

**Land at Chepstow
Road, Raglan,
Monmouthshire
Archaeological
Earthwork Survey**

Client: Monmouthshire Council

AB Heritage Project No:60223

Date:08/03/2018

**Land at Chepstow Road, Raglan
Monmouthshire
Archaeological Earthwork Survey**

Client Monmouthshire Council
Project Number 60223
Prepared By J S-J & DD
Illustrated By CA
Approved By Daniel Dodds

| Rev Number | Description | Undertaken | Approved | Date |
|------------|-------------|------------|----------|------------|
| 1.0 | Draft | J S-J & DD | DD | 07/02/2017 |
| 1.1 | Final | J S-J & DD | DD | 08/03/2018 |

This document has been prepared in accordance with AB Heritage standard operating procedures. It remains confidential and the copyright of AB Heritage Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited

Enquiries To:

AB Heritage Limited (Head Office)
Jarrow Business Centre, Rolling Mill Road
Jarrow, South Tyneside, NE32 3DT
Email: info@abheritage.co.uk
Tel: 03333 440 206



CONTENTS

| | |
|--------------------------------------|---|
| 1. Introduction..... | 1 |
| 1.1 Project Background | 1 |
| 1.2 Site Location & Description..... | 1 |
| 1.3 Geology & Topography..... | 1 |
| 1.4 Archaeological Background..... | 1 |
| 2. Aims & Methodology | 3 |
| 2.1 Aims of Works | 3 |
| 2.2 Methodology of Work..... | 3 |
| 3. Results | 4 |
| 4. Discussion | 5 |
| 4.1 Results..... | 5 |
| 4.2 Conclusion..... | 5 |
| 5. Acknowledgements | 6 |
| 6. References..... | 7 |
| 7. OASIS Form..... | 8 |

FIGURES

- Fig. 1: Site location plan (1:25,000)
- Fig. 2: Ortho-mosaic (1:1,000)
- Fig. 3: Digital elevation model (1:1,000)
- Fig. 4: Hill-shade model (1:1,000)
- Fig. 5: LiDAR interpretation

1. INTRODUCTION

1.1 Project Background

- 1.1.1 AB Heritage Limited (hereafter AB Heritage) was commissioned by Monmouthshire Council to prepare an Earthwork Survey on known ridge and furrow remains at Land at Chepstow Road, South of Raglan, Monmouthshire. AB Heritage enlisted their elected contractor, Cotswold Archaeology to carry out a drone survey of the site and to produce detailed plans.
- 1.1.2 The work was carried out as part of a series of pre-application assessments which have also included a high level Historic Environment Desk Based Assessment (AB Heritage, 2017). The results of the earthwork survey will be used to support the application for a housing development and to aid the final design for the scheme, which has yet to be confirmed.

1.2 Site Location & Description

- 1.2.1 The site is approximately 2.18ha in extent. To the east of the site lies Chepstow Road, whilst to the south lies agricultural land, and to the west and north are areas of modern housing. The site is centred on NGR: SO: 4110 3840.

1.3 Geology & Topography

- 1.3.1 The underlying bedrock geology of the area is mapped as Raglan Mudstone Formation – Siltstone and Mudstone, Interbedded of the Silurian Period, overlain by Alluvium - clay, silt, sand and gravel of the Quaternary Period (BGS 2017).
- 1.3.2 The site lies at approximately 39m AOD and is relatively flat.

1.4 Archaeological Background

- 1.4.1 A desk-based assessment (DBA) of the site was compiled in August 2017 (AB Heritage 2017). The following section provides a summary of information provided by the DBA. The northern part of the site lies within the Raglan Landscape Aspect Area (Register of Historic Landscapes in Wales Aspect Area Code MNMTHHL026), which represents the extent of the medieval and post-medieval small town of Raglan. The southern part lies in the Modern Raglan Landscape Aspect Area (Register of Historic Landscapes in Wales Aspect Area Code MNMTHHL042), which represents the extent of modern housing development to the south and east of the Raglan Landscape Area Aspect.
- 1.4.2 There are no records of any previous archaeological works on the site. There are no recorded heritage assets within the site. The Brooks, a post-medieval house which lies just outside the eastern edge of site, is recorded on the Glamorgan-Gwent Archaeological Trust Historic Environment Record as a farm of the Raglan Castle Estate in the 15th to 17th century.
- 1.4.3 The closest known evidence for prehistoric activity is a findspot of a palstave, found c. 450m south-west of the site, whilst the nearest Roman findspot, a Roman Mirror, is c. 5km the north-west. The medieval stone castle of Raglan that lies c. 800m to the north of the site was constructed in the 15th century and may have replaced an earlier motte and bailey castle. The farm of The Brooks on the eastern edge of the site was part of the estate of the stone castle (AB Heritage 2017, 12).

- 1.4.4 The historic cartographic evidence for the site shows that from the mid-19th century the site was under pasture. The First Edition Ordnance Survey map of 1882 depicts a footpath running east to west across the site from just north of the Brooks. This is shown on all subsequent editions. LiDAR images for the site depict the remains of ridge and furrow cultivation north of The Brooks (AB Heritage 2017, 13). During an initial walkover of the site these ridge and furrow earthworks were visible as extant features, albeit truncated. A curvilinear feature running south-east/north-west was interpreted as a furlong boundary or headland. These features are a linear bank within open field agricultural systems that divided the furlongs (blocks of individual strips) and represented a convenient division within the open fields on which to turn the plough and also to access the individual strips (Taylor 1975, 85-6). Several features were observed outside the southern boundary of the site and were interpreted as the remains of a former mill race associated with The Brooks farm buildings.

2. AIMS & METHODOLOGY

2.1 Aims of Works

- 2.1.1 The aim of the work was to produce an accurate record of the earthworks known to exist on the site. In order to achieve this the objectives for the projects were:
- to produce a high resolution georeferenced digital elevation model of the development area using drone photogrammetry survey
 - to produce a report setting out the results of the project and the archaeological conclusions that can be drawn from the recorded data

2.2 Methodology of Work

- 2.2.1 An aerial photogrammetry survey was undertaken using aerial photographs captured with a UAV/Drone. Grid flight plans were flown to capture vertical images from altitudes of around 50m across the site. The resulting photographic images were processed in Agisoft Photoscan Pro software to produce point cloud, mesh and textured 3D models, ortho-images and digital elevation models (DEMs). The DEMs were geo-referenced to the National Grid by converting the aircraft derived GPS coordinates or by using ground control points. The DEM Geotifs were analysed using GIS to produce similar results to LiDAR, with typical resolution of between 2 - 5cm/pixel.
- 2.2.2 The drone survey was undertaken by a fully licensed drone operator with permission to conduct aerial work from the Civil Aviation Authority. Pre-flight checks were undertaken before and during the survey to ensure safe operating procedures were followed always. Due care and consideration was given to other aircraft in the air and to people and properties on the ground.
- 2.2.3 The digital archive from the earthwork survey is currently held by Cotswold Archaeology at their offices in Kemble. A summary of information from this project set out within Appendix A will be entered by Cotswold Archaeology onto the OASIS online database of archaeological projects in Britain.

3. RESULTS

Drone UAV Survey

- 3.1.1 Processing of low-level drone photography into a digital elevation model was undertaken, producing a model with pixel size corresponding to c. 0.05m. The elevation model was then processed to produce hill-shade models at azimuths of 45, 200, 270 and 300 degrees, and an angle of incidence of 20 degrees above horizontal.
- 3.1.2 Interrogation of the four hill-shade models revealed a stratigraphic sequence of anomalies. The earliest anomaly consisted of a curvilinear bank, corresponding to the feature interpreted as the furlong boundary or headland during the 2017 site visit. The bank crossed the centre of the site on a north-western/south-eastern alignment, before turning sharply to the south and then turning back directly east, towards The Brooks. The headland formed the south-western boundary to a system of north-north-west/south-south-east aligned linear anomalies, which were interpreted as ridge and furrow earthworks. The ridge and furrow earthworks had a spacing of between 10-15m between ridges. The earlier features were cut by a modern field boundary, cutting across the site east-north-east/west-south-west, and subsequently by a linear depression orientated east-south-east/west-north-west. This has been interpreted as a modern 'desire line' path (a path created by human traffic along the shortest route between two points).

4. DISCUSSION

4.1 Results

4.1.1 The earthwork survey has confirmed the presence of upstanding ridge and furrow earthworks in the northern half of the site, which was first identified during the earlier walk-over and LiDAR analysis undertaken by AB Heritage (AB Heritage, 2017). Although there are many variations medieval ridge and furrow earthworks are typically spaced 10m apart (Rackham 1986, 167) whereas later ridge and furrow earthworks are generally spaced every 4.5 to 5m (ibid., 168). The spacing of the surveyed ridge and furrow earthworks would, therefore, suggest it is medieval in date. Another typical feature of medieval ridge and furrow is a reversed 's' shape to the earthworks (ibid.; Taylor 1975, 82). This isn't immediately apparent here; however, as only a small length of the original earthworks is visible within the site it cannot be determined with any certainty that it is absent. The ridge and furrow remains were found to respect the edge of a linear bank, tentatively identified as the remains of a medieval furlong boundary or headland. This combination of ridge, furrow and delineating bank is typical of late medieval open field systems. The presence of both feature types would suggest a medieval origin for the cultivation earthworks on the site.

4.2 Conclusion

- 4.2.1 The investigation has revealed that the morphology of the remains indicated a potentially likely date of late medieval age. This would correspond with the establishment and occupation of Raglan stone castle in the 15th century.
- 4.2.2 While a direct association linking the late medieval field on the site, with the castle has been destroyed by subsequent development, it is difficult to imagine a scenario when the site was linked to the fortunes of the castle.

5. ACKNOWLEDGEMENTS

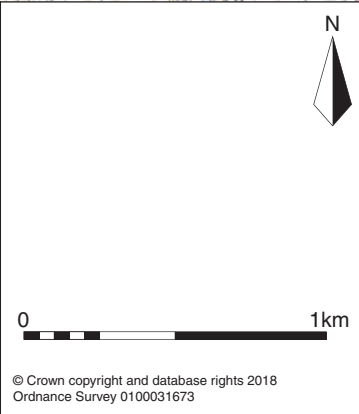
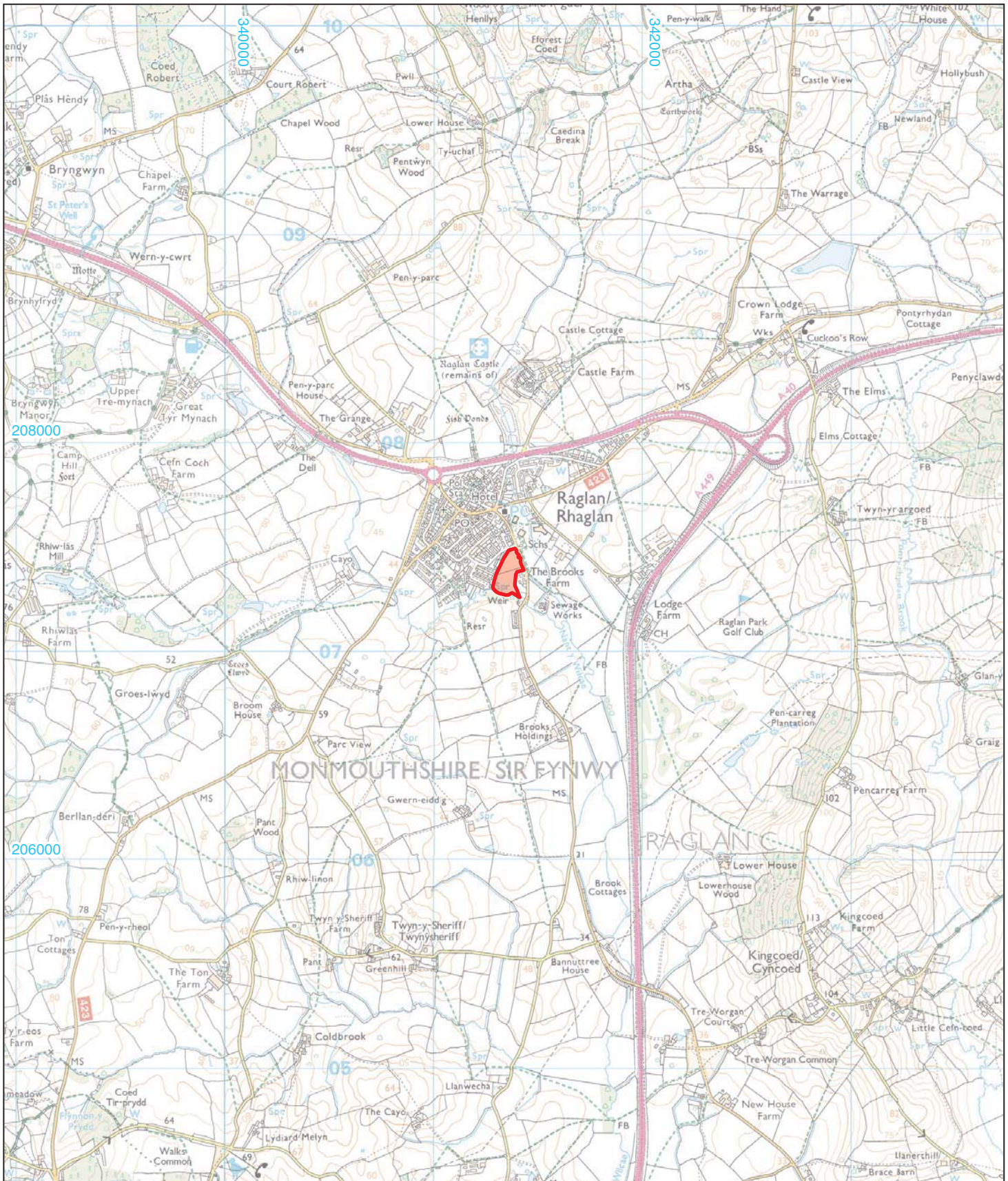
- 5.1.1 AB Heritage would like to thank Nicola Sully of Alder King for project management on behalf of Monmouthshire Council. We should also like to thank SJake Streatfeild_James and Richard Young from Cotswold Archaeology for the Drone Survey and the report. Finally we should like to thank Dan Bashford for the walkover survey.

6. REFERENCES

- AB Heritage, 2017 *Land at Chepstow Road, Raglan, Monmouthshire: Historic Environment Desk Based Assessment*
- BGS (British Geological Survey) 2017 Geology of Britain Viewer
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html> Accessed 1 March 2017
- CA (Cotswold Archaeology) 2017 Land at Chepstow Road, Raglan Monmouthshire; Written Scheme of Investigation for an Earthwork Survey
- EH (English Heritage) 1991 Section 6 of *Metric Survey Specification for English Heritage*
- EH (English Heritage) 2007 *Understanding the Archaeology of Landscapes, A good guide to recording practice*
- Rackham, O. 1986 *The History of the Countryside*, London, JM Dent and Sons
- Taylor, C. 1975 *Fields in the English Landscape*, Sutton Publishing

7. OASIS FORM

| PROJECT DETAILS | | |
|--|---|--------------|
| Project Name | Land at Chepstow Road, Raglan Monmouthshire | |
| Short description | A drone-based archaeological earthwork survey was undertaken on behalf of AB Heritage Ltd, on land to the west of Chepstow Road, Raglan Monmouthshire. GIS analysis of the digital elevation model showed the presence of a feature interpreted as a furlong bank, and associated ridge and furrow. | |
| Project dates | January 2018 | |
| Project type | Earthwork Survey | |
| Previous work | Desk Based Assessment (AB Heritage 2017) | |
| Future work | Unknown | |
| PROJECT LOCATION | | |
| Site Location | Land at Chepstow Road, Raglan Monmouthshire | |
| Study area (M ² /ha) | 2.18 ha | |
| Site co-ordinates | SO 4110 3840 | |
| PROJECT CREATORS | | |
| Name of organisation | AB Heritage and Cotswold Archaeology | |
| Project Brief originator | N/A | |
| Project Design (WSI) originator | Cotswold Archaeology | |
| Project Manager | Richard Young | |
| Project Supervisor | Jake Streatfeild-James | |
| MONUMENT TYPE | Ridge and furrow | |
| SIGNIFICANT FINDS | none | |
| PROJECT ARCHIVES | | |
| | Intended final location of archive | Content |
| Physical | | |
| Paper | | |
| Digital | Cotswold Archaeology | digital data |
| BIBLIOGRAPHY | | |
| CA (Cotswold Archaeology) 2017 <i>Land at Chepstow Road, Raglan Monmouthshire: Archaeological Earthwork Survey</i> . CA typescript report 18037 | | |




Cotswold Archaeology
 Andover 01264 347630
 Cirencester 01285 771022
 Exeter 01392 826185
 Milton Keynes 01908 564660
www.cotswoldarchaeology.co.uk
enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE
 Land at Chepstow Road, Raglan,
 Monmouthshire

FIGURE TITLE
 Site location plan

DRAWN BY CP PROJECT NO. 6485 FIGURE NO.
 CHECKED BY DJB DATE 22/01/2018
 APPROVED BY RY SCALE@A4 1:25,000 **1**

© Crown copyright and database rights 2018
Ordnance Survey 0100031673



Legend

Site Boundary



© Crown copyright and database rights [year of supply or date of publication]
Ordnance Survey 0100031673

| | | |
|--|--|--------------|
| | Andover | 01264 347630 |
| | Cirencester | 01285 771022 |
| | Exeter | 01392 826185 |
| | Milton Keynes | 01908 564660 |
| | www.cotswoldarchaeology.co.uk enquiries@cotswoldarchaeology.co.uk | |

PROJECT TITLE
Land at Chepstow Road, Raglan
Monmouthshire

FIGURE TITLE
Ortho-mosaic

| | | |
|-----------------------|------------------------|-------------------|
| DRAWN BY JSJ | PROJECT NO 6485 | FIGURE NO. |
| CHECKED BY JSJ | DATE 30/01/2018 | 2 |
| APPROVED BY RY | SCALE@A3 1:750 | |



Legend

Site Boundary

Digital Elevation Model Value

High : 45.4426
 Low : 35.0605



© Crown copyright and database rights [year of supply or date of publication]
 Ordnance Survey 0100031673

Cotswold Archaeology

| | |
|---------------|-------------------------------------|
| Andover | 01264 347630 |
| Cirencester | 01285 771022 |
| Exeter | 01392 826185 |
| Milton Keynes | 01908 564660 |
| w | www.cotswoldarchaeology.co.uk |
| e | enquiries@cotswoldarchaeology.co.uk |

PROJECT TITLE
**Land at Chepstow Road, Raglan
 Monmouthshire**

FIGURE TITLE
Digital elevation model

| | | |
|-------------------------------|--------------------------------|---------------------------|
| <small>DRAWN BY</small> JSJ | <small>PROJECT NO</small> 6485 | <small>FIGURE NO.</small> |
| <small>CHECKED BY</small> JSJ | <small>DATE</small> 30/01/2018 | 3 |
| <small>APPROVED BY</small> RY | <small>SCALE@A3</small> 1:750 | |

Document Path: P:\6485 Chepstow Road Raglan SURV\GIS\6485_Figure 3.mxd



Legend

Site Boundary

Hillshade 270/20

Value

High : 254.997

Low : 0



© Crown copyright and database rights [year of supply or date of publication]
 Ordnance Survey 0100031673

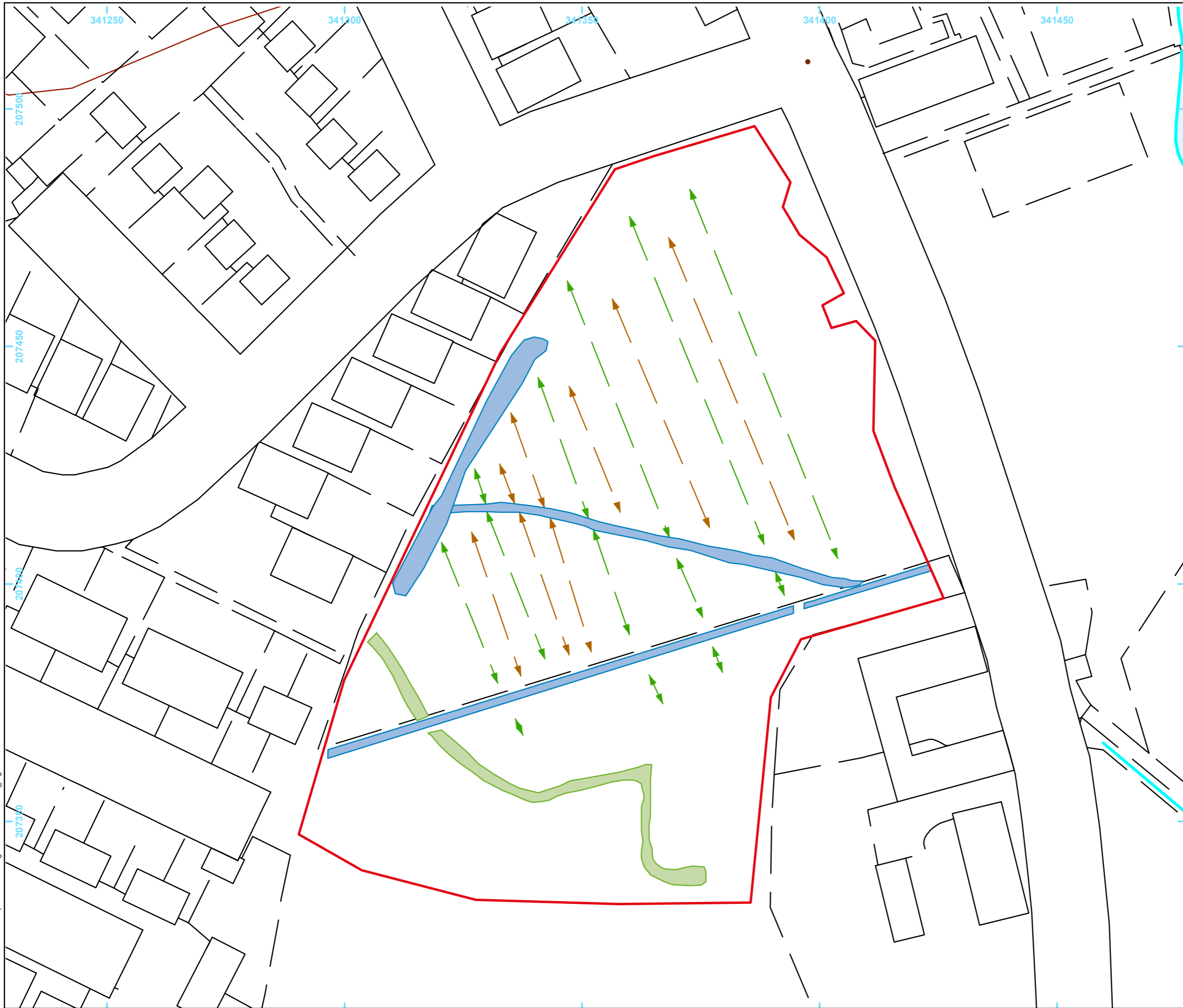
 **Cotswold Archaeology**

| | |
|-------------------------------------|--------------|
| Andover | 01264 347630 |
| Cirencester | 01285 771022 |
| Exeter | 01392 826185 |
| Milton Keynes | 01908 564660 |
| www.cotswoldarchaeology.co.uk | |
| enquiries@cotswoldarchaeology.co.uk | |

PROJECT TITLE
 Land at Chepstow Road, Raglan
 Monmouthshire

FIGURE TITLE
 Hill-shade model

| | | |
|-----------------------|------------------------|-------------------|
| DRAWN BY JSJ | PROJECT NO 6485 | FIGURE NO. |
| CHECKED BY JSJ | DATE 30/01/2018 | 4 |
| APPROVED BY RY | SCALE@A3 1:750 | |



- Legend**
- Site Boundary
 - Period**
 - Medieval
 - Modern
 - Multi-period
 - ↔ Plough Furrow
 - ↔ Plough Ridge



© Crown copyright and database rights [year of supply or date of publication]
 Ordnance Survey 0100031673

Cotswold Archaeology

| | |
|--|--------------|
| Andover | 01264 347630 |
| Cirencester | 01285 771022 |
| Exeter | 01392 826185 |
| Milton Keynes | 01908 564660 |
| w www.cotswoldarchaeology.co.uk | |
| e enquiries@cotswoldarchaeology.co.uk | |

PROJECT TITLE
 Land at Chepstow Road, Raglan
 Monmouthshire

FIGURE TITLE
 LiDAR Interpretation

| | | |
|-----------------------|------------------------|-------------------|
| DRAWN BY JSJ | PROJECT NO 6485 | FIGURE NO. |
| CHECKED BY JSJ | DATE 30/01/2018 | 5 |
| APPROVED BY RY | SCALE@A3 1:750 | |



AB Heritage Limited (Head Office)
Jarrow Business Centre, Rolling Mill
Road, Jarrow, South Tyneside, NE32 3DT
Tel: 03333 440 206
e-mail: info@abheritage.co.uk