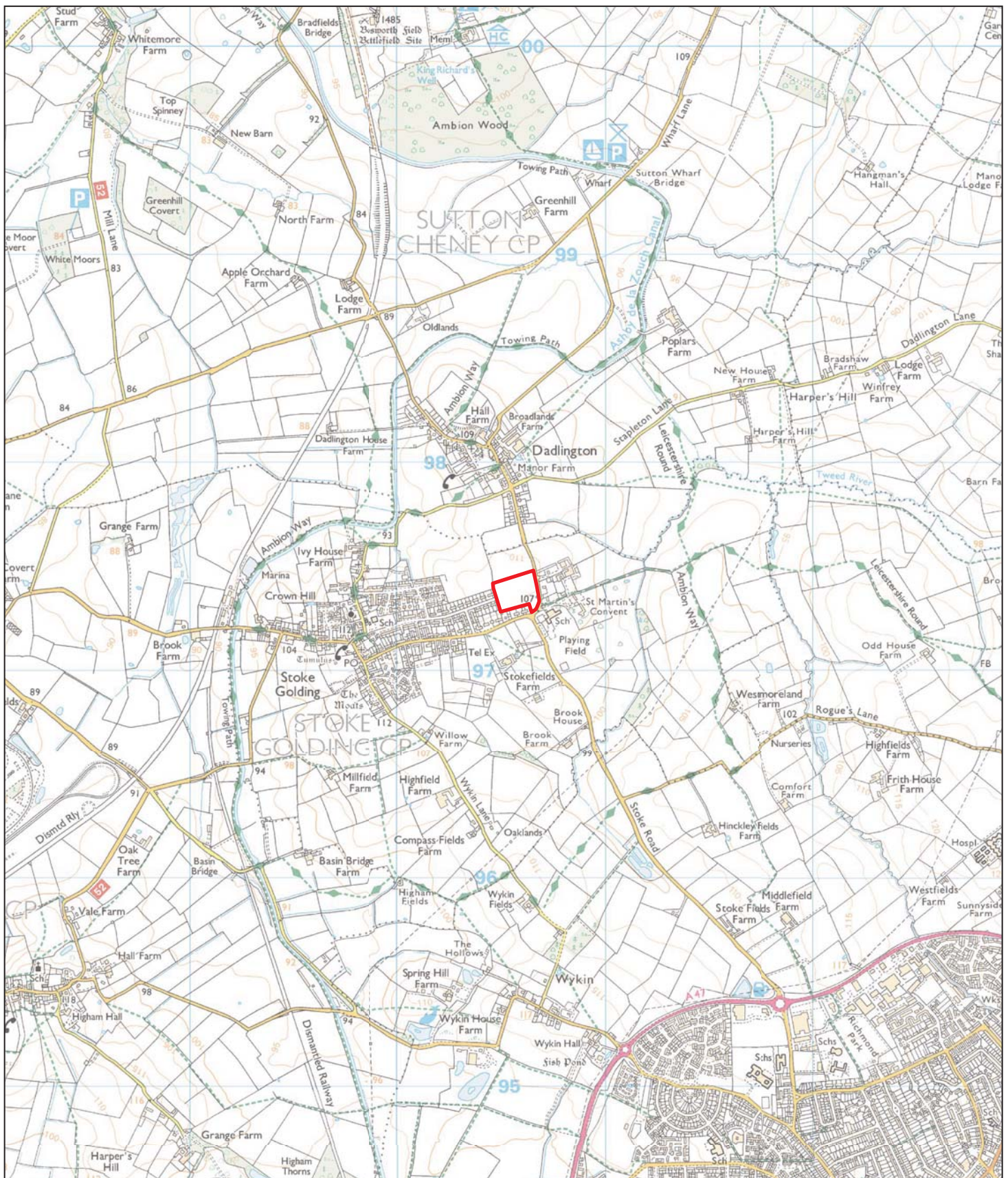
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APPENDIX A: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Hinckley Road, Stoke Golding, Leicestershire	
Short description (250 words maximum)	In December 2014, an archaeological earthwork survey was undertaken by Cotswold Archaeology on land at Hinckley Road, Stoke Golding, Leicestershire. The survey recorded well-preserved ridge and furrow earthworks at the site, prior to its loss to residential development.	
Project dates	22 December 2014	
Project type	Archaeological earthwork survey	
Previous work	DBHA (CgMs 2010); geophysical survey (NA 2010); trial trench evaluation (NA 2011)	
Future work	None	
PROJECT LOCATION		
Site Location	Hinckley Road, Stoke Golding, Leicestershire	
Study area (M ² /ha)	3.15ha	
Site co-ordinates (8 Fig Grid Reference)	SP 4056 9738	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator	Leicestershire County Council	
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Derek Evans	
Project Supervisor	Dan Riley	
MONUMENT TYPE	Ridge and furrow earthworks	
SIGNIFICANT FINDS	none	
PROJECT ARCHIVES		
		Content
Physical	Leicestershire Museum Services, accession no. X.A156.2014	None
Paper		Site records
Digital		Survey data, photographs, report
BIBLIOGRAPHY		
CA (Cotswold Archaeology) 2015 <i>Hinckley Road, Stoke Golding, Leicestershire: Earthwork Survey</i> . CA typescript report 15022		



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PROJECT TITLE

Hinckley Road, Stoke Golding
 Leicestershire

FIGURE TITLE

Site location plan

PROJECT NO. 660402 DATE 12/01/2015
 DRAWN BY LJH REVISION 00
 APPROVED BY JB SCALE@A4 1:25,000

FIGURE NO.

1

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- site boundary
- earthwork survey results**
- top of slope
- bottom of slope
- ↔ profile



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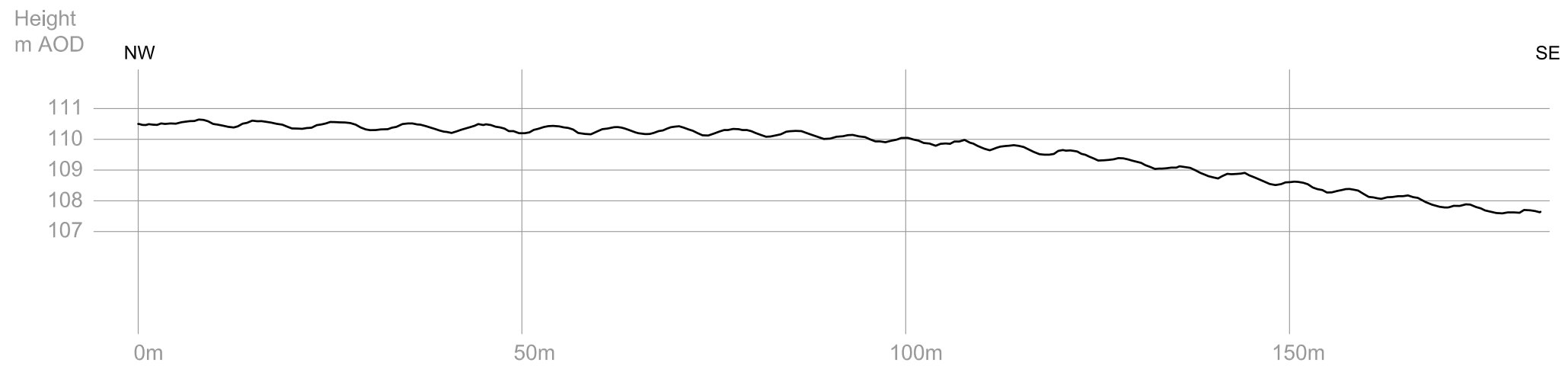
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PROJECT TITLE
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 Leicestershire

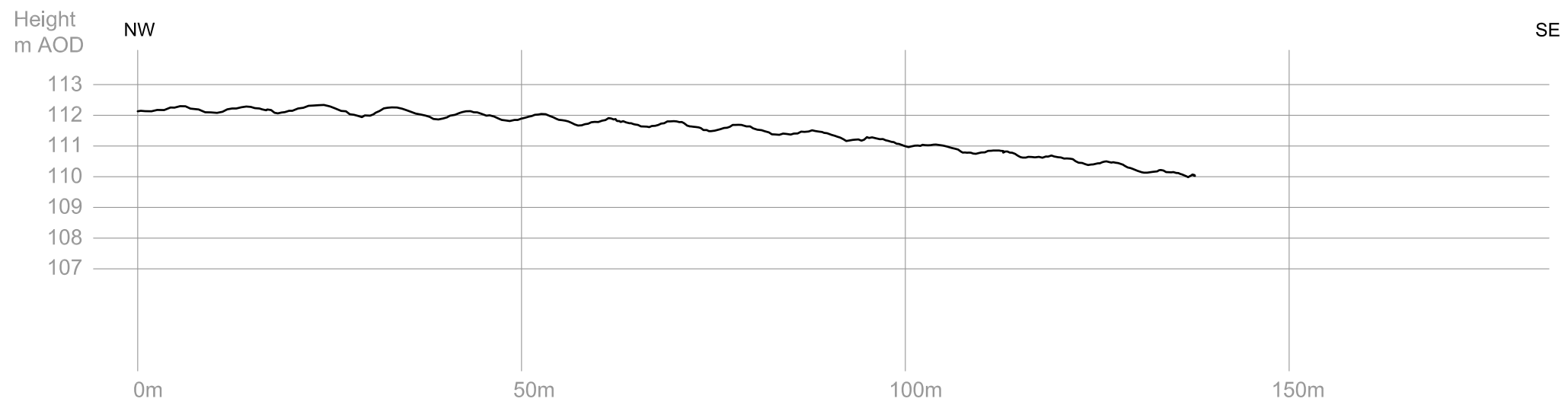
FIGURE TITLE
 The site, showing earthwork survey results

PROJECT NO. 660402	DATE 12/01/2015	FIGURE NO. 2
DRAWN BY LJH	REVISION 00	
APPROVED BY JB	SCALE@A3 1:1000 & 1:400	

Profile A



Profile B



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4 Satellite image



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PROJECT TITLE

Hinckley Road, Stoke Golding
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FIGURE TITLE

Satellite Image

PROJECT NO.	660402	DATE	12/01/2015	FIGURE NO.
DRAWN BY	LJH	REVISION	00	4
APPROVED BY	JB	SCALE@A4	Approx. 1:5000	