

TAR BARROW, CIRENCESTER, GLOUCESTERSHIRE
A ROMAN OR IRON AGE CEREMONIAL AREA
AERIAL PHOTO INTERPRETATION AND MAPPING
ARCHAEOLOGICAL REPORT

Helen Winton



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SUMMARY

This report describes the archaeological features and technical details of the aerial photo interpretation and mapping of a small area around the possible Roman enclosures showing as cropmarks, by the scheduled earthworks of Tar Barrow (Gloucestershire 268), overlooking Cirencester, Gloucestershire. The form of a cropmark recorded in 2005 indicated a potentially significant site associated with the Roman settlement of Corinium. Research by Neil Holbrook and Richard Reece suggested that the area around Tar Barrow possibly functioned as a religious focus in the Roman period, and possibly later Iron Age, and may have influenced the routes of the Roman road system in the vicinity, and possibly even the location of the Roman town. This chance discovery from the air provides an opportunity to explore some of the theories about the early development of the town, and possibly the pre-Roman landscape. However, this will require work to determine chronological detail and a better understanding of the function of the features revealed as cropmarks and through geophysical survey.

CONTRIBUTORS

Helen Winton, Aerial Survey and Investigation, English Heritage, carried out the aerial photo assessment and transcription. Pete Home commented on the report.

ACKNOWLEDGEMENTS

Particular thanks go to Neil Holbrook for his encouragement and advice on the site. Thanks also to Tim Young and Dr Peter Guest for supplying the geophysics plot and to Cardiff University for permission to reproduce it.

ARCHIVE LOCATION

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DATE OF SURVEY

November 2007

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INTRODUCTION

This report describes the archaeological features and technical details of the aerial photo analysis and mapping of a small area around the scheduled sites of Tar Barrows (Gloucestershire 268), overlooking Cirencester. There are two barrows and this report refers to the easterly of the two barrows, at SP 0311 0252, as Tar Barrow throughout.

A previously unknown cropmark, adjacent to Tar Barrow, was photographed in the summer of 2005 by an English Heritage aerial reconnaissance team, Pete Home, observer, Damian Grady, observer and photographer, and Bob Bewley, pilot. A field visit in 2007, with the EH Field Monument Warden (Melanie Barge), Damian Grady and the landowner revealed that no surface indication of the cropmark site were visible.

The form of the cropmark recorded in 2005 suggested that it indicated a significant site associated with the Roman settlement of Corinium. Research by Neil Holbrook (1994) and Richard Reece (2003) had already suggested that the area around Tar Barrow possibly functioned as a religious focus in the Roman period and possibly also in the later Iron Age. They suggest the location of this ceremonial area may have influenced the routes of the Roman road system in the vicinity, and possibly even the location of the Roman town (Holbrook 2008).

A review of all available aerial photographs at the National Monuments Record (NMR) demonstrated that the 2005 cropmark was only one element of a complex archaeological landscape. Photographs taken in the 1940s and 1950s record extensive medieval and post medieval ridge and furrow, headlands and a possible trackway. Until relatively recently these were preserved as earthworks in pasture which extended across the slopes above Cirencester. This medieval and later landscape has been ploughed level revealing underlying, probably Roman or Iron Age, features. These are visible as parchmarks and cropmarks of rectilinear enclosures, with the same NE-SW orientation, situated in the area immediately around Tar Barrow. It is possible that these represent religious or funerary activity outside the Roman town.

Neil Holbrook requested an analysis of aerial photographs of the immediate environs of Tar Barrows and Helen Winton carried this out in November 2007. This coincided with a geophysical survey, carried out by GeoArch for Dr Peter Guest at the University of Cardiff, which revealed that the cropmarks indicate only parts of complex and extensive sub-surface remains.

An aerial photo analysis project working to National Mapping Programme standards (EH HEEP 4755MAIN) provides contextual data for this important site (Janik et al 2011).

PROJECT AREA

The project area comprises 50 hectares on a slope overlooking Cirencester between Hare Bushes and Grove Lane, the latter following the line of the Roman wall on the north-eastern edge of the town (Figures 1 and 2).

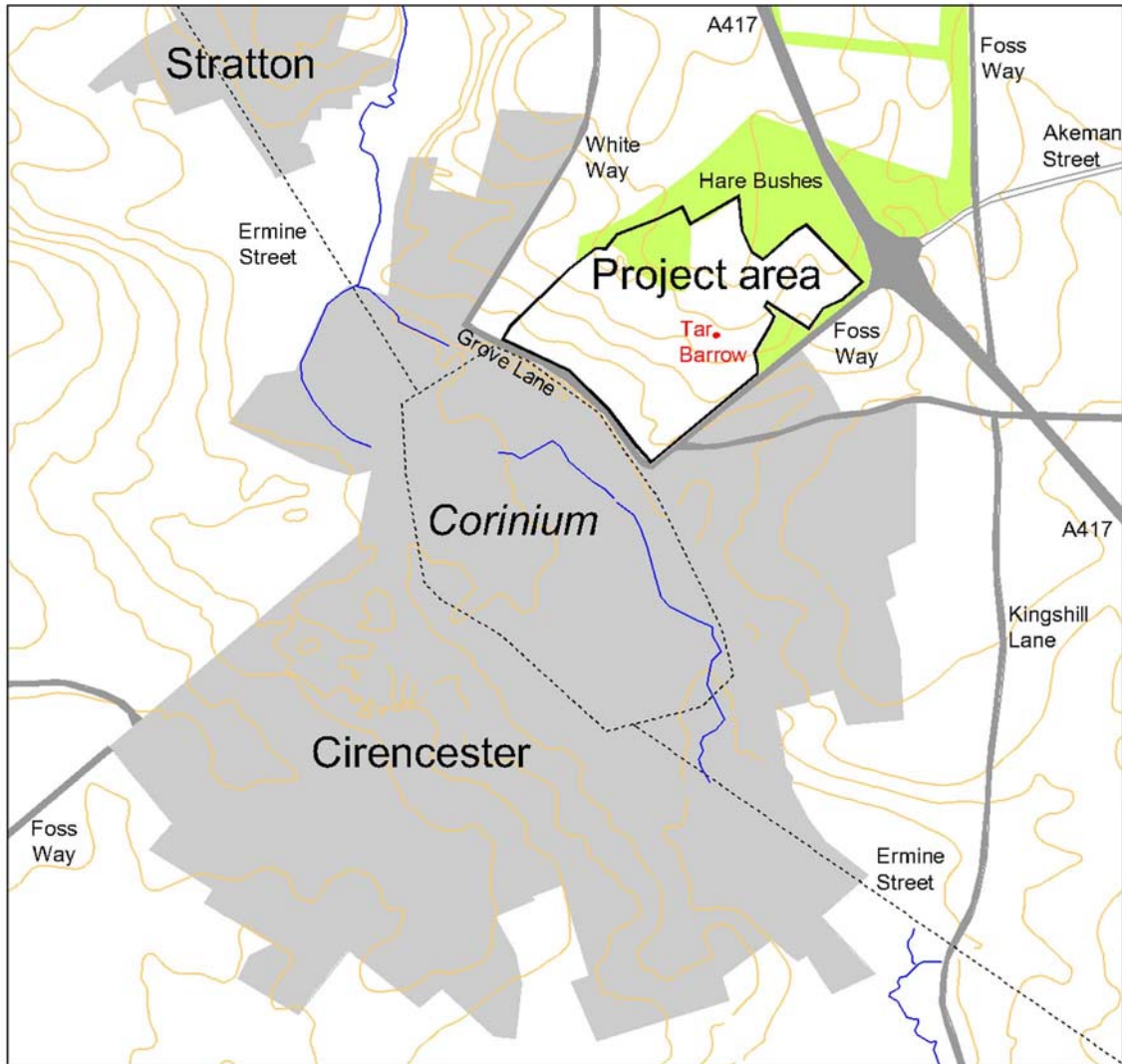


Figure 1 Location of project area. Contour and map information derived from Ordnance Survey Mapping © Crown Copyright. All rights reserved. English Heritage 100019088. 2009.

The fields between the town and Hare Bushes were mainly in pasture through the first half of the 20th century and were gradually converted to arable from the late 1970s onwards. The cricket club in the centre of the survey area appears to have been established in the late 1970s or early 1980s. The area had a more mixed use in recent years and was recorded in a mix of arable and pasture in 1990 (Darvill and Gerrard, 1994) and more recently parts have been in set-aside.

There are two barrows scheduled in this area usually referred to as Tar Barrows. This report concerns features adjacent to the easterly of the two barrows at SP 0311 0252. The other barrow is approximately 200m to the North West, adjacent to the cricket ground.

Several authors have noted possible issues with the location of the Roman town on what was a relatively narrow gravel island by the River Chum (Holbrook in Darvill and Gerrard 1994, Holbrook and Wilkinson, and Hargreaves in Holbrook 1998). Richard Reece (2003) suggests that the logical location for the crossroads of the Fosse Way and Ermin Street would be nearer Hare Bushes (see also Holbrook 2008). This could have been a better location for a settlement given the possible seasonal flooding lower down around the river Chum. The fact that the Roman town was not situated further up the slopes, by Tar Barrow, may indicate that there was already a significant site there, perhaps a pre-Roman cemetery and/or religious site (Holbrook 2008). The aerial photo analysis and mapping suggests a site close to Tar Barrow with elements usually associated with religious and settlement activity. There is a suggestion of a NE-SW road or track (on the geophysics) through the site but there is no indication this continues to the south towards the town.

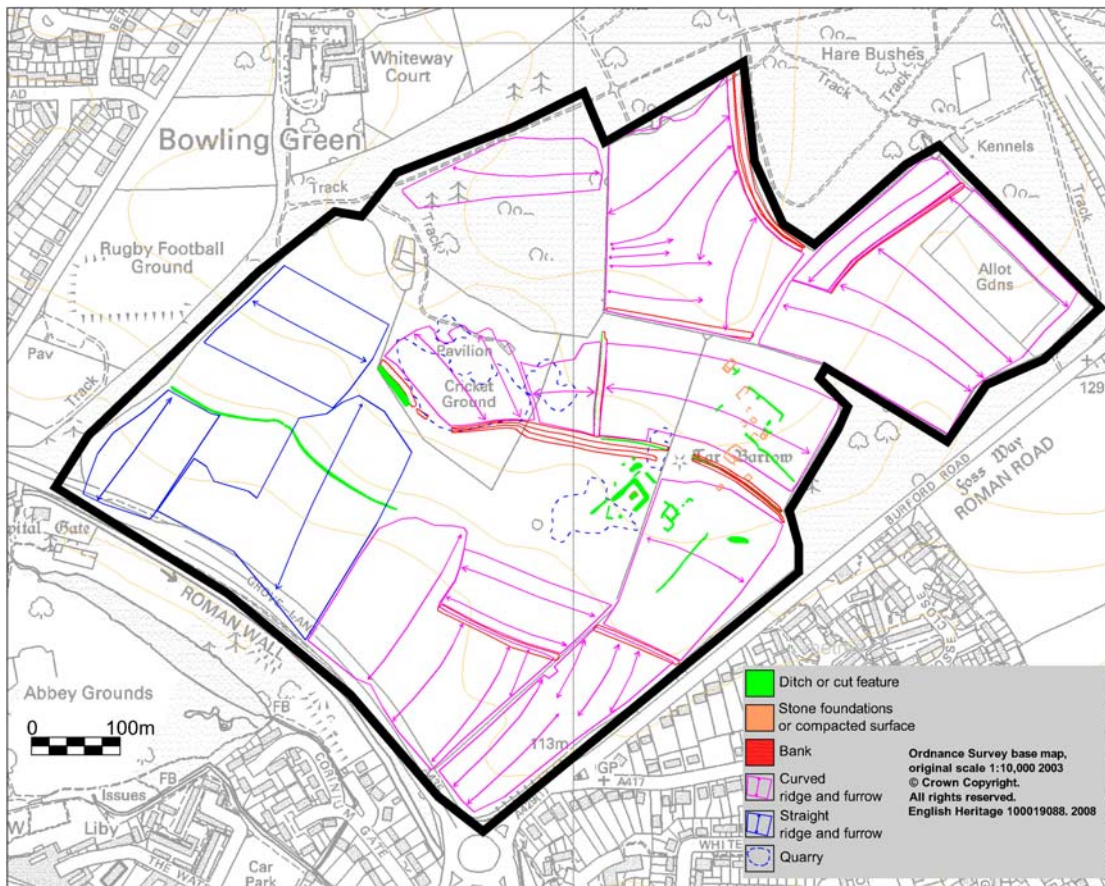


Figure 2 Project area with all archaeological features mapped from aerial photographs

POSSIBLE ROMAN FEATURES

The elements of the site identified as likely to be Roman are all sub-surface features visible as cropmarks on oblique photographs taken in 2005, and as marks in grass on vertical photographs taken in 1975 (Figure 3). The geophysical survey carried out by GeoArch for Dr Peter Guest at the University of Cardiff, confirms that the cropmarks indicate parts of a complex and extensive site (Figures 4 and 5).

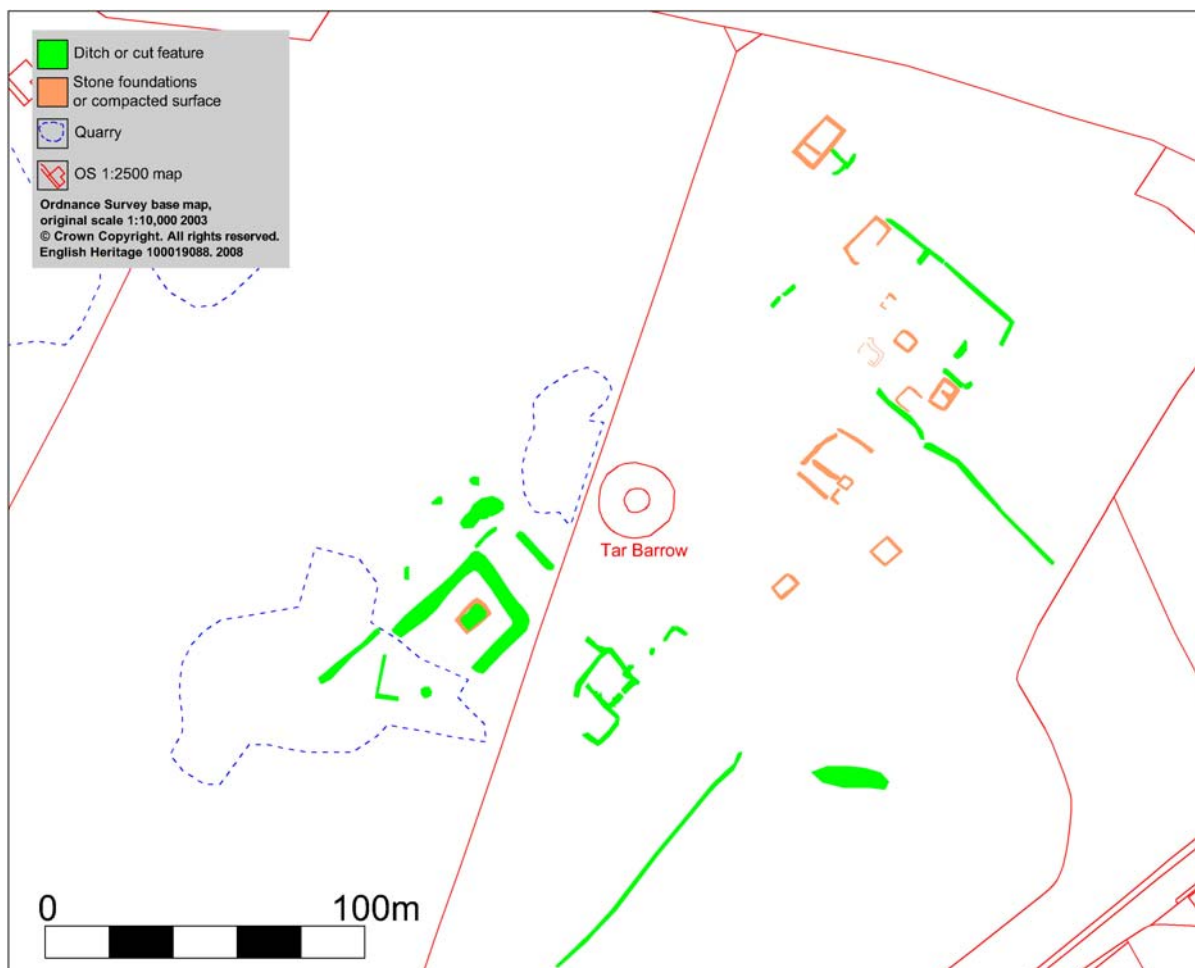


Figure 3 Possible Roman or Iron Age features visible on aerial photographs

The cropmarks suggest the remains of a series of ditched enclosures and possible building foundations all aligned NE-SW. The most substantial of these is the enclosure, to the south-west of Tar Barrow, which was first spotted in 2005. Ditches, measuring up to 5m wide in places, partially enclose an area 21m wide and at least 31m long. It is not clear, if the enclosure is open-ended to the SW, as this area has been partially quarried away. Faint cropmarks of ditches in this quarried area suggest that sub-surface features perhaps do survive. However, it is possible that the fourth side was deliberately left open offering views down the slope. Within the enclosure is a rectangular structure measuring circa

11m by 6m defined by what appear to be stone foundations surrounding a pit or cut feature measuring 8m by 5m.

The conical profile of Tar Barrow may indicate that it is Roman in date (Holbrook 2008, 308). The proximity of the substantial enclosure to Tar Barrow and the form of the enclosure suggest a possible religious function, perhaps the site of a mausoleum or a small temple. However, the cropmarks do not exhibit exactly the elements usually associated with a typical Romano-Celtic temple (Frere and St Joseph 1983, 218-223). It may be that the apparently wide ditches of the Tar Barrow enclosure are the result of robbing along the line of a wall but they seem too substantial for this. The structure in the centre does not seem to have the characteristics of temple buildings usually found in Britain such as very regular, sometimes concentric, square foundations and a porch (Frere and St Joseph 1983, Figures 136-139). However, the elongated nature of the central rectangle could be the robbed podium of a more classical style temple sometimes found in urban locations. Some temples were established within earlier irregular enclosures, as at Bancroft in Buckinghamshire (Williams and Zeepvat 1994), but these are usually larger, and have a different character to the enclosure by Tar Barrow.

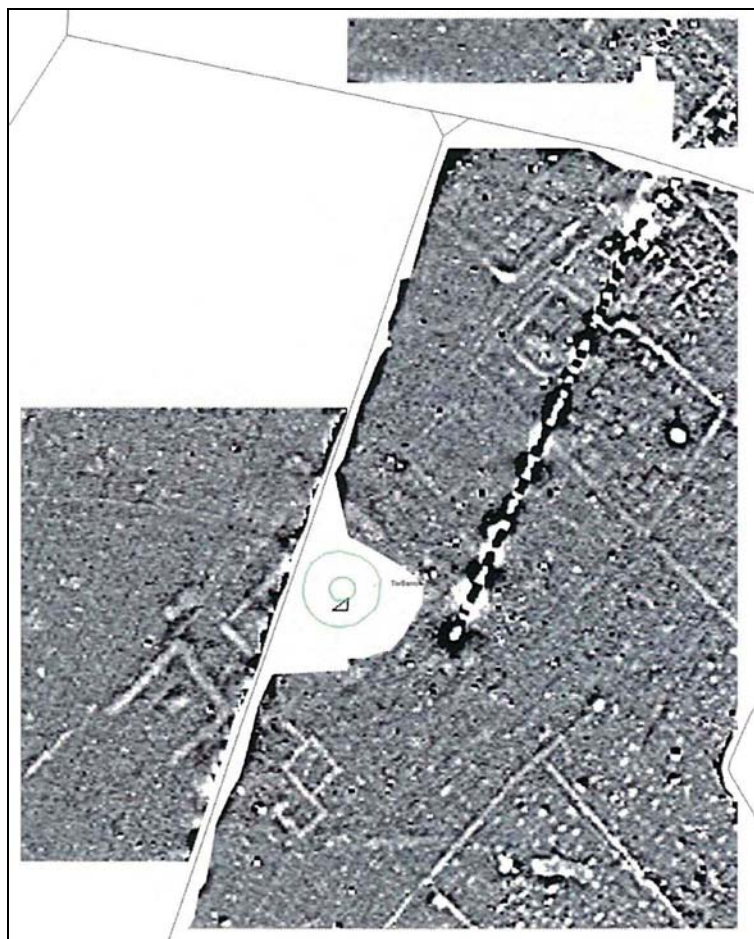


Figure 4 Geophysical survey by GeoArch for Dr Peter Guest. ©copyright GeoArch. Reproduced with the permission of Cardiff University.

A number of other ditches and pits appear to cluster around the south side of Tar Barrow, including two conjoined enclosures to the southeast (Figure 3). The geophysical survey confirms that the cropmarks are parts of a complex of smaller enclosures on the same NW-SE alignment as the large enclosure (Figure 4). The geophysics and the cropmarks seem to suggest that there is an entrance in the east side of the upper of the two conjoined enclosures.

The cropmarks hint at more enclosures to the southeast and northeast of Tar Barrow and the greater extent of these are confirmed by the geophysics. There are a number of larger enclosures defined by ditches interspersed with a series of individual and apparently conjoined square or sub-square structures, probably building foundations, which measure between 5m and 10m across. Some square structures appear on the 2005 oblique photographs and hints of more were seen as faint parchmarks on the 1975 vertical photographs (Figure 3 and Figure 9).

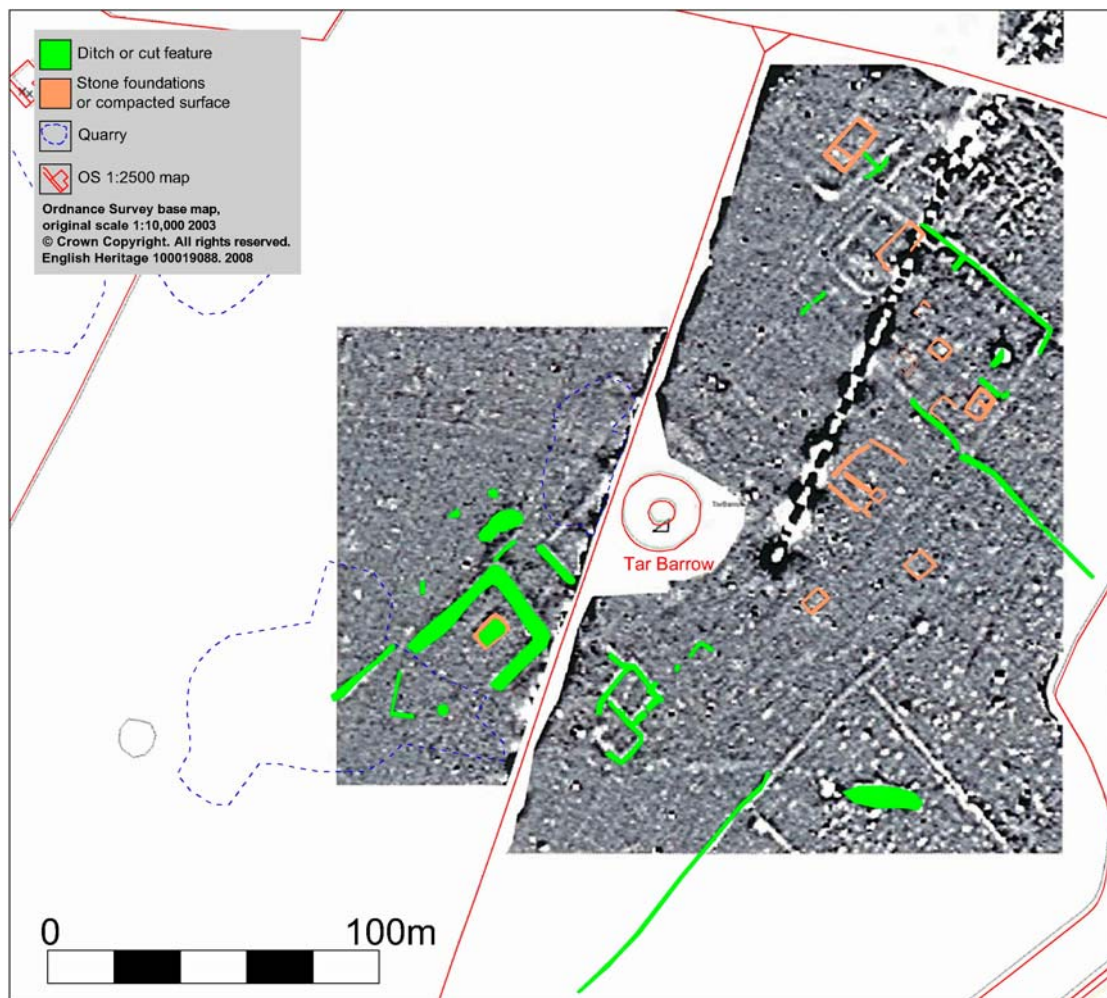


Figure 5 Aerial photo transcription (colour). Magnetic gradiometer survey by GeoArch for Dr Peter Guest. ©copyright GeoArch. Reproduced with the permission of Cardiff University.

The cropmarks, and results from the geophysical survey, have parallels, in terms of setting and form, to late Iron Age and Roman settlement. Alternatively, they may represent the remains of religious or funerary structures, perhaps mausolea, aligned on the trackway or road through the site.

There are hints of larger ditched enclosures to the north east of Tar Barrow, which appear to enclose smaller conjoined square or sub-square structures, possibly building foundations, measuring between 5m and 10m across. This arrangement has morphological parallels at Stanway by Colchester in Essex and Folly Lane, St Albans (Holbrook 2008, 310). Another comparison could be made with Bancroft in Buckinghamshire (Zeepvat and Williams 1994).

Both Stanway and Folly Lane have complex sequences of activity but both include a large ditched enclosure or enclosures established in the late Iron Age or early Roman period, which seem to have formed the focus for funerary activities (Crummy et al 2007 Figure 3, Niblett 1999 Figures 8, 114, 118). Both are situated close to Iron Age oppidum sites, which later became substantial Roman towns and both seem to have been established relatively close to the site of later Roman religious activity. At Bancroft, there was a similar pattern where a temple was established within an earlier enclosure but this site is situated close to a large villa/temple complex rather than a town (Zeepvat and Williams 1994, Figures 5, 36 and 37).

The assignment of a Roman date to the enclosures around Tar Barrow is based on comparison with excavated sites elsewhere in England. However, it is possible that some of these features relate to the pre-Roman Iron Age and/or the post Roman period. Post Roman activity in the area is indicated by surface scatters of 5th-9th century chaff-tempered pottery (N Holbrook, pers comm). However the stone buildings indicated by the cropmarks and geophysics are almost certainly of Roman origin.

The form of remains at all these sites, including Tar Barrow is only superficially similar and each has a very complex sequence of funerary and ritual activities. Therefore, the possible comparisons offer only tentative explanations and dates for the site at Tar Barrow but they do present some interesting possibilities.

MEDIEVAL AND/OR POST MEDIEVAL FEATURES

Photographs taken in the 1940s and 1950s record medieval and post medieval ridge and furrow, headlands and a possible trackway. Depressions, presumably the result of medieval or post medieval quarrying, can be seen across the centre of the survey area. The Cotswolds NMP survey (and research by Gerrard, 1994, Fig 41) shows that the ridge and furrow by Tar Barrow was part of a much wider medieval and post medieval landscape of open fields and water meadows extending to the north and east of Cirencester (Janik et al 2010). However, there has been little or no research to place this agricultural landscape in the context of the settlement and land ownership of Cirencester and environs (Gerrard, 1994 118),

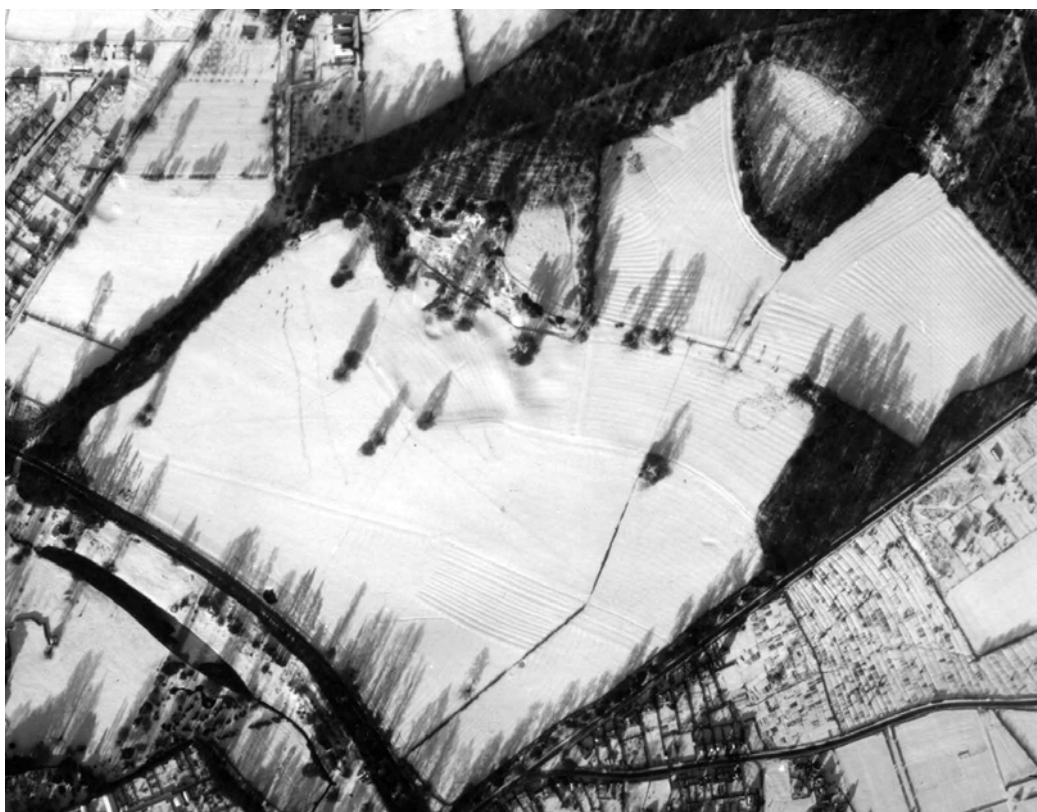


Figure 6 Medieval earthworks highlighted by snow.

Extract of RAF 540-958 frame 3336 1st December 1952 English Heritage (NMR) RAF Photography

The dating of ridge and furrow has been much discussed in the published literature on medieval fields but it seems clear, from detailed comparisons with documentary evidence, that broad dating based on the form and direction of the rigs is reasonably reliable (Hall 1982, 10). Nineteenth century and later ploughing can be characterised as laid out in large fields with narrow straight rigs parallel to the hedges (Hall 1982, 11). Medieval ridge and furrow can be characterised as curvilinear with relatively broad rigs, however, the term 'medieval' in this context, is no more precise than from as early as the twelfth century through to eighteenth century (Hall 1982, 11-13, Wilson 1989, 185). Excavation of

samples of ridge and furrow along the route of the A419/A417 suggest a complex and varied development of the open field systems on the southern Cotswolds with broad dates from the medieval to early post medieval period (Mudd et al, 1999, 299).

Most of the ridge and furrow in the survey area is therefore likely to be part of a medieval or early post medieval open field system, however it is unclear when this system was established and for how long it remained in use. The ridge and furrow appears to have a different character in the southwestern parts of the survey area, to the east of the rugby club. Here there are the remains of what appears to be slighter, presumably less well established, ploughing, with relatively straight and narrow rigs and furrows covering an area measuring circa 280m by 310m. These appear to overlie a curving ditched boundary (only visible as a cropmark). It possible that the curving boundary is of medieval origin and is contemporary with the open field system to the east and north-east whereas the straight rig relates to a relatively short period of ploughing or grassland improvement in the later post medieval period.

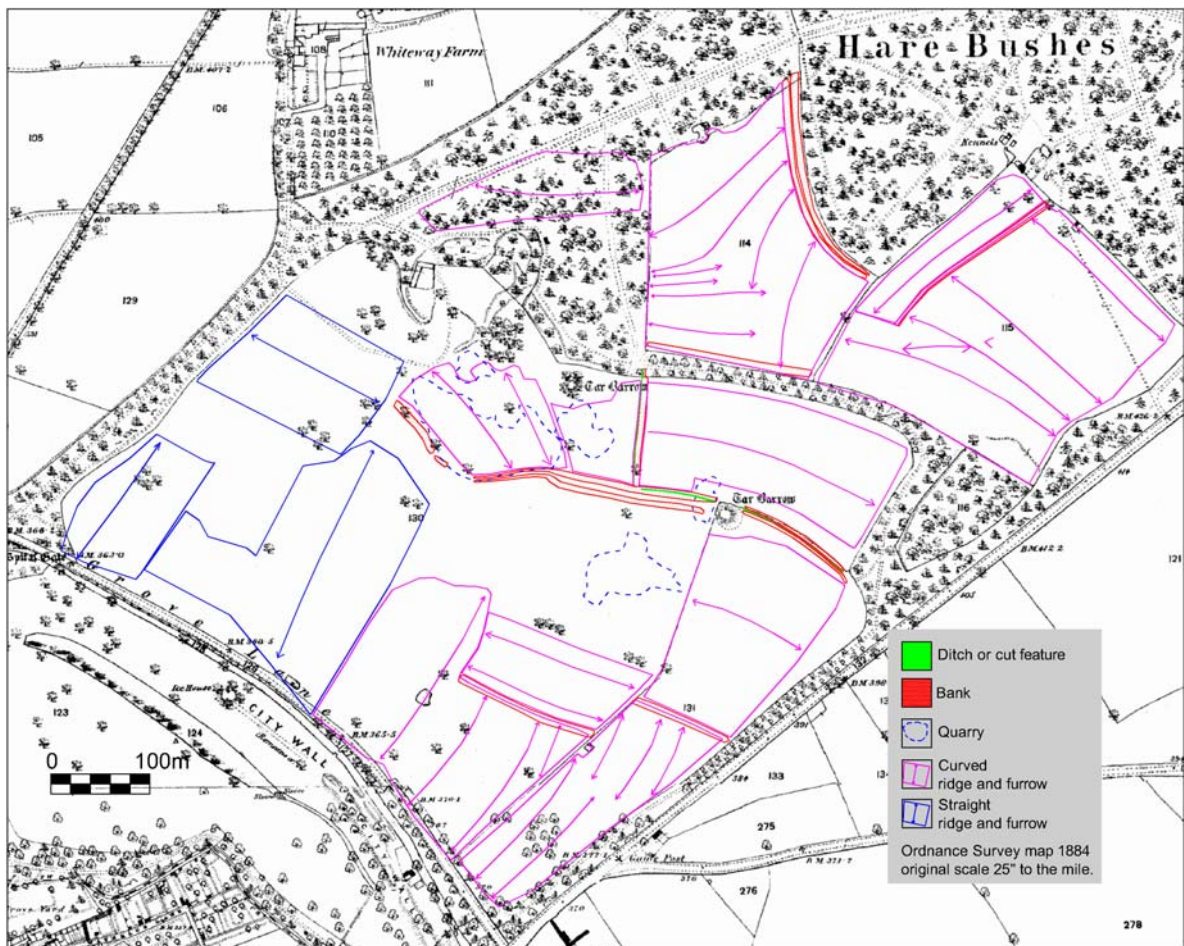


Figure 7 Medieval features visible on aerial photographs and the 1884 OS map

The field boundary on the OS 1884 map which passes across the top of Tar Barrow marks the line of a possible trackway or boundary between two medieval plough

headlands which once extended westwards beyond the small quarry adjacent to the barrow.

The quarrying adjacent to the westerly of the two Tar Barrows (SP 0295 0265) appears to have been relatively shallow (it is now marked as the site of a cricket ground) and the late 19th century Ordnance Survey mapping shows that it extended northwards into the woods. It seems that the quarrying in the woods was preserved sufficiently for it to be recorded by the Ordnance Survey. Elsewhere medieval, or post medieval, ridge and furrow appears to extend across quarried areas and the headlands seem to respect, or are defined by, the southern extent of this quarrying. This suggests a medieval or earlier date for the quarrying but without accurate dating for the ridge and furrow; it is difficult to be certain.

The nearby Hare Bushes quarries (adjacent to the site of the A419 interchange) were apparently famous in the post medieval period for Great Oolite building stone and fossil eggs (Darvill and Gerrard 1994, 137). Excavations have demonstrated that these quarries, to the north east of the survey area, were more extensive than those mapped by the OS (Mudd et al, 1999, 304). It is possible that the shallow quarrying near Tar Barrow was part of medieval or post medieval prospection for outcrops of Great Oolite, or is surface quarrying for the inferior Forest Marble overlying the Oolitic limestone in this area.

The medieval earthworks all appear to have been ploughed level but it is probable that parts of the more deeply cut features, such as furrows or trackways, survive as sub surface remains and some of these can be seen as cropmarks or soilmarks on more recent aerial photos. It is probable that material from the rigs and headlands may have been spread during modern ploughing.

METHODOLOGY

All vertical aerial photos were viewed using a hand held stereoscope to enable the site to be viewed in 3D. This provided invaluable details of the form of many of the more subtle earthworks. Viewing the area in 3D also aided in the understanding of the topography of the site and helped in the choice of control for the aerial photo transformations.

Oblique and vertical photographs containing archaeological information were scanned and saved as .TIFF's, and then transformed to a plan view and georeferenced.

The aerial photo transformations were carried out using the University of Bradford Aerial 5 photo rectification program. Control information was taken from the OS 1:2500 scale Landline maps. The height differences across the area were compensated for with a digital terrain model derived from OS Landline profile 5m interval contours. The digital transformations used for the plot are therefore accurate to within +/-2m to the base map and so will be typically within 5m of true ground position.

The aerial photo transcription was produced in AutoCAD by tracing the archaeology from the transformed and georeferenced aerial images.

Monument descriptions for the main elements of the site, and an Event record, were created in the NMR database, AMIE. All plans and this report will be deposited with the NMR archive. All aerial photographs used during the survey are also available from the NMR.

SOURCES FOR AERIAL PHOTO SURVEY

All readily available aerial photos from the NMR collections were consulted. The online catalogue for the Cambridge University Collection of Air Photographs (CUCAP) curated by the Unit for Landscape Modelling indicated that they had no photographs for this area.



Figure 8 Colour oblique showing details of the enclosures adjacent to Tar Barrow.

NMR SP0302-39 (23975-54) 13-JUL-2005 © English Heritage.NMR

The key photographs were the 2005 colour obliques, which alerted us to the presence of the site, and vertical photographs from an Ordnance Survey sortie in 1975. The oblique photographs provide valuable close-ups, in colour, of the enclosure to the south west of Tar Barrow (Figure 8). The black and white verticals taken in 1975 show more enclosures as positive marks and parchmarks in grass (Figure 9). However, the 1975 photographs are at a relatively small scale and details of the enclosures were difficult to make out without the aid of a stereoscope. The geophysical survey demonstrated that the features visible as cropmarks on the aerial photographs are only part of a more complex site. The geophysics also provided confirmation, and aided interpretation, of some of the less clear features on the 1975 photographs.



Figure 9 Vertical photographs, taken in 1975, with parchmarks and positive marks in grass.

OS 75306 Frame 14 3rd July 1975 © Crown copyright. Ordnance Survey

RAF vertical sorties, in particular those carried out in 1947 and 1952, show medieval and post medieval ridge and furrow and headlands, which once extended between Grove Lane, Burford Road and Hare Bushes (Figure 5). In contrast, the geophysical survey seems to have recorded little of the medieval landscape.

| Reference Number/Sortie. *Used in transcription | Vertical/ Oblique | Frame(s) | Date | Key features |
|--|----------------------|---------------------|-------------|---|
| RAF 3G/TUD/UK/102 | V | 5099-5101 5132-4 | 30-Mar-1946 | Ridge and furrow (R+F). Military activity in Hare Bushes outside project area. White marks prob. Agricultural. |
| RAF CPE/UK/2098* | V | 4455-9 | 28-May-1947 | R+F. White circular marks prob. agricultural? |
| RAF 540/958* | V | 3334-7 | 01-Dec-1952 | Snow highlighting R+F and headlands. |
| OS/65017 | V | 38-41 | 29-Mar-1965 | R+F appears levelled. |
| RAF 58/8308 F64 | V | 62-63 | 21-Sep-1967 | Areas of improved pasture where R+F appears level. |
| MAL 90/67 | V | 54-57 | 12-Nov-1967 | As above. |
| FSL/71221 | V | 235-236 | 09-Sep-1971 | Area partly in arable. Some rig still earthworks. Dark circular marks to N and west of barrow, and in places across the survey area appear natural. |
| OS/75306* | V | 14-15 | 03-Jul-1975 | Parchmarks of main cropmarks. |
| OS/90193* | V | 61-62 | 19-Jul-1990 | Field in arable, cropmarks of "temple" and some parts med/pm field system. |
| NMR SP0302/36-48* | ○ | 23975/51-64 | 13-Jul-2005 | Details of "temple". |
| NMR SP0302/49-53 | ○ | 24587/22-23, 28-29 | 05-Apr-2007 | Close up and contextual shots of barrow. Hints of cropmarks to south-east of cricket ground but unclear if archaeological in origin. |

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