

ARCHAEOLOGICAL REPORT

Contents

Summary of the Oxford Roman pottery industry

The site at Lower Farm

The significance of Lower Farm

National context and conclusions

References

Appendix 1: Magnetometer survey

Appendix 2: The remainder of the site.

Lower Farm, Nuneham Courtenay, Oxfordshire, and the Oxford Roman pottery industry

The Oxford Roman pottery industry

The Oxford Roman pottery industry was one of the largest of its kind in Roman Britain, with component sites mostly lying in a broad north-south zone east of the Thames running from Noke, north-east of Oxford, perhaps as far as Dorchester-on-Thames in the south – a distance of about 19km. Established in the 1st century AD, the industry grew to be of regional importance in the 2nd century, while new lines of production introduced from the middle of the 3rd century were disseminated much more widely still. By the early 4th century a range of specialised products (colour-coated fine wares derived from the Continental samian ware tradition, white ware mortaria and ‘parchment ware’ – red-painted white ware) was distributed across southern and central Britain and the extent and density of these distributions indicate that Oxford was the single most important producer of such wares in Britain in the 4th century. In these terms the industry was of national importance from at least the later 3rd century if not earlier.

The primary account of the Oxford industry is that of Christopher Young (1977), which summarised the evidence for the then known kiln sites and provided corpora of all the main classes of coarse, fine and specialist ware products. A reprint of this volume (2000) contained an updated bibliography of both new kiln sites and selected key consumer site pottery assemblages. Subsequent work has added further new kilns and production-related features, but the spatial framework of the industry and the range of its products remain substantially as set out by Young.

Individual component production sites within the industry vary considerably in size and the quality of associated evidence. They also varied significantly in terms of chronology and trajectories of development. Overall, approximately 30 production sites are known (excluding two in the lower Evenlode valley), almost all lying east of the Thames and just over half within the City boundary. Numbers of kilns within each site could be variable and some sites are known only from concentrations of distinctive waste material (such as pots broken during firing, or kiln debris). Definition of discrete sites is problematic (hence the absolute number of such sites is only approximate) since the location of the core of the industry within present day East Oxford has restricted access to and understanding of the extent of individual sites; similarly the scale of excavation has mostly been very limited – the key exceptions are sites at the Churchill Hospital (Young 1972; 1973; 1974) and Blackbird Leys (Booth and Edgeley-Long 2003). The core area occupied by the industry is best seen as a landscape within which production complexes, varying in size and in the density of kilns, were located (mostly) in ditched enclosures, interspersed between agricultural fields and the woodland which was a crucial resource for the industry. Associated domestic occupation was probably also scattered and mostly of low status, though such evidence is sparse. Unusually, a site at Headington Wick, known only from 19th-century records, perhaps a villa, also produced production-related evidence, though the precise relationship between this and the villa itself is unclear (Jewitt 1851).

A further consequence of the location of the heart of the industry in East Oxford is that most production sites known there are at best only partly preserved and many are more or less completely destroyed. The possibility that significant previously unknown and relatively undisturbed kiln sites may yet be identified within the City is at best only slight. For these reasons relatively undisturbed production sites lying outside the City boundary are of particular significance for potential future work on the industry, not simply in terms of adding to understanding of its 'mechanics' – the layout and chronology of sites, aspects of kiln construction and technology, resource management, the range and relative quantities of products and the development of the vessel type repertoire – but also in relation to the wider questions of the organisation and social and economic contexts of the industry (Young 2000).

Knowledge of significant Oxford pottery industry sites lying outside the City boundary remains relatively limited. To the north two sites at Woodeaton are known only from unpublished surface-collected finds (Young 1977, 256), while a little further north-east production at Noke is indicated by more surface-collected material (Cheetham 1995) and subsequent evaluation of an area east and south-east of Lower Farm there (Pine 2005). The finds appear to indicate production of coarse wares and white ware mortaria in the later 2nd and 3rd centuries.

Immediately south of the City recent evaluation by Cotswold Archaeology subsequent to geophysical survey of a large area adjoining Grenoble Road produced evidence of pottery production waste, but no kiln structures were identified. This activity may relate to the southern margin of the nearby Blackbird Leys production complex. Further south three more production sites are known. Of these one at Berinsfield was destroyed by quarrying long ago (Harden 1936, 83-94). A further site just east of the Golden Balls road junction (Marsh Baldon), of uncertain but apparently substantial extent, was Scheduled (an area of very roughly 2ha, National Heritage List no. 1006337, formerly county no. OX 132) subsequent to the discovery of surface finds indicating the production of colour-coated ware. This site, however, is known to have been heavily damaged by ploughing (G Lambrick pers. comm.); its present condition is uncertain, and the site remains in cultivation.

Lower Farm

This leaves the site of Lower Farm, Nuneham Courtenay, which, except for a passing reference to 'Sherds of Romano-British pottery ... found ... 300 yards east of Lower Farm' in 1962/3 (*Oxoniensia* 28 (1963), 90), was unknown prior to its disturbance by a water pipeline in 1991. Following excavation of a narrow transect through well-preserved remains of production-related features and deposits and recovery of a large associated pottery assemblage (Booth et al. 1993) a geophysical survey of the immediately adjacent area undertaken by the Ancient Monuments Laboratory showed that the transect lay within a group of enclosures containing kilns. That survey also revealed possible prehistoric features, while areas of the ridge and furrow that survived as earthworks in this particular area of the site were also clearly visible in the plots, overlying the Roman enclosures (Cole 1993, fig. 22). A LiDAR image of the area shows the surviving ridge and furrow very clearly (Appendix 2). Subsequent geophysical survey (in 1994 and 1996) and fieldwalking (in 1995) examined a larger

area east of the excavated site (Cole 1996; OAU 1996). It should be noted that the OAU document incorporates elements of the AMLab report (Cole 1996) but that despite its date that document only combined the results of the 1992 and 1994 geophysical surveys. A subsequent complete unpublished survey plot formed the basis for an interpretative illustration (Henig and Booth 2000, 167, fig. 6.8; note that the scale on this figure is incorrect – the scale bar represents 200m) but was never presented within a formal AMLab report on the 1996 geophysical survey work. However, Paul Linford (Geophysics Manager, Historic England Archaeological Investigation Team) has very recently kindly provided a new plot of the 1992, 1994 and 1996 survey data, and a brief note which summarises the importance of the combined AMLab geophysical surveys. This emphasises the quality of the survey data, particularly when considering the advances in geophysical survey equipment and techniques since this work was done (Linford 2020; Appendix 1).

The 1995 and 1996 work was undertaken in the context of progressing towards scheduling of the site, with the specific aim of achieving further definition of the maximum extent of the site ‘before the area for inclusion in the Scheduled Ancient Monument could be determined’ (OAU 1996, 2). The geophysical surveys revealed further prehistoric features, most likely of Iron Age date (no prehistoric pottery was recovered in the fieldwalking, but Iron Age sherds were found in the 1991 excavation), apparently underlying a broadly west-east aligned complex of enclosures lying on both sides of a ditched trackway. Clusters of anomalies interpreted as pottery kilns were located within some of the enclosures and fieldwalking recovered a fairly dense spread of pottery (some 4000 sherds) from across most of the area in which geophysical anomalies were revealed. The fieldwalking covered a larger area than the geophysical survey and this showed that the northern part of the field containing the main west-east trackway was significantly devoid of pottery in the area north of the trackside enclosures (OAU 1996, fig. 6).

Later work in the area of Lower Farm was associated with the Abingdon Pipeline (a gas pipeline). The route of this pipeline ran adjacent to the west side of the A4704 through the large field containing the west-east trackway and kiln complexes. Fieldwalking recovered just over 100 small Roman sherds (Cotswold Archaeology 2003), the distribution of which was consistent with those demonstrated by the OAU 1995 work. Geophysical survey did not cover this part of the pipeline route and only picked up at the point where its line turned south-westwards perpendicular to the line of the A4704 some 150m or more south of the likely southern edge of the pottery production site. Some ‘possible pit-like anomalies’ (Bartlett 2003) were identified further south-west at a point roughly 300m south of the most southerly features located in the 1992 geophysical survey. Iron Age and Roman features were found in approximately the same area when the pipeline works took place in 2004 (information from the Oxfordshire Historic Environment Record, sites MOX12703 and 12704). Their significance is uncertain, and it is unlikely that they are associated with the pottery production site. Nevertheless, these remains show that both the prehistoric and Roman sites at Lower Farm did not exist in isolation: they existed as part of a much more extensive pattern of land use and settlement.

The significance of Lower Farm

The Roman pottery production site at Lower Farm can be summarised as follows. Known features certainly or probably associated with pottery production cover an area of very roughly 12ha and are placed within a fairly coherent set of enclosures based around trackways defined by ditches. Detailed interpretation of the results of the various geophysical surveys is not always certain, but it is likely that at least 40 kilns are represented (Henig and Booth 2000, 166), a highly significant figure when it is considered that the known kilns from the whole of the rest of the industry (many not recorded in detail) total about 60. Pottery production probably commenced in the early 2nd century AD and continued into the 4th century, though perhaps not right up the end of the Roman period; the site was therefore in operation for most of the life of this nationally important industry. There is good evidence for the production of a range of innovative products in the 2nd century, including glazed and mica-dusted wares, fine moulded grey ware and, in the second half of the century, colour-coated beakers in a style quite different from that of the well-known late Roman fine wares. Comparable productions are known at a limited number of centres elsewhere in Roman Britain but these appear to be unique in the context of the Oxford industry. In addition to these less-common elements all the main strands of Oxford industry production, except parchment ware, were represented at Lower Farm. The 1991 excavated sample indicated a strong emphasis on production in the second half of the 3rd century, with both white ware mortaria and fine colour-coated ware well represented. The fieldwalking evidence suggests, as would be expected, that there was spatial and chronological variation in production across the site as a whole, and although there is still considerable uncertainty about the working life of an individual kiln it is likely that only a relatively few kilns were in operation at any one time and that their operators would have focussed on particular lines of production, though these could have varied from one firing to another.

Lower Farm thus appears as a very good and almost complete example of a major component of the Oxford Roman pottery industry, itself in the late Roman period arguably the most important centre of its type in Britain. Lower Farm presents almost all the characteristics of the Oxford industry as well as a number of early Roman products that may be unique within the industry. In its scale and state of preservation the site appears unmatched within the industry, except perhaps at Noke, where, however, the extent of the site is quite unknown and there is no evidence for colour-coated wares, one of the main production lines of the late Roman industry.

Limitations on understanding of the Lower Farm site are twofold. The first concerns its spatial definition. The various geophysical surveys appear to provide a fairly clear indication of the trackways and enclosures that form the framework for most of the site, and the distribution of those features is quite closely mirrored by the distribution of surface collected pottery, but features extend south-eastwards of the limit of the 1994-6 surveys at their eastern end, and the surface distribution of pottery suggest that the site may have extended east of the A4704, which formed the limit of all fieldwork (OAU 1996, 1). Limited surface finds also hint that the western limit of the complex may extend beyond the enclosures defined by the 1992 geophysical survey. Definition of the overall extent of the site, while good, is

therefore not absolutely complete, but could be improved through further geophysical survey and other investigations. The second factor, less easily assessed, concerns the state of preservation of the archaeological features. This will be variable depending on the history of agricultural regimes in the different fields beneath which the pottery production site lies. The fact that the site was not identified before pipeline work in 1991 is because the component field through which the pipeline cut was pasture and had not been in regular use for arable in modern times (though it was clearly ploughed in the medieval period, when the whole of the site lay within Lower Field, the northernmost of the four open fields of the medieval village of Nuneham Courtenay (Booth et al. 1993, 116, fig. 11)). Preservation of deposits here was therefore particularly good. The modern fields to the east, however, have been in regular cultivation and preservation here will be less good. On present evidence, however, it is likely to be as good as in any comparable example outside Oxford (and certainly better than at the scheduled site of Golden Balls; the situation at Noke is uncertain), and in part significantly better.

National context and conclusions

A rapid search of the Historic England register of Scheduled Monuments reveals some 17 sites with Roman pottery kilns or other evidence for pottery production, with indications that the pottery production evidence constituted the basis for scheduling in 14 cases, representing 11 different industries (only the New Forest industry, with four separate schedules, is represented by more than one site). As noted above the sole Oxford industry entry in this list is for the Golden Balls site (which lies just under 4km south-east of Lower Farm), though there is reason to believe that it is poorly preserved. Like a number of the other regionally and nationally important industries in the list the Oxford industry was polyfocal; individual component sites of such industries are unlikely to be representative of the whole, and this is certainly the case with Golden Balls, a site which seems to have been entirely of late Roman date and focussed very largely on the production of colour-coated fine wares (Young 1977, 242).

On the basis that the plough-damaged state of the Golden Balls site may significantly compromise its value as a good representative Christopher Young has commented that ‘it is highly desirable that at least one production site from the extensive late Roman pottery industry should be preserved for posterity and this [Lower Farm] is currently the best candidate of which we have knowledge.’ This observation in turn reflects the wording of the County's own Mineral and Waste Sites Assessment and the draft SEA which both recognise the importance of the site:

‘The archaeological remains of a Roman pottery production site could be considered to be of very high significance and could appear to be demonstrably of equivalent significance to scheduled monuments and may need to be physically preserved.

The impact on archaeology from mineral extraction would be irreversible and permanent.’ (Draft SEA, p.85 - the Sites Assessment uses the same wording)

The geophysical survey data, meanwhile, “represents one of the best demonstrations of the magnetic survey of a rural Roman industrial site yet achieved

and those results considerably enhance the national archaeological significance of the site” (see Appendix 1). Thus far only a very small part of the Lower Farm complex has been excavated, all within the confines of a water pipeline easement. The results were excellent in archaeological terms, but very expensive: the budget for excavation and analysis of this site alone was approximately double the value of the original costings for archaeological work along the entire pipeline.

The work carried out during the early/mid-1990s demonstrated that the Roman kiln site at Lower Farm, Nuneham Courtenay, was complex archaeologically. Prehistoric remains were also present: how if at all they relate to the Roman site is not clear at the moment. The well-preserved medieval ridge and furrow overlying part of the site is an important feature in its own right (a rare survival within this part of the county), and also served to protect a large area of the kiln site from later ploughing. The Roman component of this site is of national significance: its other aspects are of considerable interest as well

Destruction of any part of this nationally important site would have to be preceded by a lengthy programme of archaeological excavation. The results of this would require full, comprehensive analysis and publication. There can be no doubt that this would be a very expensive process. Any damage to, and certainly permanent loss of, even part of the Roman kiln site should be rejected as unacceptable. The archaeological costs alone of including part of it within a mineral extraction programme might well be prohibitive, and render extraction of the area unviable. The desirability of permanently preserving this site in its entirety might well align surprisingly closely with hard economic reality.

Paul Booth (BA, FSA, MCIfA. Hon Research Associate, Institute of Archaeology, Oxford University. Past President, Study Group for Roman Pottery)

Graham Keevill (BA, FSA, MCIfA. Director, Keevill Heritage Ltd. Project Manager for the Lower Farm site in 1991, and coordinator of the 1992-6 fieldwalking and geophysical surveys)

February 2020

References

- Bartlett, A D H, 2003 Abingdon Pipeline Report on archaeogeophysical survey of proposed gas pipeline 2003. Bartlett-Clark Consultancy unpublished report
- Booth, P and Edgeley-Long, G, 2003 Prehistoric settlement and Roman pottery production at Blackbird Leys, Oxford, *Oxoniensia* **68**, 201-262
- Booth, P, Boyle, A and Keevill, G D, 1993 A Romano-British kiln site at Lower Farm, Nuneham Courtenay, and other sites on the Didcot to Oxford and Wootton to Abingdon water mains, Oxfordshire, *Oxoniensia* **58**, 87-217
- Cheetham, C J, 1995 Some Roman and pre-Roman settlements and roads by the confluence of the Cherwell and the Ray near Otmoor, *Oxoniensia* **60**, 419-426
- Cole, M, 1993 The geophysical survey, in Booth et al. 1993, 129-131
- Cole, M A, 1996 *Lower Farm, Nuneham Courtenay, Oxon. Interim Report on Geophysical Surveys, 1992-4*. AM Lab Report 4/96
- Cotswold Archaeology, 2003 Abingdon Pipeline Oxfordshire, fieldwalking survey for RSK ENSR Environment on behalf of TRANSCO. Unpublished Cotswold Archaeology report 03041
- Harden, D B, 1936 Two Romano-British potters'-fields near Oxford, *Oxoniensia* **1**, 81-102
- Henig, M and Booth, P, 2000 *Roman Oxfordshire*, Alan Sutton, Stroud
- Jewitt, L, 1851 On Roman remains, recently discovered at Headington, near Oxford, *J Brit Archaeol Association* **6**, 52-67
- Linford, P, 2020 Lower Farm, Nuneham Courtenay, Magnetometer Survey 1992-96, unpublished note (see Appendix 1)
- Oxford Archaeological Unit, 1996 Lower Farm, Nuneham Courtenay, Oxfordshire SP 539005 Report on the evaluation of a Romano-British kiln site. Unpublished report for English Heritage
- Pine, J, 2005 Ashgrove [recte Ashgrave], RSPB Otmoor, Noke, Oxon; an archaeological evaluation (Phase 1), Thames Valley Archaeological Services unpublished report 0565
- Young, C J, 1972 Excavations at the Churchill Hospital, 1971: Interim report, *Oxoniensia* **37**, 10-31
- Young, C J, 1973 Excavations at the Churchill Hospital, 1972: Interim report, *Oxoniensia* **38**, 207-214

Young, C J, 1974 Excavations at the Churchill Hospital, 1973: Interim report, *Oxoniensia* **39**, 1-11

Young, C J, 1977 *The Roman pottery industry of the Oxford region*, Brit Archaeol Rep (Brit Ser) **43**, Oxford

Young, C J, 2000 Oxfordshire pottery revisited, in C J Young, *The Roman pottery industry of the Oxford region*, Brit Archaeol Rep (Brit Ser) **43**, Oxford (reprint), 7 unnumbered pages

Oxfordshire Historic Environment Record entries:

https://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=MOX10853&resourceID=1033 for the kiln site.

https://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=MOX12703&resourceID=1033 for Iron Age pits south of the kiln site on the Abingdon pipeline.

https://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=MOX12704&resourceID=1033 for Roman pit and pottery south of the kiln site on the Abingdon pipeline.

Appendix 1: Lower Farm, Nuneham Courtenay, Magnetometer Survey 1992-96
[Note written to Graham Keevill]

Please find attached an updated version of the plot of Mark Cole's magnetometer surveys at Lower Farm, Nuneham Courtenay made after the final visit in November 1996 where I have used newer processing software not available in the 1990s to correct for the strong magnetic gradients caused by the electricity pylons. As you know, Mark's final visit was in an attempt to delineate the full extent of the Roman settlement and, while he circulated a plot of these results shortly thereafter, he left English Heritage before writing an updated AML report. Our correspondence on file suggests that the site was considered significant enough to merit designation and that sufficient information had already been obtained in this regard. However, the trail goes cold at the end of 1996 and there is no subsequent correspondence to indicate why scheduling did not proceed.

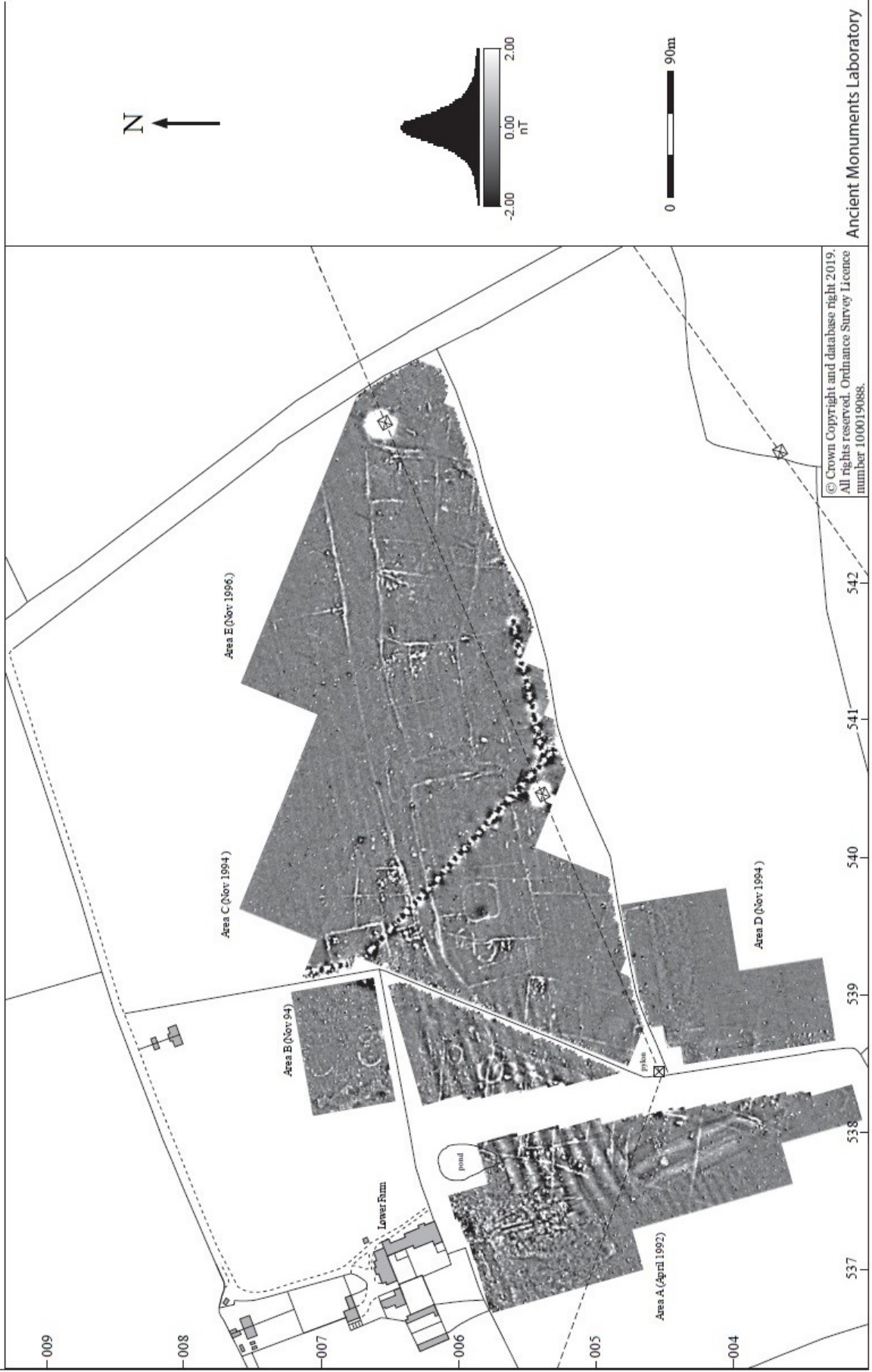
From a geophysical point of view the site is significant - Dr Andrew David, then head of the English Heritage Archaeological Sciences team commented in 2004 that "it represents one of the best demonstrations of the magnetic survey of a rural Roman industrial site yet achieved and those results considerably enhance the national archaeological significance of the site". While far more geophysical survey has been carried out since the turn of the century taking advantage of newer technology, the 1995 paper on the Nuneham Courtenay magnetic results remains a valuable published exemplar for this site type. The survey exhibits clear examples of magnetic responses to Roman kilns, associated ditched enclosures and both full- and half-circle ring ditches. In addition an interesting interaction is exhibited in the westernmost field where later ridge and furrow has been clearly detected as a magnetic anomaly where it overlies the Roman remains owing to magnetically enhanced material created by the industrial processes having been incorporated into the plough soil. In contrast, in areas away from Roman industrial features the signal caused by the ridge and furrow is very weak.

While large magnetometer surveys are now more common using 21st century equipment, a site of this size presented a major challenge in the early 1990s. However, the resource outlay for extensive geophysical survey carried out over four years was certainly justified by the quality of the results. On their strength, and in conjunction with the accompanying excavation evidence, I would have thought a good case for considering the site for designation could still be made.

Paul Linford
Geophysics Manager
Historic England Archaeological Investigation Team
26th February 2020

LOWER FARM, NUNEHAM COURTENAY, OXON.
 Summary plan of magnetometer surveys 1992-6

FIGURE 2



Appendix 2: LiDAR (Light Detection and Ranging) image of the Lower Farm area



The red arrow indicates the area of surviving ridge and furrow. The black arrows show the line of the 1991 pipeline and its easement. The black star is in the approximate location where Roman pot sherds were found on the field surface in February 2020: a small area had been cultivated for corn in 2019, so the soil was exposed. The course of the river Thames can be seen through the middle of the image, with the Didcot-Oxford railway on the left edge. Note the presence of subtle earthworks in the arable fields to the east and south-east of the ridge and furrow. These appear to pre-date the current pattern of fields, established in the late 18th century. The earthworks are probably of medieval date.

Appendix 2: The remainder of the site

Relatively little is known about the archaeology of the remainder of the proposed allocation site. However, British Geological Survey online mapping (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>) shows that the superficial geology of much of the site is alluvium. This alluvium consists of river-laid silts, deposited in the flood-plain of the Thames. Archaeological work in the upper Thames

valley has shown that much of this alluvium was laid down between about 1000 BC and 1000 AD. A number of archaeological implications follow from this.

First, it is extremely difficult to detect archaeological remains which are covered by alluvium, except by intrusive investigation of the ground. Therefore, the absence of recorded archaeological remains in such areas cannot be taken as an indication that there is nothing there. Prehistoric and Roman remains are widely present in the Thames valley, and there is no reason to suppose that the Nuneham Courtenay proposed allocation site is an exception to that general pattern.

Second, if remains are present, then (precisely because they lie under a protective covering of alluvium) they can be very well-preserved, not having been disturbed by later activities such as ploughing.

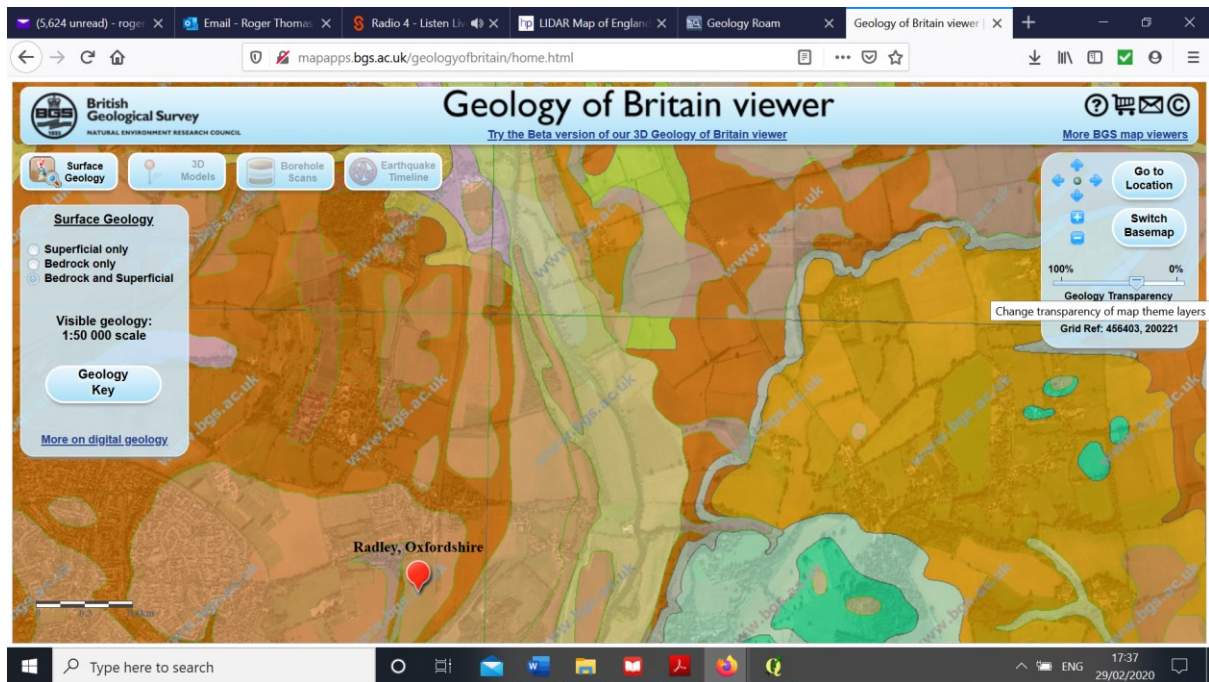
Third, alluvium in the Thames flood-plain can mask the presence of former channels of the Thames, now filled in with silts and (sometimes) peat; in the past, the Thames often consisted of multiple channels, unlike most of the modern river. The deposits which fill such old channels are often waterlogged, which means that organic archaeological material (such as wooden items, and also evidence for the past environment) may be preserved; normally, such materials do not survive in the ground.

There is a number of places in the Thames valley where archaeological investigations of areas covered by alluvium (usually in advance of quarrying) has revealed abundant and important archaeological remains. Sites include Yarnton, Thrupp (Radley), Drayton and Eton Rowing Lake at Dorney. In each case, it is likely that the remains uncovered can be considered of national importance. Given what has been found elsewhere, it is therefore entirely reasonable to think that such remains may also exist within the proposed allocation site at Nuneham Courtenay.

The presence of alluvium and possible infilled ancient river channels may also have implications for the amount of sand and gravel present. If the Northmoor Terrace gravel which presumably lies in the floodplain here is covered by significant depths of alluvium, and/or is dissected by now-infilled ancient river channels, then the quantity of sand and gravel present may be considerably less (and the quantity of unusable silts and clays much greater) than the simple size of the site might suggest.

We are not aware of any ground investigation work which could have shed light on the issues outlined above. We therefore recommend that a programme of archaeological and geological site investigation should be carried out, in order to

clarify the issues raised above, before any further consideration is given to including this proposed allocation in the Plan.



From: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>. The light-coloured band following the river is alluvium.